UTAR BAFE

International Conference on Business, Accounting, Finance and Economics 2015

SUSTAINABLE DEVELOPMENT IN THE GLOBALISED ENVIRONMENT

Challenges and Opportunities

Editors

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Organized by:
Faculty of Business and Finance
Centre for Accounting, Banking and Finance
Centre for Business and Management
Centre for Economic Studies

Message from UTAR President

Welcome to the 3rd International Conference on Business, Accounting, Finance and Economics (BAFE 2015). It gives me much honour to welcome all the speakers and participants to this conference.

It is heartening to see that since BAFE's inaugural launch in 2013, the conference has gained momentum in becoming an avenue for an assembly of great minds to network, exchange research knowledge and ideas, and discuss on possible collaborations and further researches among local and international scholars. To date, BAFE has seen an impressive submission of over 200 papers from across the globe, each with a professional take on research ranging from the world financial problems to East and Southeast Asian economies.

These papers will provide a greater insight into the various economies of the region and perhaps provide a better understanding of the policies and decisions made. Such conferences provide a great platform for meaningful discussions that will hopefully lead to better researches and collaborations. What is more gratifying is that academics from various countries come together and contribute their expertise to investigate, explore and highlight issues that prompt others to look into possible solutions. Through such conferences, I believe researchers are able to inspire others to think deeper and seek creative solutions to problems.

I am delighted that BAFE provides a suitable platform for such interactions which resonate well with UTAR's commitment in providing quality education and research and raising the bar to meet international standards.

It is my fervent wish that all of you enjoy the conference while immersing yourselves in the pool of knowledge and be rejuvenated with fresh ideas for further research activities.
Congratulations to the BAFE 2015 organising committee for bringing everyone together.
Thank you.

With best regards,
YBhg Ir. Prof. Academician Dato' Dr. Chuah Hean Teik
UTAR President

Message from the Conference Chair, International Conference on BAFE 2015

Driven by the great success of the 2nd International Conference on BAFE 2014 last year, I am pleased to once again organise the 3rd International Conference on Business, Accounting, Finance, and Economic (BAFE 2015) through my dedicated organising units comprising the Faculty of Business and Finance, Centre for Accounting, Banking and Finance, Centre for Business Management, and Centre for Economic Studies at Universiti Tunku Abdul Rahman, Kampar Campus, Malaysia.

This year, our Conference's theme - "Sustainable Development in the Globalised Environment: Challenges and Opportunities" encourages intellectual presentations of research findings from researchers, academicians, and postgraduate students who are currently engaging in the empirical studies of business, accounting, finance, and economic issues. The theme also serves as a platform for knowledge acquisition, transfer, sharing, and application among participating scholars in the areas of theoretical development, research analysis, and finding contribution.

I would like to express my warmest welcome to each and every local participant who has devoted his/her time, effort, and money to this Conference. Special thanks and appreciation are also extended to our overseas presenters/participants from India, Vietnam and the Philippines. Your active involvement in BAFE 2015 International Conference has inspired me and my organising team to ensure another memorable academic endeavor for your learning exposure.

Let us all explore and enjoy the fruits of this Conference today. Whether you are the audience or presenter, the one-day proceedings would definitely enrich your research horizon better and faster until we meet next year in the 4th International Conference on BAFE 2016.

Thank you and warm regards.

Prof Dr Choong Chee Keong
Conference Chair, International Conference on BAFE 2015
Professorial Chair (Tan Sri Dato' Sri Dr Teh Hong Piow Chair in Banking and Finance)
Dean
Faculty of Business and Finance
Universiti Tunku Abdul Rahman (UTAR)

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ACCOUNTING

BANKING/ FINANCE

ECONOMICS

A STUDY ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL COMMITMENT AND INTENTION TO LEAVE: AGE AS THE MODERATOR

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Abstract

Hospitality industry is one of the important sectors that contribute to the growth of Malaysian economy and GDP. It is a service industry in which employees play a critical role in determining organizational performance as well as resulting a direct impact on customer satisfaction. Therefore, human resource is an important elements for the organizations which operate in hospitality industry. However, the industry is facing challenge in retaining talented employees and high turnover exists among the hotels. According to the past researches, high turnover intention would lead to actual resignation of employees. Therefore, organizations should strive to reduce the intention to leave of their employees in order to effectively control the turnover rate. The objective of this paper is to analyse the relationship between organizational commitment and intention to leave as well as the moderating effect of age in this relationship. Three-component model developed by Meyer and Allen (1991) is adopted to represent the concept of organizational commitment. Questionnaire had been distributed to the hotel employees in Penang and the results show that affective commitment, continuance commitment, and normative commitment have negative relationship with intention to leave, whereas age moderates the relationship between normative commitment and intention to leave. Several implications and limitations have been given at the end of the research. It is proposed that emphasizing on affective commitment and continuance commitment would bring a more effective reduction on overall intention to leave among the employees. However, further detail study is required to examine the moderating effect of age as well as other variables.

Keywords: Organizational Commitment, Intention to Leave, Age, Turnover, Human Resource

INTRODUCTION

Turnover is a prevalent issue in many industry because it could incur substantial cost for the organization. As a result, there are plenty of worldwide researchers contributed to understand the behaviour and improve the turnover rate through many relevant concepts including organizational commitment, age and generations, as well as intention to leave (Adenguga, Adenuga, & Ayodele, 2013; Kumar & Eng, 2012; Omar, Anuar, Majid, & Johari, 2012). The statistical results had proven that organizational commitment and age are significantly related to intention to leave, however, there is little

evidence examine the combination of the relationship between these three variables. In this paper, the relationship between organizational commitment and intention to leave would be verified and whether age could result any moderating effect on this relationship would be tested.

Problem Statement

As mentioned above, organizational commitment is negatively related to costs of doing business. Low organizational commitment would result in various adverse impact to the organizations and lead to serious consequences. One of the consequences is increasing in employees' intention to leave from their current organizations. High level of intention to leave could incur troublesome problems and impacts towards hotel industry (AlBattat, Rasmi, Som, & Puad, 2013).

Employees' commitment towards their organizations plays an important role in service sector. It was found that when the employees' organizational commitment drop, organizations would face serious problem in retaining talented employees. Once the low commitment employees dissatisfied with their organizations, they tend to have low motivation and poor performance. Low organizational commitment among employees would lead to poor work behaviour and attitudes (Kumar & Eng, 2012).

Many researchers had agreed that the most challenging issue for hotel industry was maintaining a low turnover rate. According to the study, the annual turnover rate of all level of employees in hotel industry was estimated within the range from 60% to 300% (Hemdi & Rahman, 2010; Kysilka & Csaba, n.d.). Although Malaysian hotel industry is having a steady growth and generating large amount of incomes, high employees' turnover rate increased the costs of doing business and this become one of the major problems faced by the hotel employers.

When organizations are having high turnover rate, they need to allocate more capitals and resources to recruit, select, hire, and train new employees. These additional costs would reduce the return on investment and result a significant effect on their financial position. Besides, if the resigned employees join other organizations within the same industry, all the valuable knowledge and confidential information from the previous organizations would be exposed to the competitors. Although there might be an agreement to protect the organizations from divulging these information, it is inevitable that talented employees as well as potential customers would be gone (Kysilka & Csaba, n.d.).

Among the various type of resources, human resource is playing an essential role in developing an organization. It helps to improve the organizational image and achieves the goals. In service sector, hotel industry is highly depending on the human resource because all the employees are having direct connection with the customers. Excellence employees are capable to provide high quality of services to the customers, however, once the employees are having intention to leave, the performance of the employees would reduce and the quality of services would be directly affected. Many researchers have showed that there is an adverse relationship between employee turnover rate and human resource practices (Ahmad Rasmi, Puad, Mohamed, & Bahauddin, 2013; AlBattat, Rasmi, Som, & Puad, 2013).

Furthermore, age is another important element in human resource management as it could be used to predict the behaviour of the employees. By comparing employees with different generations, most of the Generation Y employees are lacking of vital life skills including strong work ethic, capability to socialize with people face-to-face, ability to follow basic organizational instructions, and full concentration on work. All of these skills are essential in order to provide excellent works in hotels. Employees who work in hotels are expected to be hospitable, however, Generation Y employees are spending more time in interacting with their mobile devices rather than their customers (Jenkins, 2013).

LITERATURE REVIEW

Intention to Leave

Liu, Liu, and Hu, (2010) defined intention to leave as the idea that the employees want to make a decision to quit their current job voluntarily. Increasing in the intention to leave would ultimately increase turnover rate and reduce organization's reputation. Meanwhile, it could incur indirect expenses in hiring and training new employees to replace the job vacancy.

There are many intensive studies have been done by the researchers on the importance of employees' leaving intention in relation to turnover rate. Most of them have concluded that intention to leave is the best predictor of actual turnover behaviour (Arnold & Feldman, 1982; Ghiselli, La Lopa, & Bai, 2001; Steel & Ovalle, 1984). According to the withdrawal cognition process proposed by Mobley, Horner, and Hollingsworth (1978), intention to leave is the last stage of the process before actual leaving decision is made.

Therefore, intention to leave is the most important phase before leading to actual turnover behaviour. It might happen when there is a gap between the desire jobs and current jobs. When employees start to compare their current jobs with others, they would start to think of leaving their current job (Lee, 1998; Robinson & Beesley, 2010; Tracey & Hinkin, 2008). Furthermore, intention to leave might arise once employees found dissatisfaction on their current jobs and this drives them to leave the organizations. According to Bigliardi, Petroni and Dormio (2005), when the employees start to think whether to stay or leave the organization, it shows that they have the intention to leave their organizations. Although it is just a short period of thinking, their job performance would be affected and the chance of leaving could be high. The final consequences could be either voluntary or involuntary quit (Mowday, Steers, & Porter, 1979).

Steel and Ovalle (1984) as well as Yang, Wan and Fu (2012) suggested that it is essential for the managers or employers to determine the willingness of their employees to stay in the current jobs in order to predict the possibility of leaving. Besides, Munasinghe and Sigman (2004) found that young employees solve problem by switching job while older employees stay longer and tend to invest more in the organizations. It is believed that different generations of employees would respond differently towards the dissatisfaction of their current jobs but there are too little researches available to conclude that organizational commitment and intention to leave are moderated by age.

Organizational Commitment

According to Thatcher, Stepina, and Boyle (2003), organizational commitment is an essential antecedent which would influence the level of intention to leave. In the paper published by Mathis, Robert and Jackson (as cited in Kumar & Eng, 2012) explained that organizational commitment indicates how much the employees trust and accede organization's goals as well as how much the employees aspiration to stay in the organization. It would influence the attitudes of the employees related to works and behaviours. Low organizational commitment could lead to poor employees' attitudes (Boal & Blau, 1987). Employees would have low motivation and poor performance in their works if they failed to establish the commitment towards their organizations (Shore & Martin, 1989). According to Allen and Meyer (1990), organizational commitment has an adverse relationship with intention to leave and this also supported by many other researchers (Bartol, 1979; Chang, 1999; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Moncrief, 1996; Samad, 2006). In order to improve the understanding of organizational commitment and assist in interpreting existing researches, three-component model of organizational commitment was formed to integrate the past researchers' concepts and contributions into one simple model (Meyer & Allen, 1991). Three-component model divided organizational commitment into three elements, which are affective commitment, continuance commitment, and normative commitment (Powell & Meyer, 2004).

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Affective Commitment

Affective Commitment is a desired-based commitment in which employees are willing to stay and work in their organizations because they want to do so. It apropos to positive emotional attachment of employees towards the organizations (Meyer & Allen, 1991). When the affective commitment of the employees is high, they tend to develop a sense of belongingness and their organizations would become their social identity. Affective commitment could determine the involvement of the employees in their daily works and influence their job performance (Rhoades, Eisenberger, & Armeli, 2001). The employees' personal characteristics, organizational structures, and other characteristics related to job and working experiences are the antecedents of affective commitment.

Continuance Commitment

Unlike affective commitment, continuance commitment is a cost-based variable in which it is linked to the cost of the employees leaving the organizations. Resigning from the current job might incur certain explicit and implicit cost, including the cost of finding another job as well as the opportunity cost that given by the current job. When analysing and comparing those costs, employees might found that staying in the organizations is a better option. Therefore, they stay in their organizations not because they like to do so but they need to do so (Meyer & Allen, 1991). Continuance commitment was firstly introduced in Becker's side-bet theory (1960). It was stated that employees would incur gains and losses while deciding whether to stay or leave their organizations. The evaluation of gains versus losses includes economic costs as well as social costs.

Normative Commitment

Affective commitment is linked to the employees' preferences while continuance commitment deals with the costs associated. The last component in organizational commitment, normative commitment, is an obligation-based commitment in which the employees perceived that it is an obligation for them to stay and continue work in the organizations. The obligation is not enforced by the organizations or contracts, employees are willing to stay because they should do so rather than they have to do (Meyer & Allen, 1991). When there is strong normative commitment exists, employees would willing to continue to work for their organizations because the sense of obligation to stay with the organizations no matter it is performing well or suffering losses.

Moderating Variable

Despite the evidences that support the relationship between organizational commitment and intention to leave, age is another important variable in predicting the level of commitments and the possibility of leaving the current jobs. Organizations consist of different generations of employees in which they could be divided into different age groups. Generations could be explained as a group of people who were born within the similar years, possess the similar characteristics, and share the similar life experiences (Arsenault, 2004). From the minimum age for employment to the formal retirement age, employees could be classified into three age groups. First is the Baby Boomer, who born in between 1954 and 1964 (Smith & Tasman, 2005). Second group is the Generation X, who born in between 1965 and 1980. The last generation is Generation Y, who born in between 1981 to 1998 (Shacklock & Brunetto, 2012).

According to Hussain, Yunus, Ishak, & Daud (2013), different generations of employees possess different work attitudes in their organizations. They tend to behave differently towards similar situation and this lead them to have different level of intention to leave their organizations. Different generations are holding different characteristics and preferences. As compared to Baby Boomer and Generation X, Generation Y has less loyalty to their organizations, low level of employee engagement, like to seek for new excitement, and are being called as "job hoppers" (Smola & Sutton, 2002).

All these characteristics are obviously showing that Generation Y would have lower organizational commitment and higher intention to leave compared to older generations of employees

even they are receiving similar employment practices. On the other hand, majority of Generation X and Baby Boomer employees are holding senior position. They tend to have higher loyalty to the organizations and more satisfy with their jobs. Furthermore, there are less opportunities for them to obtain a new job in other organizations with higher positions or rewards (Labatmediene, Endriulaitiene, & Gustainiene, 2007). As a result, these groups of employees are believed to have high organizational commitment and low intention to leave compared to Generation Y employees.

In addition, according to the previous research done by Allen and Meyer (1990), it showed that age is positively related to organizational commitment. This is mainly due to the older employees had been stay in their organizations for a long time as well as the differences in generational characteristics discussed above. In another research done by Labatmediene, Endriulaitiene, & Gustainiene (2007) stated that age is one of the best predictors for intention to leave. Hence, this paper proposes that when the age groups are different, the association between organizational commitment and intention to leave would be influenced.

Liu, Liu, and Hu, (2010) defined intention to leave as the idea that the employees want to make a decision to quit their current job voluntarily. Increasing in the intention to leave would ultimately increase turnover rate and reduce organization's reputation. Meanwhile, it could incur indirect expenses in hiring and training new employees to replace the job vacancy.

Another research done by Nasurdin (2005) provided the evidence of the moderating effect of age in the relationship between noninstrumental justice and organizational commitment. In this study, young employees were found to have greater effect of noninstrumental procedural justice on organizational commitment. Old employees are those who have been working with the organizations since long time ago and have high investment in the organizations. Their organizational commitment is mostly contributed by the high investment, so it is generally higher than young employees. Age is vital in predicting organizational commitment, according to Mathieu and Zajac (1990), old employees would have less job opportunities and this lead to higher commitment to their current jobs. Besides, Dunham, Grube, and Castaneda (1994) stated that old employees have more experience and spent more time in their current jobs, so their organizational commitment is higher than young employees. Hence, age is proposed as a moderator in this paper.

Furthermore, the results of the study from Jonathan, Thibeli, and Darroux (2013) showed that age is significantly related to intention to leave. The objective of their study was to test the relationship and effect of intrinsic job satisfaction, extrinsic job satisfaction, age, and education on intention to leave in public secondary school teachers. The results revealed that the relationship between age and intention to leave is negative and the level of intention to leave tends to decrease with aging. Age plays an important role in determining both of the variables and this paper would investigate the moderating effect of age in the relationship between organizational commitment and intention to leave.

Hypotheses Development

Affective commitment is one of the dimensions of organizational commitment and known as the best forecaster of intention to leave (Kuean, Kaur, & Wong, 2010). Kumar and Eng (2012) defined it as the level to the extent of employees are psychologically fascinated to organization. All the feelings including loyalty, belongingness, and affection could influence the level of affective commitment. It represents a general psychological orientation and helps to predict organization-relevant behaviour such as absenteeism and turnover. When the employees are more emotionally attached to the organizations, the less likely they would intent to leave their organizations. Affective commitment is expected to have a negative relationship with organizational commitment.

H_1: There is a negative relationship between affective commitment and intention to leave.

The second independent variable in the conceptual framework is continuance commitment. It is the costs of leaving the organizations that results from the reciprocal relationship between the employees and organizations (Kumar & Eng, 2012). Employees would become committed to their organizations if

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they have side-bet or benefits from continuing employment relationship. If the benefits gained from leaving the current job is less than the lost, employees would choose to stay in their organizations. Therefore, the level of continuance commitment is anticipated to vary inversely with the level of intention to leave.

H_2: There is a negative relationship between continuance commitment and intention to leave.

According to Kumar & Eng (2012), normative commitment is measuring the moral obligation of an employees to stay in an organization and might not effectively predict intention to leave. Wiener and Vardi (1980) stated that normative commitment was significantly correlated with work effects, however, if employees stay in the organizations because of their moral obligation would not work or perform better than those with high affective commitment. It is due to they only perform their duties based on what they should do but they tend to stay in order to accomplish their obligations. Meyer and Allen (1991) proposed that under normal circumstances, employees would willing to work for the organizations because they should do so but would not contribute more than required. Hence, the level of intention to leave is expected to be influenced by the normative commitment.

H_3: There is a negative relationship between normative commitment and intention to leave.

The relationship between organizational commitment and intention to leave had been frequently studied by many researchers. Organizational commitment is important for an organization as it is related to organizational efficiency and employee performance. Researches showed that employees' emotion, side-bet, and moral obligation would influence the level of organizational commitment. Therefore, three-component model of organizational commitment was formed to categorize these factors or antecedents into affective commitment, continuance commitment, and normative commitment (Meyer & Allen, 1991). Rusu (2013) stated that although these three types of organizational commitment do not exclude each other, an employee might either have combination of any of these three forms of commitment or might not develop any form and commitment. As all the three variables of organizational commitment are proposed to significantly related to intention to leave, organizational commitment is expected to have a significant contribution in explaining intention to leave.

H_4: There is a significant relationship between organizational commitment and intention to leave.

Different age groups are proposed to influence the relationship between organizational commitment and intention to leave in this paper. Career development theory stated that an individual would have different attitudes and behaviours in different career stages. When employees go through the growth, exploration, establishment, maintenance, and decline stages, they tend to change their attitudes as well as behaviours along with their age (Rhodes, 1983; Steel & Ovalle, 1984). As mentioned by Allen and Meyer (1990), old employees who already worked in the organizations long time ago are more satisfied with the organizations and have less job opportunities. This indicated that old employees would have higher level of loyalty and job efforts. According to the research done by Labatmediene, Endriulaitiene, and Gustainiene (2007), age is significantly related to continuance commitment. Majority of old employees are breadwinner and have the responsibilities to support their families in term of finance. It is difficult for them to resign from current jobs and find new jobs in another organizations within a short period of time. Therefore, they would have lower level of intention to leave compared to young employees and this is supported by Lachman and Diamant (1987) who stated that age is one of the factors that would affect employees' intention to leave (as cited in Berry, 2010). This paper would contribute to the understanding of moderating effect of age and developed the following hypotheses of age is moderating the relationship between each of the independent variables and intention to leave.

H_5: Age moderates the relationship between affective commitment and intention to leave.

H_6: Age moderates the relationship between continuance commitment and intention to leave.

H_7: Age moderates the relationship between normative commitment and intention to leave.

CONCEPTUAL FRAMEWORK

After reviewing the past researches, Meyer and Allen's three-component model was adopted as the independent variables to represent employees' organizational commitment. Figure 1 showed the proposed conceptual framework in which age is proposed to be the moderator in the relationship between each of the independent variables of organizational commitment and the dependent variable, intention to leave. The three independent variables under organizational commitment are affective commitment, continuance commitment, and normative commitment.

Figure 1: Proposed Conceptual Framework
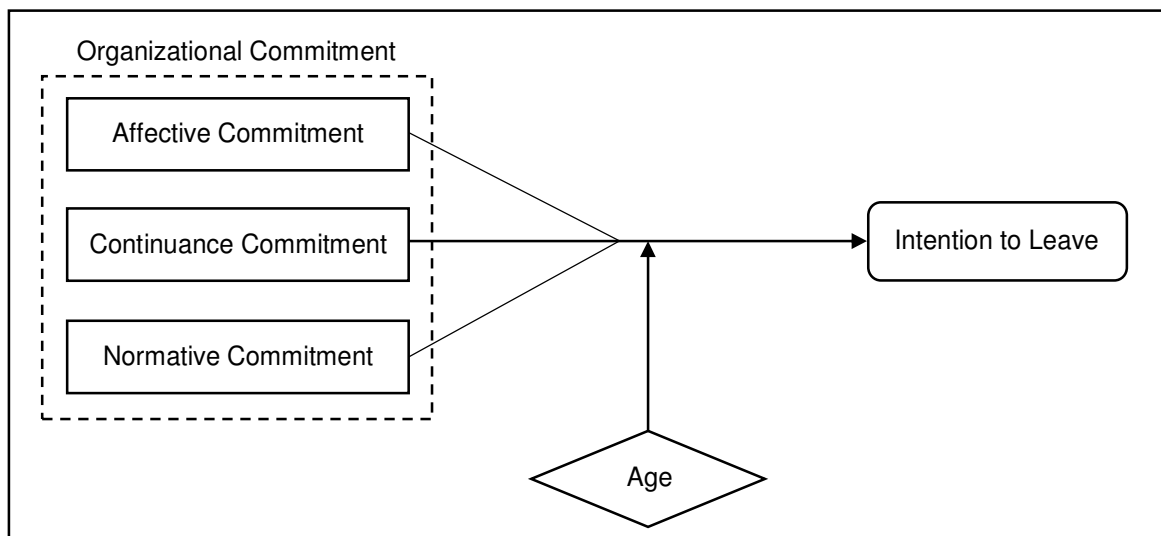
RESEARCH METHODOLOGY

Sampling Design

The targeted industry in this paper is hospitality industry and hotel employees would be selected as target sample. Penang had been chosen as the sampling location as it is one of the famous places to visit in Malaysia and there are more than 200 hotels located in Penang. Due to the moderating effect of age would be tested, it is important to gather the data from different generations of employees. Old employees might join the organizations many years ago and are holding senior position, whereas young employees might be assigned to entry level jobs. Therefore, this research targeted all level of employees from the managerial position to first line employees in order to obtain heterogeneous data and generate a reliable results. Questionnaire were distributed to hotel employees by using convenience sampling technique and there were total 326 sets of data collected from the respondents used in the following data analyses.

Research Procedure

All the hypotheses developed would be tested by conducting primary research. Quantitative data would be collected through distributing self-administrated questionnaire as it is one of the easy method to collect from a large number of respondents. There are 3 sections and total 27 questions involved in the questionnaires. Section A consists of 6 questions of respondents' demographic information, including gender, age, ethnic group, marital status, educational level, and working experiences. In Section B, there are 18 statements for the three independent variables in the conceptual framework. 6 statement would be given in each variable and respondents are required to answer with the 7-point Likert scale which reflect

their degree of agreement from 1 (strongly disagree) to 7 (strongly agree). Last but not least, Section C is measuring the level of intention to leave and it consists of 3 statements. All the 18 statements in Section B are adopted from Meyer, Allen, and Smith (1993) and the other 3 statements from Section C are adapted from Carmeli and Weisberg (2006), Nadiri and Tanova (2010) as well as Stallworth (2003).

All the data were key into the computer software, Statistical Package for the Social Sciences (SPSS), in order to perform the analyses. Before the inferential analyses were conducted, reverse coding had been performed to 3rd, 4th, 5th, and 13th statement in Section B. After that, descriptive analyses were conducted to summarise the data for each question and reliability test was run for the statements in Section B and C. After the reliability test, the average score of each variables were generated by combining the statement in order to perform the inferential analyses and test the hypotheses developed. The confidence level of this research is 0.05, therefore, the hypothesis is supported when its significant level or p-value generated from the following analysis less than 0.05.

Since Likert scale had been used in Section B and C, Pearson correlation coefficient was selected to analyse the direction and strength of the relationship among the variables. The results from this analysis would be used to test the first three hypotheses. For the remaining hypotheses, multiple linear regression analysis would be used to determine the contribution of each independent variable in explaining the intention to leave as well as to test the moderating effect of age. This analysis would provide the impact of each variables in organizational commitment towards the intention to leave. The beta of each organizational commitment and the R square of the whole conceptual model would be generated to conclude the whole study. In order to analyse the moderating effect of age, interaction terms would be generated for each organizational commitment by multiplying the average score of each individual independent variable with the moderating variable, age. After that, all the three interaction terms would be added into the multiple linear regression analysis and age is having moderation effect on the relationship only if the interaction term in the analysis is significant.

DATA ANALYSIS

From the 326 respondents, 153 of them are male and the other 173 are female. Majority of the targeted hotel employees are from the age of 17 to 25 years old, which represent 69.94% of the sample. 24.23% of the employees are between the age of 26 to 35 years old and the remaining 5.83% are from 36 to 45 years old. Table 1 below showed the results of the reliability analysis for the three independent variables, affective commitment, continuance commitment, and normative commitment, as well as the dependent variable, intention to leave.

Table 1: Reliability Analysis Result

No.	Constructs	Cronbach's Alpha
1	Affective Commitment	0.873
2	Continuance Commitment	0.911
3	Normative Commitment	0.895
4	Intention to Leave	0.799

Intention to leave obtained the lowest Cronbach's alpha value, which is 0.799, compared to other variables. The other three independent variables, affective commitment, continuance commitment, and normative commitment, obtained a very good reliability. Affective commitment yielded 0.873, continuance commitment yielded 0.911, and normative commitment yielded 0.895 in Cronbach's alpha value. The overall reliability of the questionnaire is good as the Cronbach's alpha values for each of the variables are more than 0.70.

Table 2: Pearson Correlation Coefficient Analysis Result

	AC	CC	NC	ITL
AC	1			
CC	0.607*	1		
NC	0.578*	0.662*	1	
ITL	-0.784*	-0.794*	-0.810*	1

Note: AC = Affective Commitment; CC = Continuance Commitment;
NC = Normative Commitment; ITL = Intention to Leave
* $p < 0.05$

From Table 2, the relationship between affective commitment and intention to leave is negatively correlated as the correlation coefficient between these two variables is -0.784. When there is a high affective commitment, the level of intention to leave would be low. The strength of this relationship is high due to the correlation coefficient fell in the range of ±0.71 to ±0.90. As the p-value is less than the confidence level 0.05, H_1, there is a negative relationship between affective commitment and intention to leave, is supported.

On the other hand, the relationship between continuance commitment and intention to leave is negatively correlated as the correlation coefficient between these two variables is -0.794. When there is a high continuance commitment, the level of intention to leave would be low. The strength of this relationship is high due to the correlation coefficient fell in the range of ±0.71 to ±0.90. As the p-value is less than the confidence level 0.05, H_2, there is a negative relationship between continuance commitment and intention to leave, is supported.

Last but not least, the relationship between normative commitment and intention to leave is negatively correlated as the correlation coefficient between these two variables is -0.810. When there is a high normative commitment, the level of intention to leave would be low. The strength of this relationship is high due to the correlation coefficient fell in the range of ±0.71 to ±0.90. As the p-value is less than the confidence level 0.05, H3, there is a negative relationship between normative commitment and intention to leave, is supported.

Table 3: Multiple Linear Regression Analysis Result

Variable	Beta
Affective Commitment	-0.569*
Continuance Commitment	-0.339*
Normative Commitment	-0.488*
R Square = 0.853*	

* $p < 0.05$

Table 3 showed that the conceptual framework is a good descriptor for the dependent variable in relation with independent variables as the p-value of this model is less than the confidence level 0.05. Besides, the p-values for each independent variables are less than the confidence level, therefore, all the independent variables, affective commitment, continuance commitment, and normative commitment, are significant in explaining the level of intention to leave. Hence, H_4, there is a significant relationship between organizational commitment and intention to leave, is supported by this study.

The R square value in this analysis is 0.853. This indicated that 85.3% of intention to leave could be explained by the three independent variables. However, there are remaining 14.7% factors were unexplained in this study. It showed that there are other critical variables which could influence the level of intention to leave were not being taken into account in this study.

By using the beta generated from the analysis, the level of intention to leave could be estimated from the following equation:

Intention to Leave = 9.469 - 0.569 (Affective Commitment) - 0.339 (Continuance Commitment) - 0.488 (Normative Commitment)

Based on the results, all the three independent variables have a negative relationship with the intention to leave. For every 1 unit increase in affective commitment, intention to leave would reduce 0.569 units. Meanwhile, for every 1 unit increase in continuance commitment, intention to leave would reduce 0.339 units while for every 1 unit increase in normative commitment, intention to leave would reduce 0.488 units. In addition, independent variable with the highest beta indicated that it had the most significant impact towards the dependent variable. In this study, affective commitment has a higher beta compared to continuance commitment and normative commitment, therefore, affective commitment is expected to have a highest contribution in estimating the level of intention to leave and this is consistent with the past researches.

Table 4: Moderating Effect Analysis Result

Variable	Significant Level
Affective Commitment × Age	0.376
Continuance Commitment × Age	0.110
Normative Commitment × Age	0.001

According to the results shown in Table 4, the interaction term of affective commitment and age is not significant at confidence level of 0.05. This indicated that age does not moderate the relationship between affective commitment and intention to leave, therefore, H_5 is not supported. Similar for continuance commitment and age, its p-value also more than 0.05. As a result, H_6 is not supported and age does not has moderating effect on continuance commitment in relation with intention to leave. However, the interaction term of normative commitment and age yielded a p-value less than confidence level 0.05. Hence, H_7 is supported in this study and this indicated that age is moderating the relationship between normative commitment and intention to leave.

Conclusion and Discussion

Discussions

Based on the statistical results, affective commitment is negatively related to intention to leave. This is consistent with previous research conducted by Meyer and Allen (as cited in Kumar & Eng, 2012) in which affective commitment and intention to leave are varying inversely. If employees have high affective commitment, it is unlikely that they would leave their organizations and vice versa. According to the past studies, affective commitment is the most influential factor in determining the level of intention to leave compared to continuance commitment and normative commitment (Kumar & Eng, 2012). The rationale behind is that affective commitment is the level of emotional attachment an employee have towards the organization and the emotion would make the employee intended to stay in the organization voluntarily. In other words, the hotel employees who have high level of affective commitment would choose to stay with the current organizations even there are better opportunities in other organizations. However, for those who have low level of affective commitment could be easily attracted by external vacancies available and leave the current organizations.

Furthermore, the results also indicated that there is a significant relationship between continuance commitment and intention to leave and this is consistent with other past researches. Kumar and Eng (2012) stated that continuance commitment and intention to leave have a negative relationship. If the continuance commitment of the employees is low, their intention to leave would be high. The level of continuance commitment is depending on the costs of staying or leaving the organizations. If the costs of leaving are high, the employees would choose to stay in the hotel rather than change their jobs to other organizations. In the employees' point of view, staying or leaving their organizations based on continuance commitment is similar to betting. If they choose to leave their current organizations, they are using their current benefits as bet to gain the benefits from other organizations which might not as much

as expected. Despite of the risk, employees would not hesitate to leave and work for other hotels if the leaving could provide more benefits to them than staying in the current hotels.

Moreover, the negative relationship between normative commitment and intention to leave also had been proved in the statistical results. Increasing in normative commitment tends to help in reducing the level of intention to leave and this adverse relationship was supported by many past researches (Allen & Meyer, 1990; Bartol, 1979; Chang, 1999; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Moncrief, 1996; Samad, 2006). Although Kumar and Eng (2012) proposed that normative commitment had a least influence in intention to leave, it was proven that normative commitment has a negative relationship with intention to leave. Employees have strong normative commitment towards their organizations might because of there are their connected people such as parents or relative are working in the organizations. These people would encourage them to work with the organizations and expect high level of loyalty from them. As a result, those employees would form a moral obligation to stay with their organizations and have lower chance of leaving.

The overall results supported that organizational commitment and intention to leave is highly related to each other. Increasing or decreasing in different type of commitment could generate a great impact towards the level of intention to leave (Thatcher, Stepina, & Boyle, 2003). Based on the analyses, H_1 until H_4 is supported, however, only one out of three hypotheses for the moderating analysis are supported by the research result. Age is examined to have moderating effect on the relationship between normative commitment and intention to leave but it does not moderate affective commitment and continuance commitment. The level of affective commitment is depending on the emotion or feeling of employees and their behaviour to define things instead of their age (Rhoades, Eisenberger, & Armeli, 2001). Employees who shared a common emotion and characteristics tends to possess similar behaviour and level of intention to leave no matter they are young or old. Besides, it is unusual that employees with the same age or generation are having similar characteristics as people change while growing up. Therefore, age is neither used in determining the emotion of the employees nor the impact towards the relationship between affective commitment and intention to leave. In comparison, the factor determining continuance commitment is the costs rather than age (Meyer & Allen, 1991). Both young and old employees possess needs to survive and would perceive similar value of the compensations and benefits given by the hotels. When come to the decision of staying or leaving, the value of the costs for young and old employees could be the same. Therefore, age does not play an important role in the costs and benefits analysis.

In contrast, age moderates the relationship between normative commitment and intention to leave and it is one of the factors that could influence normative commitment besides organizational and positional tenure. Meyer, Allen, and Smith (1993) found that normative commitment tends to increase significantly along with the employee's age and increasing in age would lead to low level of intention to leave (Jonathan, Thibeli, & Darroux, 2013). Employees from different age groups tend to have different level of normative commitment and intention to leave. They might perceive different level of obligation on their jobs which would influence their willingness to stay in the organizations. This paper proposed that the relationship between normative commitment and intention to leave is stronger among the old employees than the young employees. Increasing in normative commitment is expected to have higher reduction in intention to leave of old employees, however, the process of supporting this statement is beyond the scope of this study. Despite that, majority of old employees have worked with the organizations for years and experienced many circumstances. They know the operations of the organizations and might gain supports from the organizations when they are facing difficulties. Besides, some of them might start working when the organizations start from a scratch. Therefore, they make their jobs as an obligation from not letting the organizations fall down.

Although not all the hypotheses are supported in this study, the results give some implications and recommendations for future research. High turnover rate has become a critical issue for many organizations, this paper advocate that organizational commitment is the most significant predictor for the intention to leave in hospitality industry. In other words, organizations could reduce the cost of hiring by increasing the organizational commitment of their employees. According to the three-component model developed by Meyer and Allen (1991), organizations could maximize their employees' commitment in

three perspectives, which are affective commitment, continuance commitment, and normative commitment.

Implications

Affective commitment is influenced by the characteristics of the employees and their jobs. These two elements would interact and ultimately form the working experiences. In order to understand the characteristics, organizations could conduct job analysis and employee personality test so that they would have a better understanding of their employees as well as the jobs assigned. Adjustments could be made to find the best match of the employee and job with the information collected and some of the strategies, including job rotation, decentralization of decision making, or job enrichment and enlargement, could be implemented according to the employees' characteristics. The objective is to achieve person-organization fit and create emotional attachment of the employees towards their organizations (Kristof-Brown, Zimmerman, & Johnson, 2005; McConnell, 2003).

The second way to control the intention to leave is through creating continuance commitment among the employees. According to Abdullah and Abdul (2014), continuance commitment is how much the employees willing to remain the employment due to the cost of leaving is high. In order to increase continuance commitment, organizations could provide more incentives and benefits which would be taken away if they resign from the organizations. However, the benefits related to basic physiological needs, such as accommodations and transportations, should be the first priority to be considered. It is because employees might face difficulty in searching for a new place to live or another way to travel to their new workplace if they resigned from the current organizations.

Besides affective and continuance commitment, organizations could consider to reduce their employees' intention to leave by emphasizing on the normative commitment. It is a perception of the employees in which they have the moral obligation to continue their employment in the organizations (Doyle, 2014). Employees would think that they should perform their works and form obligations. Normative commitment could be result from socialization process as well as the investments which the organizations placed upon the employees (Meyer & Allen, 1991). It could be increased by focusing on employee career planning and development. Those training courses, part-time study programmes, learning trips, or other proposal that would develop the employees' skills tends to increase their normative commitment if it is free and all the costs are borne by the organizations. Although increasing in any type of organizational commitment could reduce the level of intention to leave, the age of the targeted employees should be taken into consideration when designing the strategies. The results in this study showed that age moderates the effect of normative commitment in reducing intention to leave but did not show whether young or old employees have stronger effect. If organizations implement a strategy to increase the normative commitment of their employees, the response of young and old employees would be different. However, since age does not have moderating effect on other relationships, the effect of the strategy to increase affective and continuance commitment would be similar for all employees.

As a result, affective and continuance commitment would be more effective in controlling intention to leave than normative commitment. Organizations should emphasize more on these two variables if the ultimate objective is to increase all employees' commitment and reduce overall turnover rate. The study of whether young or old employees are more sensitive on the relationship between normative commitment and intention to leave is beyond the scope of this paper, therefore, further implication of the moderating effect of age requires future study.

Limitations

Throughout the research, several limitations which might influence the reliability and objectivity of the results are identified. Some limitations is underlying in the research methodology and the first one is the location where the survey had been conducted. Penang is selected as the sampling location due to it is one of the most visited place in Malaysia and convenient for the researchers. However, there are total 13 states and more than thousands hotels in Malaysia. Each state might possess a unique culture and

represent an isolated hospitality industry, therefore, the data obtained solely from one state is difficult to generalize to the whole hospitality industry in Malaysia.

The second limitation is regarding the sampling technique used in selecting the target respondents. Because of the information and resources constraints, convenience sampling technique had been chosen and it might reduce the objectivity of the results due to not all the target population have the equal chance to be selected as respondents. Convenience sampling technique is a nonprobability sampling method in which researchers select the respondents based on their convenience and generally only those hotel employees who have the opportunity to meet the researchers have the chance being selected.

Another limitation is the coverage of the type of employees. This paper is targeting all level of employees who are working in hospitality industry. However, due to the convenience sampling technique is adopted, most of the respondents included in the sample are lower level employees. This intimated that the results only applicable to the middle and first-line employees.

The last limitation of this study is the proportion of young and old employees in the sample. As stated earlier, the difference between the numbers of young and old respondents is large. The frequency distribution of age is right skewed and there are more young employees included in the survey than old employees. Since the moderation effect of age would be tested in this paper, having an approximately equal number of young and old employees are essential to the reliability of the results.

Recommendations for Future Research

Based on the limitations identified, there are few suggestions for future research in order to minimize the impact of the constraints as well as improve the reliability and implication of the research. The first suggestion is concerning the research methodology. Although convenience sampling method is easy and less costly to carry out, probability sampling technique should be the first consideration in order to improve the reliability of the results. Since age is the moderator in this research, stratified sampling technique should be an appropriate option. By obtaining a sample which contains the similar number of young and old employees to the population would make the results become more representative. Besides, expanding the research to other area is necessary. The survey in this paper was conducted in Penang and it could be carried out in other place such as Malacca, Kuala Lumpur, or even whole Malaysia. The selection of sampling location should be based on the importance and contribution of the targeting hotels to the Malaysian hospitality industry.

Another aspect of the recommendations is regarding the moderator. This paper only concentrates whether age moderates the relationship between organizational commitment and intention to leave. However, the study of whether young or old employees have more significant impact on the relationship is beyond the scope of the research. Therefore, future research might investigate the impact of different categories of age to the relationship between normative commitment and intention to leave. Furthermore, as an extent of the research, the moderating effect of working experience could be explored in the future study. Results showed that age does not moderate the relationship of the other commitments and intention to leave, however, it might due to the imbalanced number of young and old employees included in the sample. Most of the young employees joint the hotels for a short period of time and have less working experience in the organizations. Working experience and socialization process are important in forming organizational commitment, new employees are expected to have less commitment as they are in the midst of socializing and adapting themselves into the organizations (Meyer & Allen, 1991). If the organizational culture and norms are mismatch with the employees, they might have high intention to leave at the beginning. Nevertheless, they would have high organizational commitment if they have successfully socialized into the organizations.

Conclusion

Turnover rate is a critical issue for most of the organizations in Malaysian hospitality industry. The objective of this paper is to help these organizations overcome this human resource problem through

reducing the intention to leave of their employees. Many researchers agreed that intention to leave would emerge before the actual turnover happened. Organizational commitment is the best predictor of intention to leave and age has an influential impact on these two variables. Therefore, hypotheses have been developed to study the relationship among organizational commitment, intention to leave, and age. The research was conducted in Penang with 326 set of data collected. Statistical result showed that organizational commitment is negatively related to intention to leave and this is consistent with previous studies done in different sampling location. It is unambiguous that emphasizing on employees' organizational commitment is an effective strategy to maintain a low level of turnover rate.

Furthermore, the study of moderating effect of age in this paper indicated that age is moderating the relationship between normative commitment and intention to leave. Although the detail investigation of this moderating effect is beyond the scope of the research, this result implied that employees from different generations would have different perception on the moral obligation towards their organizations. It might influence the strength of the relationship and organizations should emphasize on the affective commitment and continuance commitment in order to lower down the level of intention to leave of all generations of employees.

In a nutshell, this paper provides a better understanding of the association between organizational commitment and intention to leave as well as the moderating effect of age. It could be essential for the hotel managers in implementing strategy to retain talented employees. It is proven that increasing in employees' organizational commitment would consequently reduce their intention to leave. There are a few implications given in this research to help the hotels control their turnover rate. Besides, several limitations have been identified and should be taken into consideration as they could affect the reliability of the results. Future research could try to avoid the limitations found by taking the recommendations given in order to contribute to the understanding of the relationship and moderating effect of other variables.

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THE INFLUENCE OF JOB STRESS AND BURNOUT ON JOB SATISFACTION AMONG PRIMARY SCHOOL TEACHERS IN IPOH

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Abstract

Educational industry plays a very important role for the development of a country. Teachers have the responsibility in delivering knowledge and educate students to become a good citizen. Teaching profession, however, is considered as one of the most stressful occupations. The purpose of this study is to examine the influence of job stress and burnout on job satisfaction among the primary school teachers in Ipoh. Three hundred (300) sets of questionnaires had been distributed to the teachers from four primary schools in Ipoh and a total number of 240 sets had been returned. Nevertheless, only 226 questionnaires were usable. The results from the multiple regression analysis showed that job stress and two dimensions of burnout (i.e. reduced in personal accomplishment and depersonalization) were significantly related to job satisfaction. For future study, some other stressful professions such as firefighter and airline pilots are recommended. Furthermore, if future studies choose to focus in educational industry, they can emphasize on special education teachers, such as the teachers who teach disable students.

Keywords: Stress, Burnout, Job Satisfaction, Teachers

INTRODUCTION

Education is a very important factor that will affect the personalities, behaviour and characters of an individual. Educational industry plays a vital role in the development of a country. The "Malaysia economic monitor: High performing education report" that released by the World Bank (2013) had stated that the education industry helps in modeling and developing students to become knowledgeable individuals and increase the economic growth of the country. Teachers bear great responsibility to transfer the intellectual knowledge, cultivate and educate the younger generation to become good citizens of the country. Teachers are able to alter the teaching-learning outcomes and they are the key determinants of the quality of education in a country. Therefore, teachers play a critical role in solving the declining educational standard issue in Malaysia.

Teacher is one of the highest stress professions (Kyriacou, 2001; McCarthy, 2009). Teaching is a stressful job (Shirley & Kathy, 2002; Kyriacou, 1989) due to role overload, increasing students' number, work overload and bigger class size (Billehoj, 2007). The president of National Union of the Teaching Profession (NUTP), Ismail Nihat claimed that the stress level among teachers in Malaysia is increasing and worrying. This is due to their heavy workload and rapid changes in the industry (Sapidin, 2005). In addition, human service professionals including teachers are often related to burnout as well (Croom &

Moore, 2003). According to Balkin, White and Bodey (2003), burnout will result in lower teaching quality, absenteeism among staff and early departure from the profession.

The National Union of the Teaching Profession reported that Malaysia's teachers' stress level is increasing from time to time and this has resulted in their intention to withdraw from the job and declining job satisfaction (The Sun, 1999). Abdul (2005) stated that the Malaysian Ministry of Education is having a higher job requirement towards teachers and parents are also more demanding. Job satisfaction among teachers is important and it directly impacts the job performance of teachers (Chamundeswari, 2013). It is an indicator to measure the happiness of teachers towards their jobs. The National Union of the Teaching Profession of Malaysia ("Teachers under huge pressure to deliver", 2012) reported that teachers facing tremendous pressure to deliver in classes. They are facing insomnia and stress and this had led to serious distraction and unable to focus in daily lives. It was also reported that young teachers nowadays are suffering from serious burnout and many had diagnosed with serious illnesses, such as cancer and heart diseases ("NUTP links illness", 2006).

Job satisfaction has a significant impact on the job commitment, productivity and the capabilities to perform of a teacher. Teachers with great satisfaction is likely to contribute to effective education and help Malaysia in achieving vision 2020 (Abdullah, Uli, & Salahudin, 2007), whereas low job satisfaction among teachers will influence their instructional performance, students' learning and academic achievements. Therefore, the influence of job stress and burnout on teachers' job satisfaction in Malaysia is worthwhile to be studied.

Malaysia educational standard needs great improvements as a number of reports indicated that Malaysian students' achievements at international level are not satisfactory. According to the Programme for International Student Assessment (PISA) 2012 report, Malaysia was ranked 52nd out of 65 countries. The country ranking is lower than the Organization for Economic Co-operation and Development (OECD) and international average score (Mozihim, 2014). Similarly, Malaysia's achievement in The Trends in International Mathematics and Science Study (TISS) for 2012 also discouraging as it showed the worst drop in ranking since the country participate in 1999 (Mozihim, 2014). The educational standard is declining in primary, secondary and tertiary education in Malaysia. This is proven when the "Malaysia economic Monitor: High performing education" report criticized on recent school performance (World Bank, 2014). Furthermore, World Bank Report (2013) has stated that the educational standard is worsening in Malaysia despite the government was spending twice more than neighbouring countries in education. The report highlighted that education plays a critical role in the country in order to achieve high-income status. It further stated that Malaysia has to prioritize the quality of teachers instead of the quantity.

It is significant to have high level of job satisfaction among teachers. According to Bishay (1996), teachers are one of the most important groups of professionals in a country and improvement on their motivation and satisfaction will benefit students and other teachers. They are not merely educators, but also served as role model to the younger generations. Teachers tend to be more effective when they are satisfied with the job (Bishay, 1996). Higher level of job satisfaction will also inversely affect the turnover rate of staffs (Lambert & Hogan, 2009). Education has always been among the top priorities of a nation policies development and international cooperation among the countries. Besides being the universal right, education has been perceived as the major factor of economic run (Aiglepierre & Wagner, 2013).

There are published papers examining the job satisfaction among primary school teachers in Malaysia. For example, Abdullah and Hui (2014) indicated that there was a small but significant positive relationship between communication satisfaction and teachers' job satisfaction in Malaysian primary school. On the other hand, Mat Din (2014) conducted a study to examine the effects of principal's leadership style on teachers' job satisfaction. Besides that, Singh (2005) reported that teacher background characteristic, work condition and compensations affected the level of job satisfaction among primary school teachers in Seremban. However, more empirical studies are required to understand the extent to which Malaysian primary school teachers' job satisfaction is influenced by stress and burnout, which seem to be limited thus far. As such, to fill this gap, current study aims to examine the relationship between stress, burnout (i.e. emotional exhaustion, depersonalization, and personal accomplishment) and job satisfaction among the primary school teachers in Perak, Malaysia.

LITERATURE REVIEW

Job Satisfaction

The study on job satisfaction has always been a big interest to social scientists. Kalleberg (1977) stated that evidence has shown that degree of satisfaction towards work is linked to the quality of a person's life outside work role itself. Byars and Rue (2004) explained that there are five main components of job satisfaction, which are the attitude towards the working condition and work group, attitude towards the monetary benefits of company, the company itself, and the attitude towards company's management.

In addition, there are many models which study job satisfaction but the Two Factors Theory by Herzberg is the ancestor of all (Pedrycz, Russo, & Succi, 2010). According to the theory, presence of motivators, such as the chances of promotions, recognition from supervisors, and makes more money will affect job satisfaction. On the other hand, hygiene factors, such as money, working condition and policies of the company will results in decrease of job satisfaction. Hackman and Oldham (as cited in Pedrycz et al., 2010) suggested the Job Characteristics Model. This model stated that job satisfaction is determined by five job characteristics, which are skill variety, task identity, task significance, autonomy and feedback from the job.

According to Locke (1968), there are several components and aspects of job satisfaction, such as the work itself, pay, recognitions and promotions, the working conditions, benefits brought by the job, co-workers, management of company, the company and supervision. These few aspects can be categorized into two main dimensions: extrinsic and intrinsic. Intrinsic refers to the variety and autonomy of the job, together with other elements which related to the tasks or jobs. On the other hand, satisfaction towards pay, colleagues and the working environment, and other aspects which do not directly relate to the job, are known as extrinsic motivators.

Studies have shown the direct relationship between job satisfaction and several external variables. For example, Bartram and Casimir (2007) found that trust in leadership is important to ensure employees' satisfaction. Chou and Robert (2008) discovered that support from supervisors is important. Berger and Brownell (2009) stated that the company procedures and policies are very important to employees' satisfaction. Badri, Mohaidat, Ferrandino, and Mourad (2012) conducted a study on job satisfaction among teachers. They stated that school teachers faced declining job satisfaction as a result of burnout. In their study, teachers' job satisfaction is influenced by demands of the jobs, the control they have on the working environment, type of school, tenure and competency, culture of the organization and demographic factors such as gender and age.

Lent and Brown (2006) developed another model on job satisfaction. This model indicates five elements: Personality or affective traits, participation in goal-oriented activities, working environment or conditions, self-efficacy expectations and the support and obstacles from environment. In a study by Green and Heywood (2007), they studied the relationship between job satisfaction and performance pay. Performance pay includes bonuses, profit sharing. It was stated that performance pay can leads to reduction in job satisfaction. However, those employees who received bonuses and profit sharing may have higher level of overall job satisfaction as compare to those who did not receive.

According to Michaels and Spector (1982), low level in job satisfaction can increases employees intention to turnover and resulted in an increase in turnover rate. Job satisfaction is also negatively related to absenteeism, withdrawal from the job whereas it associated to rewards and training positively (Autry & Daugherty, 2003). Yang (2010) found that job satisfaction was an important contributor to individuals' commitment to their organizations.

Stress and Job Satisfaction

According to the European Occupational Health and Safety (2011), the sources of teachers include work overload, increased of the class size, role overload and unacceptable students' behavior. The sources of stress can cause the teachers run in burnout, high absenteeism, emotional exhaustion, low job satisfaction and so on. The role of being a teacher is to foster children to become a

knowledgeable person ("*Teacher's in-depth content knowledge*", n.d.). Therefore, teacher always experience some unpleasant emotions, such as fear, worry, tensions and anger due to work overload, not enough time and energy, and unfavorable working conditions (Kyriacou, 1989).

Consequences of stress to the employees include loss of efficiency, increase of employee absenteeism, and loss of productivity (Marilyn, 2003). Waseem and Iqbal (2012) concluded that there are five drivers of job stress among employee, such as relationship with others (Sauter, Murphy, & Hurrell, 1992), performance pressure (Scott, 1966), work load (Wilkes, Beale, Hall, Rees, Watts, & Denne, 1998) and home-work interface (Alexandros-Stamatios, 2003). Study by Landsbergis (1988) demonstrated that low level of job satisfaction was associated with high level of work stress. Mofoluwake and Oluremi (2013) conducted a study among employees of NAPIMS (National Petroleum Investment Management Services) in Nigeria. Their study showed that the level of job satisfaction tends to decrease when there is an increment in organizational stress. The authors explained that the factors that lead to organizational stress include physical demands, as well as psychological demands of the job or task. As such, the following hypothesis is formulated:

Hypotheses 1: There is a significant relationship between stress and job satisfaction.

Burnout and Job Satisfaction

Burnout can be described as "psychological syndrome that involve emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment that may happen to different professional groups who work with other people in challenging circumstances" (Maslach, 1982). Emotional exhaustion defined as "having a feeling of being emotionally overextended and depleted of one's emotional resources". Emotional exhaustion arises when workers start to feel tired, overwhelmed and emotionally drained by the job (Maslach & Jackson, 1981). Based on the research by Chenevey, Ewing, and Whittington (2008), teachers who experienced higher level of emotional exhaustion are more likely suffer from higher burnout.

Depersonalization is defined as negative response which tends to keep themselves away from other people. Depersonalization is associated with role ambiguity and role conflict, job satisfaction and stress (Lee & Ashforth, 1996). According to Leiter and Maslach (2004), depersonalization often develops in response to overload exhaustion. Teachers may show negative, cold and indifferent attitudes and sometimes will physically distancing themselves from students.

Reduced personal accomplishment is defined as the reduction in sense of self accomplishment and competence in work. According to Pines and Aronson (1988), reduced personal accomplishment occurs among teachers when they evaluate themselves negatively and they feel no longer doing a meaningful and important job. This personal accomplishment is associated with the job participation and satisfaction (Lee & Ashforth, 1996; Talachi & Gorji, 2013).

Job demand-resources (JD-R) model explains that job resources and job demands usually related differently to some specific outcomes (Bakker & Demerouti, 2007). There are two major processes explains by the J-DR model. Firstly, the demanding process of job such as unmet expectation, role overload, role conflict and role ambiguity will lead to engagement and burnout. The role characteristic, such as role overload, role conflict and role ambiguity will lead to the higher burnout (Lee & Ashforth, 1996; Peiro, Gonzalez-Roma, Tordera, & Manas, 2001). Secondly, the lack of the resources in a job like met expectation, supervision and self-efficacy will also lead to burnout. If it continues in the long term, individuals will have turnover intention, low job satisfaction, mental health problem, and physical health problem and so on.

Maslach Burnout Inventory (MBI) is the most commonly used instrument to measure burnout (Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996). The modified MBI, such as The MBI-Human Services Survey (MBI-HSS) also measure the three dimensions of burnout - emotional exhaustion, depersonalization and reduced personal. Meanwhile, MBI-Educators Survey (MBI-ES) was

developed to measure the same three dimensions of burnout as the original MBI, but focus on those in teaching profession (Maslach, Jackson, & Leiter, 1996).

In teaching profession, emotional exhaustion occurs when the teachers feel tiredness and fatigue as emotional energies is drained. When the situation become severe, teachers will find themselves cannot perform as before. Besides that, when the teachers do not have positive feelings to their students, they experience depersonalization, which is the second component of burnout. Reduced personal accomplishment in teaching profession is the feeling of low level of achievement from their job. Teachers will feel that they are no longer able to help their students to grow and learn when reduced personal accomplishment is occurs. Matin, Kalali, and Anvari (2012) found that job burnout and job satisfaction among employees are negatively related to each other. As such, following hypotheses are proposed:

Hypotheses 2(a): There is a significant relationship between emotional exhaustion and job satisfaction.

Hypotheses 2 (b): There is a significant relationship between depersonalization and job satisfaction.

Hypotheses 2(c): There is a significant relationship between reduced in personal accomplishment and job satisfaction.

CONCEPTUAL FRAMEWORK
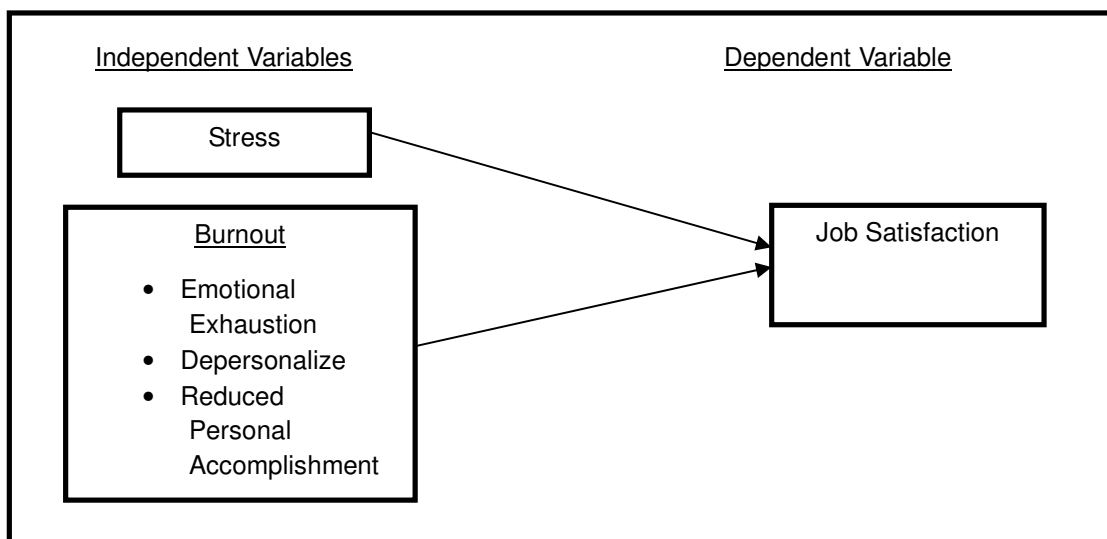
Figure 1: Proposed Conceptual Framework

Based on the review of previous literatures as described in the earlier parts, it is expected that stress will resulted to the decline in job satisfaction. Moreover, long-term occupational stress cause burnout and it commonly happens among human services workers, such as teachers (Jennett, Harris, & Mesibov, 2003). The three dimensions of burnout (emotional exhaustion, depersonalization, and reduced in personal accomplishment) are expected to have significant effects on job satisfaction among teachers.

RESEARCH METHODOLOGY

Sampling Design and Research Procedures

In this research, the target respondents are the primary school teachers in Ipoh, Perak. Based on the statistics provided by Education Department of Perak for year 2014, the latest number of primary school teachers in Perak is 22,328 people. According to the Krejcie and Morgan's (1970) sampling size table, at least 240 respondents are required in this research. Non-probability sampling was conducted in this research whereby convenience sampling is chosen. "Convenience sampling refers to sampling by

obtaining units and people who are most conveniently available" (Zikmund, 2003). This sampling method is a quick and economically way get a huge number of completed questionnaires (Sekaran & Bougie, 2012).

For this research, a few primary schools have been randomly selected, namely SJK (C) Ave Maria Convent, SJK (C) Yuk Choy, SJK (C) Sam Tet, and SJK (C) Gunung Rapat. Permission was obtained from the headmaster of each primary school before the data collection was conducted. Self-administered questionnaire was used for the purpose of data collection. A cover letter was disclosed to explain the purpose of the survey and the respondents were ensure that all the information will be kept private and confidential, and it is used for academic purpose only.

Before full study was carried out, a pilot study has been conducted in order to check the reliability and content validity of the questionnaire. A total of 30 sets of questionnaires were distributed to the primary school teachers in SJK(C) Wan Hwa 1, Ipoh during the pilot test. All the 30 sets of questionnaire have been collected back from the respondents. Subsequently, Statistical Analysis System (SAS) software was used to examine the reliability of the survey instrument based on the data collected from the pilot study.

Alpha coefficient for each variable based on the data in pilot study was: job stress (0.845), emotional exhaustion (0.875), reduced in personal accomplishment (0.652), depersonalization (0.658), and job satisfaction (0.803). As Cronbach's coefficient alpha for all the variables were above 0.6, which is considered as acceptable range (Sekaran, & Bougie, 2012), all items were remained.

For the actual study, a total number 300 set of questionnaires have been distributed to the teachers in four major primary schools in Ipoh, namely SJK(C) Ave Maria Convent, SJK(C) Yuk Choy, SJK(C) Sam Tet and SJK(C) Gunung Rapat. There are total 240 sets of questionnaires have been collected back from these four primary schools. The data were keyed in into Statistical Analysis System (SAS) software to test for reliability. Besides that, the Statistical Package for Social Sciences (SPSS) software was used to test for Pearson correlation coefficient and Multiple Regressions tests. During the progress of keying in data, there are 14 sets of questionnaires being excluded as there were problematic. Therefore, 226 sets of questionnaires were used for data entry.

Respondents' Profile

As the result, the sample included 29 males (12.83%) and 197 female (87.17%). The majority respondents are 46 to 55 years old (33.63%). Most of the respondents are Chinese (94.25%) and married (78.76%). Besides that, majority of them are Diploma holders (44.69%). Most of the respondents are receive basic salary at the range of RM 4000 to RM 5000 (38.49%) and working for 40hours per week (34.51%). In addition, majority of the primary school teacher in this research have experience as a teacher in school for 5 to 10 years and 11 to 15 years (23.45%). Most of them also have the experience as a teacher in education industry for 11 to 15 years (22.57%).

Measures

Five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was used for all the measurement scales. All the scales were adopted from previous studies as summarized in Table 1.

Table 1 Summary of measures adopted

Variables	Source	No. of Items
Burnout - Emotional Exhaustion - Personal Accomplishments - Depersonalization	Croom, & Moore (2003)	 8 8 4
Job Satisfaction	Minnesota satisfaction questionnaire (Weiss, Dawis, England, & Lofquist, 1967)	10
Personal Job Stress	Cohen, Kamarck, & Mermelstein (2012)	14

DATA ANALYSIS

After all the data has been entered into the SPSS software, data were screened to check for missing data. Next, reliability analysis was performed for the data collected from the actual study. Cronbach's coefficient alpha is an indication of how well the items in the questionnaire are correlated with each other positively (Sekaran & Bougie, 2012).

Table 2: Cronbach's Alpha, mean, and standard deviation for the variables in this study

Variables	Coefficient Alpha Value	No. of Item
Job Stress	0.914	4
Burnout: Emotional Exhaustion	0.933	8
Personal Accomplishment	0.871	8
Depersonalization	0.705	4
Job Satisfaction	0.857	10

Based on the guidelines by Sekaran and Bougie (2012), the coefficient alpha value of job stress, emotional exhaustion, personal accomplishment and job satisfaction are 0.914, 0.933, 0.871 and 0.857 respectively (Table 2). Besides that, depersonalization has a good reliability since its coefficient alpha value of 0.705. The results indicated that all the variables show good to excellent reliability.

Pearson Correlation Coefficient

Table 3: Correlations between Stress, Dimensions of Burnout and Job Satisfaction

		Stress	ee	pa	d
js	PearsonCorrelation	-.429[**]	-.428[**]	-.534[**]	-.219[**]
	Sig.(2-tailed)	.000	.000	.000	.001

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

Note. Js = job satisfaction, ee = Emotional Exhaustion, d = Depersonalization, pa = Reduced in Personal Accomplishment

Based on the findings shown in Table 3, stress, emotional exhaustion, depersonalization and reduced in personal accomplishment has a -0.429, -0.428, -0.219 and -0.534 correlations with job satisfaction respectively. The strengths of correlation range from weak to moderate.

The p-values as shown in Table 3 are 0.0001, 0.0001, 0.001 and 0.0001 respectively, which are less than the significance alpha value of 0.01. This indicated that there is a significant negative correlation between stress, emotional exhaustion, depersonalization, reduced in personal accomplishment and job satisfaction. Therefore, the results prove that when stress, emotional exhaustion, depersonalization and reduced in personal accomplishment increase, the job satisfaction will decrease.

Multiple Regression Analysis

Multiple regression assumptions, such as normality and multicollinearity were examined before the analysis was performed. The following diagram showed that the normality assumption was met.

Normality

Figure 2 Normal P-P plot of regression standardized residual and histogram

As shown in Figure 2, the P-P plot indicates that all data is falling on the straight line. Therefore, the variables of this research have a normal distribution. It also indicates that the distribution is quite equally distributed. The shape of histogram in the figure has also shown that the research has a normal distribution.

Table 4: Casewise Diagnostics

Case Number	Std. Residual	Js	Predicted value	Residual
117	-3.007	2.20	3.4771	-1.27709

Casewise diagnostics were performed to examine multivariate outliers. If the standard residual value is more than 3, regardless of positive or negative value, the case may be problematic. Case number 117 has a Standard Residual value of -3.007. As such, the case was then deleted and left 225 cases for further analysis.

Table 5: Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
Stress	0.342	2.922
Emotional Exhaustion	0.325	3.072
Reduced in Personal Accomplishment	0.894	1.119
Depersonalization	0.661	1.513

The Variance Inflation Factor (VIF) values of stress, emotional exhaustion, reduced in personal accomplishment, depersonalization are 2.922, 3.072, 1.119, and 1.513 respectively (Table 4). Therefore, this indicates that the variables in this research do not face any multicollinearity issue as all VIF value of variables do not exceed 10 (Sekaran & Bougie, 2012).

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643a	.414	.403	.41654

a. Predictors: (Constant), Stress, Emotional Exhaustion, Reduced in Personal Accomplishment, Depersonalization
b. Dependent Variable: Job Satisfaction

Result in Table 5 shows that the R value of this study is 0.643. Thus, the relationship between independent variables and dependent variable is moderate positive. Besides that, the R square value is 0.414, which shows that the independent variables, stress, emotional exhaustion, reduced in personal accomplishment and depersonalization can explain 41.4% of the variance in job satisfaction.

Table 7: Anova

Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	26.942	4	6.736	38.820	.000b
Residual	38.171	220	.174		
Total	65.113	224			

a. Predictors: (Constant), Stress, Emotional Exhaustion, Reduced in Personal Accomplishment, Depersonalization
b. Dependent Variable: Job Satisfaction

Table 7 shows that p-value is equal to 0.0001, which is less than the alpha value 0.01. Therefore, it can be concluded that the independent variables stress, emotional exhaustion, reduced in personal accomplishment and depersonalization are significant to explain the variance in job satisfaction. The model for this research considers a good descriptor of the relation between independent and dependent variables.

Table 8: Multiple Regression Analysis between Stress, Dimensions of Burnout and Job Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.021	.142		35.445	.000
Stress	-.157	.049	-.282	-3.197	.002
Emotional Exhaustion	-.091	.058	-.142	-1.567	.118
Reduced in Personal Accomplishment	-.452	.051	-.488	-8.928	.000
Depersonalization	-.129	.051	-.161	2.537	.012

Note: N= 225

Based on Table 8, the p-value of emotional exhaustion is 0.118, which is more than alpha value 0.05 and this indicates that this variable is not significant to predict the dependent variable of job satisfaction. The p-value of stress, reduced in personal accomplishment and depersonalization are 0.002, 0.0001 and 0.012 respectively which is lower than alpha value 0.05. This shows that these three variables are significant to predict job satisfaction (dependent variable). As such, the results supported hypotheses H1, H2(b), and H2(c), but not H2(a).

The Standardized Coefficient Beta value shows the contribution of each variable to the research. The Standardized Coefficient Beta value of reduced in personal accomplishment, stress,

depersonalization and emotional exhaustion are 0.488, 0.282, 0.161 and 0.142 respectively. This indicates that the highest contributing variable in explaining the variation of dependent variable is reduced in personal accomplishment and followed by stress, depersonalization and emotional exhaustion.

DISCUSSION AND CONCLUSION

Pearson analysis showed each of the independent variables (stress and all the dimensions of burnout) correlate negatively with job satisfaction. On the other hand, multiple regression analysis results showed that stress and burnout (particularly reduced personal accomplishment and depersonalization) are significantly related to job satisfaction. Therefore, management of school, Ministry of Health and Ministry of Education, together with teacher themselves play important roles to help teachers to cope with stress and burnout.

The management of school must find ways to help teachers to cope with stress and burnout. Firstly, management must consult teachers on teaching issues, such as the development of co-curriculum and teaching plans. Secondly, schools must be able to provide sufficient resources or facilities to teachers. Thirdly, job expectations and job roles must be communicated clearly to avoid conflicts and ambiguity. Fourthly, communication between teachers and management must be open so that there is a platform for feedback and support. Lastly, management must provide and encourages activities on developing professional identity for teachers (Kucukoglu, 2014).

Furthermore, Ministry of Health or the Ministry of Education must enforce certain policies or standards for stress management. Besides, teachers should also learn to manage their own emotions. According to Kucukoglu (2014), there are few strategies to help teachers to cope with burnout. For example, they can seek for chances to go overseas for educational development, or spend some time to do something to relax and relief stress. When there are problems, they should discuss with others. Teachers must understand their own weaknesses and lastly they should have a healthy life style.

Limitations and Suggestions for Future Research

There are few limitations of this research. Firstly, as the research focus in Ipoh, Perak, this research has limited sample size. Since the target respondents had been narrowed down, thus, the result might not be able to represent all teachers in Malaysia because teachers from different states may have different perceptions. Secondly, some of the questionnaires distributed by researchers were unable to collect back. 300 questionnaires were distributed but only 240 sets of questionnaires were collected back. Some questionnaires were also invalid as there were empty answers because teachers refuse to answer the questions.

Besides that, the questionnaires were distributed to teachers and collected back after few days. Therefore, the problem of self-administration questionnaire will be encountered as some of the teachers may not understand the questions because there was no guidance by researchers. The last limitation is that r square is not enough to explain the variation between the independent variables and dependent variable. According to the results which generated by the study is only 41.4% of the independent variables. 41.4% is not an ideal result, because there is still 58.6% of variables cannot be explained in the research.

There are four recommendations for future study. Firstly, in order to overcome the limitation on sample size, it is recommended that futures researchers can carry out relevant study in other states such as Penang, Kuala Lumpur and Johor Bahru. Penang is one of the states that is highly recommend. Nowadays, the cost of living in Penang is higher than Kuala Lumpur and it will cause stress among residents in Penang.

Next, since R square value is not enough to explain job satisfaction, it is recommended that future researches can add in others variable that may have more influence on job satisfaction in order to obtain more accurate result. In addition, future researchers can carry out the researches that focus on other professions. Forbes 2015 reported that fire-fighters and airlines pilots are in the list of most stressful jobs. Airline industry is also highly recommended because it is a fresh topic to study.

Lastly, it is recommended that future researchers can narrow down the respondents in more specific type of teachers. Teacher who are teaching those students which have learning disability are often ignored by researcher. These special education teachers always experience higher stress and burnout than general teacher. Therefore, it is a good and fresh area for future researchers to study.

In conclusion, this study provides empirical evidences that stress and burnout has negative implications to teachers' job satisfaction. As such, the school administrator and policy makers must take proactive steps to prevent or minimize such problems.

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CONCEPTUAL STUDY BETWEEN PSYCHOLOGICAL EMPOWERMENT AND AFFECTIVE COMMITMENT AMONGST ACADEMIC STAFF IN MALAYSIAN UNIVERSITIES

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Abstract

The primary purpose of this conceptual paper is to examine the relationship between psychological empowerment and affective commitment amongst academic staff in Malaysian Universities. Apart from this general relationship, the study has also specifically investigated on the significance of cognitions for psychological empowerment with affective commitment. Past empirical studies indicated that affective commitment is one of the most critical organizational commitments from staff toward institutions. Conceptual framework has formulated via a comprehensive review of past literatures. All proposed hypotheses are supported and discussed thoroughly.

Keywords: Psychological Empowerment, Affective Commitment

INTRODUCTION

In the past decades, organisational commitment has received a great deal of attention from research scholars and business practitioner on both theoretical and practical levels in various contexts such as in education industry (Bogler & Somech, 2004, Somech & Bogler, 2002), construction industry (Liu, Fellows & Chiu, 2006), hotel industry (Ahmad & Scott, 2015), telecommunication industry (Gurjeet & Rupali, 2014), older workers context (Winkelmann-Gleed, 2012), service industry (Fauzia, Mohamed & Hossam, 2015), employees working in public sector in Korea (Joo & Shim, 2010) and front-line employees from various industries (Aladwan, Bhanubogan & D'Netto, 2015; Aladwan, Bhanubogan & Fish, 2015). Studies have confirmed and purported that organisational commitment is one of the powerful aspects of work attitude in the areas of management and organizational behavior (Allen & Meyer, 2000) and also one of the popular and influential concept in most of industries (Jain, 2015). There were substantial research efforts which concentrated on the antecedents and consequences of organisational commitment.

Antecedents that are found to have significantly related to organisational commitment are psychological characteristics (Salami, 2008), fringe benefits (Ahmad & Scott, 2015), job satisfactions (Chughtai & Zafar, 2006), psychological contract (Fauzia, Mohamed & Hossam, 2015), organizational justices (Khurram, 2009), human resource practices (Aladwan, Bhanubogan & D'Netto, 2015), empowerment (Raub & Robert, 2007; Bogler & Somech, 2004), perceived organizational support (Aggarwal-Gupta, Vohra & Bhatnagar, 2010; Loi, Ngo & Foley, 2006) and organisatonal culture and volunteerism (Jain, 2015). Conversely, the confirmed consequences for organisational commitment are

turnover intention (Gurjeet & Rupali, 2014; Lew, 2007; Loi, Ngo & Foley, 2006), employees' productivity (Obeng & Ugboro, 2003), organizational citizenship behavior (Pare & Tremblay, 2007) and counterproductive behaviors (Dalal, 2005). Regardless of such impressive retrospective research efforts which have produced quality and useful research outputs, there is still lack of research focus in Malaysia education context.

Intrinsic motivation (Choong, et al,.2014; Choong, Wong & Lau, 2012a; 2011a), job autonomy (Choong, et al.,2014; Choong, Wong & Lau, 2012a), job satisfaction (Choong, 2012), psychological empowerment (Choong, Wong & Lau, 2011b; 2012b) and demographical variables (Choong, Tan, Keh, Lim & Tan, 2012) were significantly related to organisational commitment in Malaysia higher education context. Choong, et al. (2011a) have conducted a conceptual study on the relationship between psychological empowerment and organizational commitment. The research was then narrow down to investigate the four cognitions of psychological empowerment with organizational commitment among academic staff in the context of Malaysian private universities in 2011 (Choong, Wong and Lau, 2011a). The study findings posited the four cognitions of psychological empowerment are correlated with organizational commitment. However, only impact cognition is significantly associated with organizational commitment.

Subsequently, further study on the relationship between psychological empowerment and affective commitment among academicians in Malaysian private universities was conducted by Choong, Lau, Tan and Lim (2012). Their findings indicated that impact and competence cognitions are significantly associated with affective commitment. The examination on the relationship between psychological empowerment and the three dimensions of organizational commitment namely; affective, normative and continuance commitments among academic staff of private universities in Malaysia context is also conducted which posited that psychological empowerment is influence the most to affective commitment (Choong, Keh, Kuek, Lim & Lee, 2013). The most recent research output is tested on the four cognitions of psychological empowerment with affective commitment conceptually (Choong, Tan, Teoh, Tan & Teo, 2013) and empirically (Choong, Tan, Keh, Choe & Tan, 2014).

While previous studies were aimed at private higher education sector, the cognitions might be applicable to public higher education sector in Malaysia as well. Hence, the main objective of this paper is to examine the four cognitions of psychological empowerment with affective commitment amongst academic staff in Malaysian Public Universities. By achieving this objective, it is able to provide some valuable practical and theoretical implications, especially to Ministry of Higher Education, Public University Management and its Human Resource Team in designing practical programs and policies to lead fellow academicians affectively committed towards their institution.

The structure of this paper started with a brief background on organisational commitment, research issues and objectives of this study. Conceptual argument pertaining to the relationship between four cognitions of psychological empowerment and affective commitment will be discussed next based on past relevant literatures. It is followed by proposition development of the conceptual framework formulation. Lastly, several useful practical and theoretical implications will be highlighted at the end of the paper for the benefit of the readers.

Organisational Commitment

Various forms of commitment have been constructed and tested in the last twenty years which termed as organisational commitment (Aladwan, Bhanubogan & D'Netto, 2015; Aladwan, Bhanubogan & Fish, 2015), team commitment (Foote & Tang, 2008; Park, Henkin & Egley, 2005), leader commitment (Abrell-Vogel & Rowold, 2014), occupational commitment (Yuan & Li, 2008; Mayer & Herscovitch, 2001), union commitment (Line & Lasmane, 2014; Dey, 2012; Ezirim, Nwibere & Emecheta, 2011), goal commitment (Presslee, Vance & Webb, 2013; Bipp & Kleingeld, 2011; Zhang & Huang, 2010), professional commitment (Ajay & Bindu, 2015) and career commitment (Poon, 2014; Ballout, 2009; Freund & Carmeli, 2003; Vesa, 2003). However, the most empirically tested form of commitment is the original form of commitment: organisational commitment (Aladwan, Bhanubogan and Fish, 2015; Brian and Christopher, 2011). Organisational commitment is found to be a major impact of organisational

performance such as productivity increase, reduce absenteeism (Natarajan and Nagar, 2011), reduce lateness (Somers, 2009) and turnover intention (Gurjeet and Rupali, 2014).

The concept of organizational commitment (OC) has been found as critical workplace behaviour (Jain, 2015) and salient ongoing organisational issues for most of organisations (Chew and Chan, 2008). It has broadly defined by myriad researches. Organisational commitment is originally developed by Porter, Steers, Mowday and Boulin (1974) and Mowday, Steers and Porter (1982) which defined as "the strength of an individual's identification with and involvement in a particular organisation". However, the concept is later redefined as multidimensionality in nature named as affective, continuance and normative commitment (Meyer and Allen, 1997; 1991; 1987; Allen and Meyer, 1990). In Allen and Meyer (1990) study, they tested and found that all the three components of organisational commitment are distinct with each other. The dimensionality of organisational commitment has conceptualized by different psychological states (Meyer, Stanley and Parfyonova, 2012; Akintayo, 2006). It is argued that employee will "experience all three forms of commitment to varying degrees" (Meyer, Stanley and Parfyonova, 2012, pg. 1).

Affective commitment is defined as "an employee's desire to be emotionally attached to the identification with and involvement in the organisation" (Meyer and Allen, 1997; Allen and Meyer, 1990). Employee with high affective commitment will prefer to stay and attach to the organisation, because they want to. For continuance commitment, it is depicted as "the employees' awareness or recognition of the benefits of continuing to remain in the organisation versus the perceived cost of leaving the organisation" (Meyer and Allen, 1991; Allen and Meyer, 1990). Employee with high continuance commitment will tend to remain as a member of an organisation, because they need to. Normative commitment is often referred as "a consequence of an employee's feeling of obligation to stay in the organisation based on one's personal norms and values" (Meyer and Allen, 1991; Allen and Meyer, 1990). For employee with high normative commitment, they will continue stay in their work, because they ought to.

Based on several research findings, affective commitment is the component that provides the strongest effect on positive work behavioral outcomes such as turnover intentions, absenteeism, organisational citizenship behaviour and counterproductive behaviors (Lew, 2007; Dalal, 2005). Shore and Martin (1989) posited that affective commitment is strongly correlated with organisational commitment. If employee has higher intention to remain in an organisation, he or she will have better organisational commitment. This has confirmed by Meyer and Allen (1997). Among the three dimensions, affective commitment is found to be most beneficial dimension towards an organisation. Hence, only affective commitment will be included and tested in this research.

Psychological Empowerment

Initially, the term "psychological empowerment" is defined by Conger and Kanungo (1988) as "a process of increasing employee feelings of self-efficacy" (Conger and Kanungo, 1988). If an individual belief in himself or herself have better capability to perform assigned tasks or duties, then he or she will perceived being empowered psychologically. Psychological empowerment was then re-defined as "an intrinsic motivation manifested in four cognitions which reflecting an individual's orientation to his or her work role" (Thomas and Velthouse, 1990). Thomas and his colleague strongly belief that the four cognitions are used to form the psychological empowerment constructs. The four cognitive of psychological empowerment are referred as impact, competence, meaningfulness and choice. With the combination of four cognitive, it would motivate and influence the employees to perform their work more efficiently and effectively.

Consequently, Spreitzer (1996; 1995) has revised and operationalized the proposed model of psychological empowerment which is constructed by Thomas and colleague. Based on her extended study, she has renamed the meaningfulness as meaning cognition and choice as self-determination cognition. She is further defined the term as "reflecting personal sense of control in the workplace, as manifested in four beliefs about the person-work environment relationship in the four cognitions: meaning, competence, self-determination and impact" (Spreitzer, 1995). If missing of anyone dimension, it will limit the sense of psychological empowerment, otherwise, it will maximize the effect of psychological

empowerment. The meaning cognition is expressed as the value of jobs or tasks given based on one's values, beliefs and behaviours (Thomas & Velthouse, 1990). For competence cognition, it is referred as an individual efficacy level on performing a specific task successfully. If an individual belief in him or her capability to perform the task, it would increase his or her competency level. Self-determination can be defined as an individual autonomy level in making decision or initiating and regulating of own action. Lastly, the impact is an individual belief on his or her outcome that will influence on organisational outcome.

Psychological Empowerment and Affective Commitment

Great efforts and significant contributions in the research artworks on Psychological Empowerment and Organizational Commitment have been witnessed by fellow academic researchers and industry practitioners throughout recent decades. The research span has been targeted across myriad respondent groups, sectors, industries and even countries, for instance studies have been conducted in education sector in which teachers or academic staff as target respondent, in construction sector whereby quantity surveyors as target respondent as well as IT executives in India information technology industry. Positive and significant relationship between psychological empowerment and organizational commitment has been evidenced in the study of Somech and Bogler (2002) in which they studied teachers have been delegated the right to participate in managerial decision making aspect. This result has also be found consistent with the findings from other researchers, namely Firestone and Pennell (1993), Hackman and Oldham (1980) and Mowday, Porter and Steers (1982). Another study had implemented in the year of 2004 by Somech and Bogler which targeted towards Israeli middle and high school teachers over their perceptions on empowerment extent and the feeling of commitment to the schools, finding revealed that positive correlation between psychological empowerment and organizational commitment and similar results also found by Hoy, Tartar and Bliss (1990) and Louis and Smith (1991).

Affective commitment as one of the critical dimensions in organizational commitment has been drawn into attention in this research study. Numerous foretime researches have been established and proven the relationship or association between psychological empowerment and affective commitment. Empirical study published by Choong, Tan, Keh, Choe and Tan (2014) in which the study concentrated in exploring the relationship between psychological empowerment and affective commitment of academic staff from Malaysian Private Universities had witnessed that psychological empowerment is related significantly to affective commitment. This finding had ascertained on the consistency of other past researchers' studies, namely Choong, Lau, Tan and Lim (2012), Choong, Wong and Lau (2011), Rawat (2011), Chan (2003) as well as Laschinger, Finnegan and Shamian (2001). Positive association between psychological empowerment and affective commitment has also been concluded in the study which targeted on community health service workers (Albrecht & Andreetta, 2011). Jha (2010) unveiled that IT executive with high psychological empowerment would have higher affective commitment to organization in Indian Information Technology industry, besides Jha had also proposed organizations to plan and formulate feasible strategies to well develop and enhance employees' affective commitment extent. Exploratory research study has also undertaken in four construction industry organizations which targeted on Chinese chartered quantity surveyors over their perceived psychological empowerment towards affective commitment by Liu, Chiu and Fellows (2007). They have drawn into conclusion that perceived psychological empowerment is significantly related to affective commitment and such finding has underpinned the empirical results identified by Laschinger and Shamian (1994) and Tao, Takagi, Ishida and Masuda (1998). Based on the study of Bhatnagar (2005) which concentrated its research on management personnel from various organizations in the national capital region of India, affective commitment has been recognized as one of the strongest outcomes of psychological empowerment. Hence, the hypothesis is as follow;

Hypothesis 1: Psychological empowerment is significantly influence affective commitment.

Four Cognitions of Psychological Empowerment and Affective Commitment

Psychological empowerment could be decomposed into four major cognitions, namely meaning, competence, self-determination and impact (Thomas & Velthouse, 1990). A paucity of research studies has been conducted in the past to examine the relationship between these four cognitions of psychological empowerment and affective commitment. From the research study which done by Choong et al. (2014), the finding posited that meaning, self-determination and competence cognitions except impact cognition made academic staff psychologically empowered and this empowerment is related to affective commitment. The certainty of this prominent finding has been re-affirmed by other researches performed in the past, such as Choong, Lau, Tan and Lim (2012), Choong, Wong and Lau (2011), Chan (2003) and Laschinger, Finnegan and Shamian (2001). Numbers of past research works had proven the relationship between these four cognitions of psychological empowerment and organizational commitment, for instance studies established by Chen and Chen (2008), Nabila (2008) and Dee, Henkin and Duemer (2002). Since affective commitment is one of the dimensions found in organizational commitment, the derivation could be made to relate the four cognitions of psychological empowerment and affective commitment.

Nevertheless, research study implemented to investigate the relationship between psychological empowerment and organizational commitment of Indian service industry workers by Rawat (2011), finding revealed that meaning and self-determination are having weak relationship with affective commitment whereas competence and impact have no correlation with affective commitment. According to Jha (2010), all four cognitions of psychological empowerment have significant positive relationship with affective commitment in which the result has found in congruence with Bandura (2002) and Meyer, Irving and Allen (1998) research findings. In another research study undergone by Liden, Wayne and Sparrowe (2000) which targeted on service workers, their empirical results evidenced that three out of four cognitions, namely meaning, self-determination and impact are significantly associated with affective commitment, however for the cognition of competence, it has been revealed to have low association with affective commitment. The above literature reviews are aimed to synthesize all relevant theoretical and empirical researches in the past to aid in furtherance this research study. Hence, the hypotheses are as follow;

Hypothesis 1[a]: Meaning cognition is significantly influence affective commitment.

Hypothesis 1[b]: Competence cognition is significantly influence affective commitment.

Hypothesis 1[c]: Self-determination cognition is significantly influence affective commitment.

Hypothesis 1[d]: Impact cognition is significantly influence affective commitment.

Conceptual Framework

Based on discussions presented in literature review, a conceptual framework has been formulated and proposed as in Figure 1. The proposed conceptual framework is focus on the relationship between psychological empowerment and affective commitment among academic staff of universities in Malaysia. Further to this, this conceptual framework is also encapsulated the four cognitions of psychological empowerment on affective commitment.

Figure 1: The Proposed Conceptual Framework
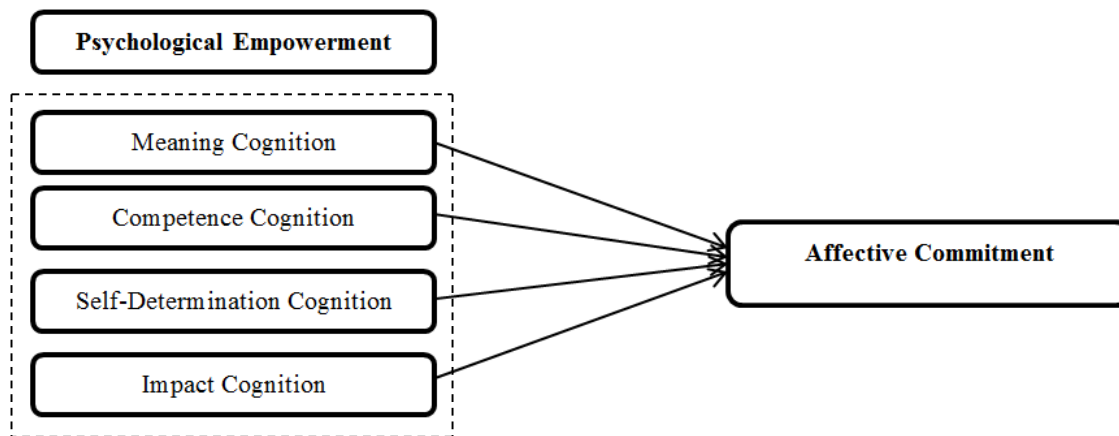
CONCLUSION

The main objective of this conceptual paper is to examine the relationship between the cognitions of psychological empowerment and affective commitment amongst academic staff in Malaysian Public Universities. The conceptual argument is used to form research hypotheses that are important to achieve research objective of this study. By studying several past relevant literatures, it has provided a better understanding on the relationship between the four cognitions of psychological empowerment and affective commitment. Further to this, it is also able to test on how this relationship works within Malaysia higher education context. In future, this paper would be extended empirically in order to examine the proposed hypotheses which have been raised in current study. Several useful insights will be recommended based on the empirical result.

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CORPORATE GOVERNANCE IN PUBLIC LISTED COMPANIES: A PERSPECTIVE FROM MALAYSIAN CODE ON CORPORATE GOVERNANCE 2012 (MCCG 2012)

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Abstract

Corporate governance plays a pivotal role in public listed companies in Malaysia. Solid corporate governance means that the board of directors is performing its duties to the company in order to serve and protect shareholders' and stakeholders' interest. This will send a strong message to both the local and foreign investors to invest in the listed companies which can further strengthen the securities market in Malaysia as securities market is one of the important economy activities in this country. Hence, proper implementations of corporate governance practices in public listed companies are essential to stimulate economic growth in Malaysia. This paper captured a review on the corporate governance scene in public listed company based in Malaysia, starting with brief definitions on corporate governance, identifying the two common models used in measuring corporate governance, discussing the importance of corporate governance in public listed companies and to the country. Some brief history on corporate governance in Malaysia is discussed and compilation of the latest corporate governance code of the best practices in Malaysia, known as Malaysian Code on Corporate Governance (MCCG 2012) on how it affects the public listed companies in their corporate governance implementation. Recommendations are suggested to be incorporated into MCCG2012 to ensure it can be more effective than presence.

Keywords: Corporate Governance, MCCG 2012, Malaysia, Public Listed Companies

INTRODUCTION

Corporate governance has been an important concept used to ensure the well-being of stakeholders to be protected from managerial utility agenda or to prevent company directors in fulfilling their personal agendas. This can be seen from the models that are being used in it (What are the models being used? Example?) (Christopher, 2010; Siebels & Knyphausen-Aufseß, 2012; Tricker, 2015). Corporate governance is particularly useful in public listed companies due to the number of stakeholders involved, especially shareholders. When there is a good level of corporate governance in the public listed companies, it will perform well enough to contribute to the significant economic growth of a country (Doidge, Karolyi & Stulz, 2007). Thus, the main objective of this paper is to give reader an understanding on the importance of corporate governance and its development in Malaysia over the years.

Definitions

There is no standard definition of corporate governance. Cadbury Report (1992) defined corporate governance report as how company should be controlled while Shleifer and Vishny (1997)

explained that it is as mechanisms for financial stakeholders to ensure they reap the fruits of their investment from the company. In Malaysia, Malaysia Code on Corporate Governance (MCCG) 2012 defined it as adopting a sustainable system in managing the daily affairs of the company in its quest for business prosperity and corporate accountability with the sole objective to build shareholder and other stakeholder value over a long term basis. Different authors or entities have their own definitions on what corporate governance is all about. Generally, the definitions are either directly or indirectly about having good governance practices (i.e. check and balance system in and out of the organization to ensure both financial and non-financial interest of its stakeholders can be preserved). As the bulk of the content is on Malaysia corporate governance practices, hence this paper shall adopt the definition provided by the MCCG.

Corporate Governance Models

Agency model and stakeholders theory are the two main corporate governance models that are being used by public listed companies. Agency model emphasized on the shareholders who are the owners that provide fund to the company (Puyvelde, et al., 2012). The interest of the shareholders should be protected by the board of directors as the rationale is that without the funding or capital, the public listed company will not be able to operate in the first place. Thus, creating and protecting shareholder value is utmost important in this model (Harper Ho, 2010; Cuñat, Gine & Guadalupe, 2012; Acharya, et al., 2013). On the other hand, Spitzeck and Hansen (2010) argued that while shareholders are important in public listed companies, the rest of the stakeholders (i.e. employees, community and environment) are equally important as well. The rationale is that capital provided by shareholders will not last forever, hence public listed company need to be able to sustain by itself. Any actions taken by the company will affect the stakeholders and vice versa as it is a reciprocal relationship between the two. Building stakeholders' value will be essential in this aspect (Jensen, 2010; Deng, Kang & Low, 2013; Ntim, Opong &Danbolt, 2012). There is no right or wrong model as whichever model the public listed company chooses to use, it must suite to its philosophy or values that it wants to deliver. However, a similarity between these two models is that the interest of the shareholders or owners is highlighted and hence the importance of the role they play in corporate governance is undeniable. In Malaysia, shareholders remain the most important stakeholders (Shukeri, Shin & Shaari, 2012) and this is seen through the board structure that public listed companies used here; single-tier or board of directors (Anum Mohd Ghazali, 2010) that emphasized on shareholders interest (Millet-Reyes & Zhao, 2010). Hence, this paper focus more on the shareholders interest as to reflect the current emphasis in Malaysia.

Importance of Corporate Governance to Public Listed Company and Country

The first importance of corporate governance on public listed companies is on wealth maximization. A good level of corporate governance in a public listed company can be revealed when the board of directors are consistently looking after the interest of the shareholders or creating the value of the shareholders. It makes no sense if owners of public listed company pour their money into a business entity with little or no interest in increasing their wealth. Wealth maximization can be increased when there is a reliable strategic business plan in the long run which enables the company to sustain itself or on a going concern basis. This can be achieved when the board of directors and top management perform their tasks on an excellent basis through making profit from time to time (Okpara, 2011). Globerman, Peng and Shapiro (2011) stressed the directors and managers need to know their roles and the right qualifications that they possessed. If this is achievable, this reflects the core aspect of corporate governance where it is to ensure the agents (i.e. board of directors and top management) perform their fiduciary duties to the company which in turns benefit the principal (shareholders) financially. As highlighted by Claessens and Yurtoglu (2013), good governance in public listed company will lead to a higher return on owner equity as well as greater efficiency within the company such as its internal control.

Good corporate governance has a positive effect on the company performance, especially from the financial aspect (Love, 2010; Tam & Tan, 2007). Numerous studies highlighted this relationship such as by Renders, Gaeremynck and Sercu (2010) where they stated that improved in corporate governance rating will lead to a better company performance. Masulis, Wang and Xie (2012) added this relationship will be significantly stronger if public listed company engaged more foreign independent directors or non-

Malaysians to be part of the board of directors. One of the reason is because as globalization remains as a key theme in the business world, there is a need for public listed company to expand its business not just on a regional basis but internationally as well. Hence, the need for a foreign independent director in the company will be relevant due to the expertise that they posses in their home country (international expansion). Study conducted by Martin-Reyna and Duran-Encalda (2012) showed that family-owned firm that eventually turn to non family-owned firm, (i.e. public listed company) tend to benefit in such relationship when there is a proper implementation of corporate governance mechanisms. Proper implementations are such as establishment of audit committee and engaged in external auditor to audit its financial statements. Large shareholding in the company serves as an important moderator as more owners will catalyst the firm good performance if there is a good level of corporate governance (Sueyoshi, Goto & Omi, 2010). More shareholders mean that there will be more funds available for the board of directors to be used for the benefit of the company.

The better the company performance is, the higher the firm or company value will be created. According to Acharya, Hahn and Kehoe (2013), this is possible as in order for the company to perform well, there will be value creation initiatives within the company to increase the productivity where it will eventually creates synergy in aiding the creation of firm value. Hence, good corporate governance practices will indirectly affect the creation of firm value through firm performance (Ghergina, Vintilă & Ţibulcă, 2014). For example, corporate social responsibility activities which is part of the corporate governance mechanism has a favorable result in creating firm value as it will boost in the company performance such as increase in sales of products and services (Harjoto & Jo, 2011).

Doidge, Karoyli and Stulz (2007) mentioned that firm or company value is important to the country's economy as the sum of it (i.e. all firms' value in a country) will affect the capital market, which in turns affects the economy growth of the country. Hence, the fundamental of this cause-effect relationship, which is good corporate governance, remains a pivotal in this aspect. This proves to be true to Malaysia during the 1997/1998 financial crisis as can be seen in the following section.

BRIEF HISTORY OF CORPORATE GOVERNANCE IN MALAYSIA

Malaysia economy was booming where economy growth at its fastest rate and capital market was bustling with transactions on a daily basis, especially with securities (KLSE, 2002). Public listed companies were doing fairly well in the securities market, however, from the corporate governance perspective; all is not well within the public listed companies. Malaysia government had been actively involved in improving the corporate governance among the public listed companies; however, the reception among the public listed companies were not encouraging at that time (Liew, 2007; Nam & Nam, 2004; Suto, 2003) as poor implementation, lack of awareness on its importance, highly concentrated ownership structure with complex cross holdings and poor debt management (Zhuang et al. 2000) can be seen in those companies.

These served as a wakeup call to both the government and public listed companies to institute corporate governance reform in Malaysia (Liew, 2007). In response to the aftermath of the financial crisis, a high level 'Finance Committee on Corporate Governance' (FCCG) was established to find out the reason on the collapse of several well-established public listed companies such as Renong and UEM at that time (Haniffa & Hudaib, 2006). Othman (1999) stated that several factors were indentified such as ownership concentration, efficacy of boards of directors, shareholder passivity, enforcement mechanisms, and lack of responsibilities awareness by directors where some of it was highlighted by the other researchers as mentioned earlier in this study. As part of the corporate governance reform, the first Malaysian Code on Corporate Governance (MCCG) was issued in 2000, where it addressed key issues in board of directors, directors' remuneration, shareholders, and accountability and audit (FCCG, 2000). It was revised in 2007 based on the recommendations from relevant parties aimed at reinforce the board of directors and audit committee in performing their duties more effectively and efficiently, especially its internal audit (MCCG, 2007). In 2011, as a response to the Capital Market Plan 2 where further strengthening the corporate governance to reinforce investor trust and confidence in the capital market is one of the key thrust, Corporate Governance Blueprint was issued (Securitites Commision Malaysia, 2011). Some of the guidelines such as stringent formalities on voting & the use of technology in pull

voting and plea to formalize the independence of directors by setting up a static portion for them in the board were introduced in it (Alnasser, 2012). To ensure MCCG is able to deliver the expectations from the Blueprint, this is where it was revised that result in the birth of MCCG 2012. At present, public listed companies are required to use MCCG 2012 as the code of best practices in corporate governance as stated in Bursa Malaysia Listing Requirement (Securities Commission Malaysia, 2013).

MALAYSIAN CODE ON CORPORATE GOVERNANCE 2012

A noticeable difference between MCCG Revised 2007 and MCCG 2012 is the format of the code. In MCCG Revised 2007, it was divided into 3 three parts; which are *Principles of Corporate Governance*, *Best Practices in Corporate Governance* and *Principle and Best Practices for other corporate participants* (MCCG, 2007). MCCG 2012 on the other hand consists of 8 principles; *Establish clear roles and responsibilities, Strengthen composition, Reinforce independence, Foster commitment, Uphold integrity in financial reporting, Recognise and manage risks, Ensure timely and high quality disclosure and Strengthen relationship between company and shareholders*, with recommendations under each of it (MCCG 2012, 2012). The latest code is easier to read and understand with a short description on the need and importance of each of the recommendation while maintaining the prescriptive spirit just like its predecessor; comply or explain approach.

In MCCG 2012, it can be seen that there are several recommendations that are not found in MCCG Revised 2007 as can be seen in Table 1. This shows that within the five years gap, there have been numerous changes internally and externally in corporate governance where public listed companies need to adopt new measures in order to achieve and maintain a good level of corporate governance. For example, there is no specific section that addresses the independence issue in the board of directors although the independence is being mentioned sporadically throughout MCCG Revised 2007. As MCCG 2012 is mainly to address the independence of the board of directors (Rahman, Ibrahim and Ahmad, 2015a), hence the 3 new recommendations under Principle 3 are believe to be able to strengthen directors independence even more in public listed company. In addition to that, all the recommendations under Principal 4 and Principal 7 are considered to be significantly new.

Table 1: Best Practices in MCCG 2012 that is not part of MCCG Revised 2007

Principal 1 - Establish clear roles and responsibilities
Recommendation 1.3 - The board should formalise ethical standards through a code of conduct and ensure its compliance.
Recommendation 1.4 - The board should ensure that the company's strategies promote sustainability.
Recommendation 1.7 - The board should formalise, periodically review and make public its board charter.
Principal 3 - Reinforce independence
Recommendation 3.1 - The board should undertake an assessment of its independent directors annually.
Recommendation 3.2 - The tenure of an independent director should not exceed a cumulative term of nine years. Upon completion of the nine years, the independent director may continue to serve on the board subject to the director's re-designation as a non-independent director.
Recommendation 3.3 - The board must justify and seek shareholders' approval in the event it retains as an independent director, a person who has served in that capacity for more than nine years.
Principal 4 – Foster commitment
Recommendation 4.1 - The board should set out expectations on time commitment for its members and protocols for accepting new directorships.
Recommendation 4.2 - The board should ensure its members have access to appropriate continuing education programmes.
Principal 7 - Ensure timely and high quality disclosure
Recommendation 4.1 - The board should ensure the company has appropriate corporate disclosure policies and procedures.
Recommendation 4.2 - The board should encourage the company to leverage on information technology for effective dissemination of information.

| **Principal 8 - Strengthen relationship between company and shareholders** |
| Recommendation 8.2 - The board should encourage poll voting. |

Source: Adapted from *Malaysian Code on Corporate Governance 2012 (MCCG 2012)* (2012), Retrieved July 2, 2015, from
http://www.mia.org.my/new/downloads/circularsandresources/circulars/2012/21/MCCG_2012.pdf

Corporate disclosure remains an important aspect in MCCG 2012. Lack of corporate disclosure might prevent shareholders and prospective investors in making a meaningful analysis. This might cause them in making a poor investment decision making that might backfired the public listed company, where lack of trust and perceive dishonesty might occur (Brown, 2009). A study was conducted by Bursa Malaysia (2014) on corporate disclosure based on MCCG 2012. On an overall basis, it found that some listed issuers have issued Corporate Governance Statements with commendable levels of disclosure. This point that proper implementation of MCCG 2012 will lead public listed company to good corporate governance.

RECOMMENDATIONS AND CONCLUSION

While public listed companies are required to adopt MCCG 2012, private companies on the hand are not required to follow. The relevant authorities should consider in making MCCG 2012 compulsory for all as the benefits seems to outweigh the drawbacks based on what was discussed earlier. A thorough study on whether MCCG 2012 is able to improve financial performance of the public listed companies in the long run should be conducted, for example based on the proposed conceptual framework by Rahman, Ibrahim and Ahmad (2015b). Good financial performance is after all the bottom line that shareholders are waiting for as it will increase their wealth.

In conclusion, the researchers would like to emphasize that although MCCG 2012 is making a good head start as can be seen in this paper, much has to be done by all the relevant authorities (who?) to ensure that overall corporate governance in Malaysia is structurally strong enough to withstand crisis (e.g., financial crisis) and create greater awareness on its importance among the directors, regardless whether they are in private or public listed companies.

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AGING AND ILLNESSES: CHALLENGES FOR MANAGEMENT AND FOR THE WORLD'S SUSTAINABILITY

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Abstract

A greying population and psychological as well as physiological illnesses can have a very strong negative impact on a company's profitability. Moreover, these two factors also sometimes negatively impact on a country and the world's socio-economic sustainability. While these issues are considered undesirable in terms of profit margin in any profit-making company, they are not necessarily bad when viewed from a longer-term perspective of evolutionary science. Human beings evolve and their body can find new ways to cope with issues such as aging and illnesses. For example, with adequate exercise, aging can be slowed down. Aging and illnesses are not an aberration to the norm but are part and parcel of sustainable development in a globalized environment. This paper hopes to re-look at aging and psychological as well as physiological illnesses as new challenges for modern-day management and also human resource management as opposed to its traditional duties of hiring, firing, promotion, discipline, work supervision, goal-setting and bonuses. This paper will use secondary data analysis to re-look at why aging and illnesses should not be viewed as bad but as new challenges or even a boon for management as well as for the world's sustainable development.

Keywords: Aging, Psychological as well as Physiological Illnesses, Management, Sustainable Development, Globalized Environment

INTRODUCTION

Very often, youth is a much celebrated phase of life because it is supposedly the most productive and the most useful. However, with the global success in medical care, more and more people are now living longer lives compared to their predecessors. In fact, the old English phrase described the retirement years as the "golden years" of one's life which is contrary to many youth-centred cultures. Therefore, retirement can indeed be one's "golden years" if one were to retire healthily on top of having accumulated a big pot of gold and/or receive pension from the government. Otherwise, retirement years will be suffering years for our aged senior citizens. However, for some other retired senior citizens, they choose to continue working because there is not much else to do outside of work and also because work is one way to express their self-actualisation needs.

On the other hand, some local insurance and investment experts had claimed that retirees will have finished using up their savings from the Employees' Provident Fund (EPF) within three years of retirement [1]. A survey by EPF in 2003 showed that 14% of retirees had used up all their EPF savings within three years while 70% of retirees had finished their savings within 10 years of retiring [2]. Another argument put forward was by consumer activist, Dato' N. Marimuthu who is also the president of the Federation of Malaysian Consumers Associations (FOMCA). He said that "more and more adults are marrying later and as a result, they have children late in their lives. By the time they retire, their children will still be young and they will still need money to finance their children's education and other needs" [3]. Therefore, whatever the reasons for working, senior citizens have, nonetheless, continued to be an important part of the workforce in Malaysia.

Moreover, following global trends in having its population living longer and thus, aging, Malaysia's retirement age for both the public sector and the private sector has also been increased to 60 years old from 58 years old after the Minimum Retirement Age Act 2012 came into force on 1st July 2013. This shows that the Malaysian government recognises the phenomenon of aging workforce in our country.

How then can profit-making and even non-profit-making organisations fully utilise this group of skilled and experienced human resources in the country? How should top management look at these senior citizens? Should they be paid as skilled and experienced employees or should they only be hired as temporary employees who must be let go of eventually? Should management view them as financially costly to hire and keep or view them as a wealth of treasure and knowledge which can still be harnessed? How should management or top corporate executives deal with this phenomenon of an aging workforce? Let us delve into what researchers and analysts have to say about aging and maximising human resources in the workplace.

LITERATURE REVIEW

From the literature reviews below, it is quite clear that authors, researchers and analysts embrace this aging workforce phenomenon and see it as part of the challenges of modern management. They do not assume that it is negative and that being old means being useless. This is despite the fact that ageism is quite prevalent in modern, industrialised nations. In Malaysia, senior citizens are termed "*warga emas*" or literally 'gold citizens' as recognition of their past contributions to the country and our economy.

However, these senior citizens can still contribute their invaluable store of knowledge, experience, skills and good attitudes in the workplace even after retirement. They can and should choose to be re-employed, and top management should give them preferential benefits.

In this section, I have compiled a few suggestions from analysts on how to maximise the use of our country's aged human resources who return to work after their retirement via monetary and non-monetary perks within each company.

Talent and Succession Planning [4]

Younger employees should be given a mentor in the form of skilled older employees who can then transfer their skills and expertise to these younger employees who wish to develop compatible skills in the areas which the older employees are expert in [3]. Moreover, the senior or older employees can help mould the right attitudes and career choices of their young co-workers or colleagues. These senior employees can also be retained by the company through hiring them as consultants [3]. The company's management should also focus on developing a Knowledge and Information Management System (KIMS) so that knowledge from older employees can be retained in a systematic manner within the company.

Health Plans and Healthcare Issues [4]

Predictably healthcare programmes are of great concern to senior employees and will influence their decision to either stay with the company or retire [3]. Therefore, it is vital for companies to develop a long-term strategic plan to address healthcare plans and issues so as to enable them to retain their company's intellectual capital and key talents [3]. In Malaysia, even though healthcare issues and medical as well as dental care are provided for by government hospitals and clinics, these institutions are generally very crowded, with a long list of patients. As a result, those who can afford private healthcare prefer to seek treatment in private hospitals and/or clinics. Clearly, some senior citizens will choose to continue working in the corporate sector because they can enjoy better medical and healthcare benefits than if they were to retire without a private medical (i.e. insurance) coverage. Making these healthcare benefits available to these senior employees who have returned after retiring makes good business sense because skills and knowledge acquired over the years are most invaluable to the overall functioning of the organisations and cannot be seen as equivalent to only ringgit and sen. Therefore, customized healthcare plans can indeed attract retirees to return to work.

Executive Compensation [4]

In order to prevent a retiree brain drain from your organisation, it is critical for management to re-look at long-term incentive programmes. For example, "supplemental retirement plans", and "deferred bonuses driven by employment after normal retirement age." [4].

Flexible Employment [4]

Both women with young children and senior citizens prefer flexible employment terms such as flexible working hours etc… This can greatly increase the number of skilled and experienced people applying for a job. Now, even women with young children can enter the workforce!

Revamping Organizational Culture

Another area to look at is the organizational culture of each of the companies which plan to extend the working life of retirees. Is their organizational culture friendly to old people? Has the furniture been arranged in a way which helps the retirees maximize their working abilities? Today, psychologists also study human-computer interactions and the best way to design tools which help us work best and be the most productive. Therefore, revamping a company's organizational culture is just a natural progression towards employing more senior citizens to work.

Some employers may consider this issue to be too costly to get their respective company involved and so, they may not want to put in that extra effort to revamp their company's organizational culture or work settings. This would be tragic, to say the least. Moreover, employers must remember that "A work environment that is not pretty effective and supportive could restrain employees' growth" [5]. Therefore, a workplace culture which is old age friendly is important too.

Re-looking at Job Analysis and Job Design

By performing job analysis and the job design which follows, employers will then be able to determine how much salary and perks to pay the returning senior citizens or senior employees for their knowledge, skills and abilities which they contribute to their job. According to Alex K.B. Yong (1996),

> "The importance of job analysis cannot be overemphasised because, among other things, job analysis has the potential to reduce confusion of tasks and at the same time clarifies job relationships in the macro perspective. It also establishes a sound basis for supervisors' expectations of subordinates' performances and subsequent compensation" [6].

According to Yong (1996) again, "It is more common to find the job description document prepared than the job specification in Malaysian companies" [6]. This clearly shows a flaw in human resource planning and with the current extended retirement age to 60 years old, our Malaysian employers should take the opportunity to improve on their job analysis and job design in their respective companies so that job specification which shows knowledge, skills, abilities and attitudes is included as part and parcel of their companies human resource planning and compensation benefits planning.

Arguments against Extending the Retirement Age

In Malaysia, the arguments against extending the retirement age were not so much on costs of changing organizational culture; rather, employers fear inefficiency and low productivity from elderly employees. To this end, their fears of inefficiency and low productivity can be linked to unfriendly organizational culture and work settings too actually.

Below, I have listed arguments of Malaysian employers against extending the retirement age in the country to provide background and context to this issue. It is important to note that their arguments

were not deemed important enough by the Malaysian government because the bill has already been passed, gazetted, and enforced since year 2012.

The critics have put forward several arguments against extending the retirement age in our country. These arguments include the fear that older and more experienced people will delay the promotional chances of their younger colleagues, thus, robbing them of many more years as senior executives. If such fears are valid, organizations should consider creating a career double-track for the full-time returning retirees and the full-time younger employees. This is not an intractable issue and can be solved with human ingenuity and creativity.

Other arguments against extending the retirement age were health issues of the retirees. As we age, health issues are quite inevitable but these can be a mere trivial matter if older employees are physically active. For example, companies can structure an exercise regime to encourage all their employees to be physically active under their Occupational Safety and Health (OSH) programme. Organizations fear that they will have to fork out a lot of money in terms of healthcare costs if they were to hire and retain older employees. These are, in fact, just fears which have not been substantiated by research. Nonetheless, top management of companies or organizations can choose to customize healthcare benefits for older employees, coming up with a win-win situation.

The issue of efficiency and productivity were also brought up. For example, the executive director of the Malaysian Employers Federation, Shamsuddin Bardan said that "…the high costs of letting workers go is a major employer concern…They will want to know if labour laws will be amended to make firing people for disciplinary problems easier" [3].

Finally, Kelly Services managing director for Singapore and Malaysia, Melissa Norman also agreed with Shamsuddin Bardan and she said, "the current rigidity in terminating staff in Malaysia is a critical factor that prevents most employers from agreeing…" [3]. There are fears in management that it will have to suffer mediocrity from their older employees for another extra few years if their retirement age were extended. Employers feel that this will translate into unnecessary labour costs for them.

Despite these arguments provided by employers against extending the retirement age of employees to 60 years old, the Malaysian government had shown foresight and leadership in this matter, resulting in the enforcement of the Minimum Retirement Age Act 2012.

Moreover, it has been projected by the Malaysian Department of Statistics that by the year 2020, a total of 9.8 per cent of our population will be 60 years old and above [7]. This represents more than 3.3 million people in Malaysia [7]. Also, the United Nations had forecast that Malaysia will reach an aging nation status by the year 2035 whereby the number of its citizens who have reached the age of 60 and above will consist of 15 per cent of the country's population [8]. At present, the United Nations categorises any country with 10 per cent of its population above the age of 60 as an aging nation [8].

RESEARCH METHODOLOGY

Library Research

My research has been based solely on the humble library and Internet searches. As such, it is not without its limitations. However, on my part, this is the beginning of a more detailed research on this matter of aging workforce in the country. Perhaps it is also the beginning of more indepth

DISCUSSION AND CONCLUSION

Aging and the accompanying psychological and physiological illnesses are part and parcel of life. These issues must be seen as optimistically as possible and with an open mind. As everyone ages, we should work at managing aging so that our employees can age gracefully, healthily and productively. That aging and illnesses are considered 'challenges' for management goes to show that we still do not fully

understand these issues enough. Health and wellness programmes organised under OSH can be a helpful way to delay the aging process as well as psychological and physiological illnesses.

Moreover, with increased globalisation processes and inter-connections among the 180 countries in the world, Malaysia cannot do without its more skilled and experienced senior employees. A retiree brain drain can have serious repercussions beyond the confines of the organisations themselves. It will also affect our nation's competitiveness as a whole. Retaining our senior employees and / or encouraging retirees to return to work in the corporate or government sector make good business sense in terms of preserving our nation's knowledge and skills database. This is a very sustainable practice in any company or country facing an aging population.

Our aging population requires that Malaysian employers take proactive actions to maximise the capacity of its human resources. Top management of companies should view this issue as a natural process and as challenges too (if deemed necessary) since advanced medical care had helped prolonged human life throughout the world, and capitalism had made us become all too wary of the costs of giving birth and raising a new generation of young people.

By performing an effective job analysis and job design which naturally follows, employers will be able to determine with much ease the necessary compensation for the particular job description and job specification. Basically, the compensation package for senior employees and other younger employees will be fair and equitable based on their job description and job specification.

As for disciplining and/or terminating staff who are delinquent or negligent in their duties, the Employment Act should not be seen as an obstacle for such management moves. This is because the current Employment Act mainly protects non-management staff. Furthermore, it is also important that employers consider establishing clear guidelines and procedures to handle disciplinary issues. They should also draw up guidelines on what constitutes delinquencies and what do not. To further strengthen the organisational set-up, employers can also consider establishing an ombudsman committee to look into complaints of abuse of power within their respective companies.

Finally, despite our multi-ethnic population in the country which some people consider as challenges to managing effectively, all our cultures in Malaysia actually do respect old people or senior citizens and at the same time these old people too believe that they should be more open minded to embrace their younger colleagues. In this sense, Malaysia is in a very unique position to fully harness this synergy to compete with the rest of the world, and more specifically, to compete with the more highly developed countries.

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TRACING THE MALAYSIAN BRAIN DRAIN TREND: THE PUSH PULL MODEL

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Abstract

Brain drain- the migration of skilled labor and talent across borders touches the core of Malaysia's aspirations to become a high income nation by 2020. Human capital is the foundation of a developed nation and for Malaysia to achieve success in its journey to achieve the status of high income nation, it will need to train, attract and retain talents. Brain drain has become a viral topic hotly debated by many, ranging from politicians, academicians, economist to the man in the street. This phenomenon is not new and has steadily gained the attention of researchers over the last decade. The increased interest in this topic can be due to rapid globalization, and a host of political, economical, sociological and technological factors. Malaysia, as with other developing countries are experiencing this similar problem. Drawing from past research, this paper will attempt to conceptualize a push pull model of brain drain in Malaysia as well as conceptualize which of these factors have the greatest potential on influencing the return intentions of Malaysian diaspora. The last part of this paper will address recommendations that can be undertaken by Malaysia to try and overcome this problem.

Keywords: brain drain, high income nation, globalization, push pull factors

INTRODUCTION

Human society has always been characterized by both internal and external mobility. Migration has been part and parcel of human history and has since become part of modern economic and social transformation. Opportunity is the driving force of migration.

However, the magnitude and direction of these flows has gained momentum in the recent past. The information on global migrant stocks suggests that 215 million people live outside their country of birth. This amounts to about 3 percent of the world's population. The migrant population from developing countries alone totals 171 million, accounting for 80 percent of all migrants. (The World Bank, 2011)

Moreover, while general population movements may have been characterized the early migration processes, those of the last five decades have been systematically dominated by skilled people, whether in South-North, North-North, North-South and South-South movements. (Mouton, Boshoff, Kulati and Teng-Zeng, 2007)

The emigration of highly skilled workers is commonly referred to as the brain drain. Brain drain is defined as the emigration of high skill individuals, where a high skill emigrant is a foreign- born individual, aged 25 or more, with an academic or professional degree beyond high school (i.e. 'post-secondary' or 'tertiary educated'). (Carrington and Detragiache, 1998, Docquier and Rapoport , 2011).

In general, brain drain can be viewed as the movement of highly skilled workers from the developing countries to the developed countries to find greater opportunities, living conditions and lifestyles.

BACKGROUND OF THE STUDY: BRAIN DRAIN IN MALAYSIA

Brain drain- the migration of skilled labor and talent across borders touches the core of Malaysia's aspirations to become a high income nation by 2020. Human capital is the bedrock of a high economy and for Malaysia to achieve success in its journey to achieve Vision 2020, it will need to train, attract and retain talents.

Brain drain has become a viral topic hotly debated by politicians, academicians, economist and the general public. Between 1960 and 2005, the world's registered migration increased to an average of 919,302 per nation, and increase of 2.4 times. However, Malaysia's emigration number rose to 1,489,168, an almost 100 fold increase over the 45 year period. (The Star Online, May 16, 2010)

According to the Malaysian Economic Monitor (2011), the number of skilled Malaysians living abroad have tripled with two out of every ten Malaysians with tertiary education opting to work overseas especially to Organization of Economic Co-operation and Development (OECD) countries or Singapore. There are currently about one million Malaysians residing overseas and 308, 833 of them are highly skilled workers. (The Malaysian Insider, July 7, 2014)

The enormity of the situation has finally hit home and the recent report by the National Economic Advisory Council (NEAC) on the New Economic Model (NEM) laments the fact that we are "not developing talent and what we do have are leaving the country" (The Star Online, May 16, 2010)

The report says that currently some 350,000 Malaysians are working abroad with over half of them having tertiary education. This leaves Malaysia with over 80% of her workforce with SPM level qualification, and their wages are being continually suppressed by the easy availability of foreign workers and other barriers like subsidies and price controls. (The Star Online, May 16, 2010)

Table 1 provides a snapshot overview of the Malaysian diaspora. In 1980, the number of Malaysians residing in Australia was 31,598 and this increased to 92,334 in 2006, those who resided in the UK in 1980 numbered 45,430 and this went up to 61,000 in 2007. The United States was a laggard with only 11,001 in 1981, but due to the country's very aggressive move to attract top talents, the number of Malaysian who took up residence there shot up to 54,321 by 2007. Similarly, Malaysia's neighbor, Singapore has also been absorbing large numbers of Malaysians, from 120,104 in 1981 to 303,828 in the year 2000.

Table 1: The Malaysian diaspora is spread out around the world, but concentrated in Singapore.

Size of the diaspora (age 0+), by country of destination and over time, numbers

	Historical series			Most recent	
	1980	1990	2000	value	year
Balanced sample total	285,623	431,292	611,809	..	..
Unbalanced sample total	286,102	452,109	657,574	..	..
Singapore (residents only)	120,104	194,929	303,828	385,979	2010
Australia	31,598	72,628	78,858	92,334	2006
Brunei	37,544	41,900	60,401	60,401	2000
United States	11,001	32,931	51,510	54,321	2005
United Kingdom	45,430	43,511	49,886	61,000	2007
Canada	5,707	16,100	20,420	21,885	2006
Hong Kong	..	12,754	15,579	14,664	2006
India	23,563	11,357	14,685	14,685	2001
New Zealand	3,300	8,820	11,460	14,547	2006
Other countries	7,855	17,179	50,947	..	..

Source: Malaysian Economic Monitor (2011) The World Bank.

The majority of Malaysian skilled workers and professionals are located in Singapore (46%), Australia (12%), Brunei (9%), United States (8%) and United Kingdom (8%). Singapore is a popular destination because of its proximity to Malaysia, higher salary and compensations, the exchange rate and the perceived favorable treatment by the Chinese majority led government.

Figure 1 shows that 64% of Malaysia's brain drain population is concentrated in the top three major occupation groups which require high skills and qualifications. The majority of high-skill emigrants work as professionals (e.g. lawyers, accountants and pharmacists), whereas the second largest group consists of technicians and associate professionals (e.g. nurses, trade brokers and estate agents) and the third largest group consists of legislators, senior officials and managers.

Figure 1: Major occupation groups where brain drain occurs
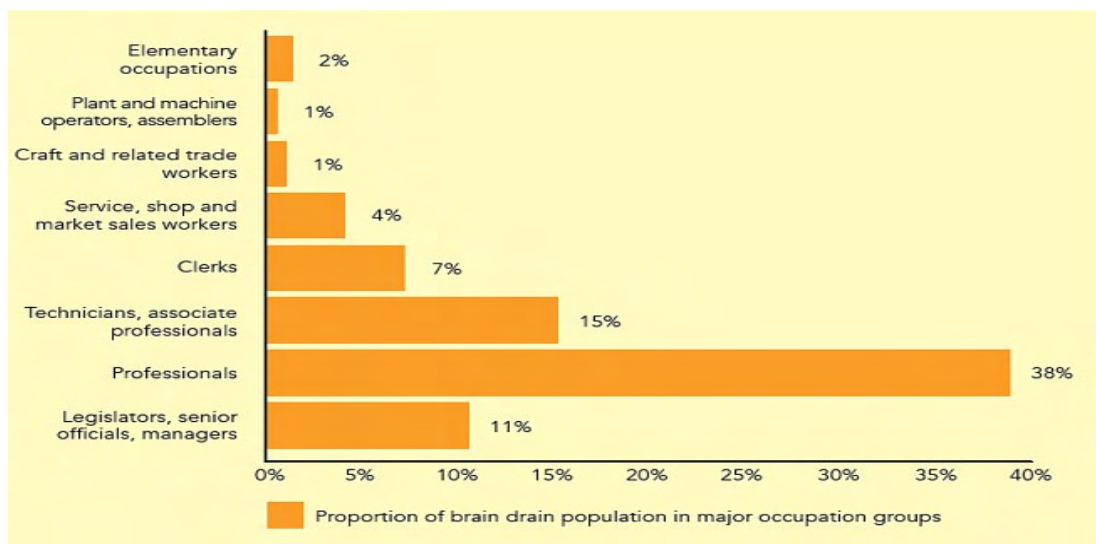
Source: "Brain drain in numbers" Penang Monthly, 27 June 2014

Approximately 15% of high-skilled emigrants from Malaysia are overqualified for their job positions. Eleven per cent of them work in middle skill occupations such as clerks, service, shop, market sales workers; whilst four per cent of them are involved in low-skilled jobs such as elementary occupations, plant, machine operators, assemblers, and craft and related trade workers. The remaining 11% of the high-skilled emigrants not shown here are unemployed. (Penang Monthly, June 27, 2014)

LITERRATURE REVIEW: PUSH PULL FACTORS OF BRAIN DRAIN

In the study of brain drain, the most cited reasons for the acceleration are the push factors in the emigrant's countries and the pull factors in the developed countries that cause them to want to emigrate overseas. The "push-pull" model was developed by Lewin (1951) and it has clear relevance for cross border movements. (Lewin, 1951, Baruch, 1995, Baruch et al, 2007)

The World Bank (2011) on Malaysian Economic Monitor had noted that better salary and benefits were among the top three reasons for Malaysians to work overseas, the other two being career prospects and social injustice.

Baruch suggested a number of factors at the individual, organizational and national levels that can explain the nature and direction of the forces. A host of factors- economic, social or legal influence an individual's decision to stay abroad, some of these push people towards the move, other factors pull people back. (Baruch et al, 2007).

The economic category can be considered a pull factor for people to emigrate. Factors such as better pay, better standard of living, better opportunities for career advancement and better work conditions overseas have enticed many people to immigrate to developed countries.

Much literature has indicated that migrants are motivated by economic factors, particularly financial disparities. For example: highly skilled Indian IT specialists are attracted to economies like the United States by higher wages and standards of living. (Creehan, 2001) Similar claims have recently been made with respect to skilled IT workers from Indonesia (Djalal, 2001) and Malaysia (Sani, 2000).

Self directed expatriation is increasingly recognized as a common career choice. Much of self directed expatriation is about improving one's life style and looking for new career choices. (Baruch et al, 2007)

Ravendran (2008) reported that Malaysians migrated to work in the United Kingdom and Australia due to pull factors such as better pay packets, better work life balance and better quality of life. Wong (2010) had identified job prospects as an important pull factor of brain drain of Malaysian students studying overseas.

Table 2 shows the comparison of average wages in Singapore, the UK and Australia, Malaysia's wages are lagging far behind. A person of managerial rank in Malaysia, for example, earns only one-third of the wages in Singapore. Interestingly, for high-skilled occupations (e.g. managers, professionals and technicians), wages in Singapore are higher than those in the UK and Australia, especially for managerial level occupations and professionals. However, the opposite is true for medium- to low-skilled jobs.

Table 2: Annual net wages in Malaysia compared to other countries, 2013

	2013 annual net wages	Singapore (US$)	Malaysia (US$)	UK (US$)	Australia (US$)
1	Legislators, senior officials, managers	78,049.19	25,555.92	47,321.36	43,6995.49
2	Professionals	54,359.04	22,231.94	43,732.30	37,075.60
3	Technicians, associate professionals	36,761.00	14,465.67	36,714.01	30,764.81
4	Clerks	24,434.18	9,090.78	26,077.60	27,135.52
5	Service, shop and market sales workers	22,668.61	6,641.24	22,110.75	16,353.14
6	Skilled agricultural and fishery workers	20,455.91	5,711.46	30,523.97	21,429.51
7	Craft and related trade workers	27,908.01	7,305.36	30,523.97	21,429.51
8	Plant and machine operators, assemblers	26,795.93	6,641.24	28,199.07	31,180.90
9	Elementary occupations	11,698.74	5,379.40	22,415.89	21,429.51

Source: "Brain drain in numbers" Penang Monthly, 27 June 2014

Malaysia is still very much a country with low labor costs. Elementary occupations (e.g. cleaners, domestic helpers and agriculture laborers) pay only US$5,380 a year – half the wage in Singapore and a quarter of those in OECD countries. Australia, for instance, pays elementary workers US$21,430. Although low wages is one of the main factors of high-skilled emigration, it is not always a disadvantage; multinational companies, especially those in the E&E sector, set up factories in Malaysia because of the availability of highly educated workers at relatively low wages. This has led to rapid development in the E&E sector and has solidified Malaysia's status as one of the major exporters of electronic goods. (Penang Monthly, June 27, 2014)

Other reasons mentioned as push factors are rigid bureaucratic and unresponsive government, controls personal freedom, racial antagonism and religious divide. (Quah et al, 2014). All these can be grouped under social justice.

In Malaysia, political oppression, human right abuses, legislative issues, and outdated education system are some of the push factors contributing to the Malaysian brain drain. For example: under the legislative front, under Malaysian law, a child born overseas to a Malaysian mother, whose husband is a non Malaysian is not entitled to Malaysian citizenship or even permanent resident (PR) status. Foreign spouses who have returned with their Malaysian other halves are also not accorded PR status. (The Star Online, May 16, 2010)

In this global village world, Malaysians are being continuously exposed to the world environment. They see, feel and hear first world lifestyles, first world civil society structures and first world social institutions over the TV and media all the time. Many Malaysians feel disillusioned or even short changed by the non optimal functioning of her political institutions, which seem always constrained by the much sensitivity of her multi religious and multi ethnic background. (The Star Online, May 16, 2010)

Outdated education policies by the government also come into play. University education opportunities for the non Malays were limited by the quota system and financial aid. A call for entrance to government universities to be based on meritocracy has fallen on the deaf ears. Thus, many Malaysian parents who could afford to send their children overseas do so. As proven by literature, this increases the rate of migration, as overseas education is the first and easiest step for more emigrants.

Malaysia's brain drain is not limited to adults as increasing number of children are also leaving the country. Many Malaysians send their children overseas when they reach a certain age, sometimes right after primary school, or more often, after the third year of secondary school. Their kids are in Singapore, Australia, and Britain- anywhere but at home in Malaysia. All the while, under the radar, these children whose families can afford it continue to leave. After finishing secondary school overseas, they attend university. Chances are, unlike a decade or two ago, many won't come back. (The Star Online, May 16, 2010)

Other factors like political oppression and human rights abuses in which many feel the ruling based UMNO government is implementing race based policies. Fear of another May 13ᵗʰ episode, anger that taxes paid by non Malaysians are used to support the bumiputras, the inequitable distribution of wealth; these are just some of the grouses. Thus, how the government apparatus conducts itself and the consequences of its policy implementation will upset an individual's innate sense of justice.

The general assumption is that the Chinese and Indians form the majority of those abandoning the country of their birth because ethnic Malays consider them "pendatang"- aliens in a Malay land, regardless of how long they have been in the country. However, increasing numbers of Malays have already emigrated as well, or are seriously thinking about it, dismayed by perceived corrupt practices of political institutions as well as the rigid confines of Islam and the rise of fundamentalism. There is worry among non Muslims that the gradual drift towards an Islamic administration with the eventual implementation of syariah laws for all as well as the lack of confidence with the government in curtailing the extremist Islamic and Malay agenda. (The Asia Sentinel, 2010)

EFFECTS OF BRAIN DRAIN IN MALAYSIA

Brain drain is a serious issue in Malaysia. It will have serious impact on Malaysia's aspirations to be a developed and high income economy by 2020. The World Bank Report (2011) on Malaysian Economic Monitor warned that if the situation was not addressed as soon as possible, it would slow down Malaysia's economy and halt the country's development. In general, brain drain can affect the source country's economy in a variety of ways.

First, brain drain means that the country is losing human capital. Since, human capital is an important growth factor, brain drain can adversely affect economic growth, Moreover, because skilled workers tend to earn high wages before their departure, they usually have saving rates higher than the average rate in the economy, Thus, the outflow of some of these high income workers could pull down the average saving rate of the remaining population, and this means that the local investment rate and thus economic growth will be hurt. (Wong, 2009)

Brain drain can have an effect on the economy through the following ways. First, the wage gaps between developing countries and developed countries are wide, implying big incentives for the skilled workers in the developing countries to emigrate. Second, the externality associated with skilled workers could be high in these developing countries, mainly because there is usually widespread unemployment of unskilled workers. The complementarity between skilled workers and unskilled workers means that the loss of a skilled worker to another country could lead to a drop in the economy's demand for unskilled workers.

Thus, large outflow of skilled workers could substantially raise the unemployment rate of unskilled workers. Third, the outflow of different types of skilled workers may not be balanced, and the developing countries could well be losing more of the types of skilled workers that they need the most-for example, doctors, engineers, and nurses, who can easily apply for immigrant visas to developed countries. Fourth, most developing countries are in an early stage of development, and skilled workers are needed for the economy to take off. Losing some of these workers could seriously hinder the growth of the economy. (Wong, 2009)

This is exactly what is happening is Malaysia. She is gaining more unskilled labor and losing skilled labor instead. The number of foreign expatriates is dropping and combined with the outflow of local talent, this shortage of dynamic and skilled labor will hamper Malaysia's initiative to achieve industrialized status. This puts pressure on wages as well as worries about the rising number of foreign workers and the incidence of rising crime rates due to the high influx of unskilled foreign labor into Malaysia. (The Star Online, May 16, 2010)

For every ten skilled Malaysians born in Malaysia, one of them elects to leave the country. This is double the world average. (The World Bank, 2011)

In the past, low-skilled laborers have helped Malaysia develop its construction, manufacturing and agricultural sectors throughout the years, but high-skilled workers are still required to bridge the technology gap between Malaysia and its competitors. In 2012, a total of 295,000 high-skilled, tertiary-level educated Malaysians left for foreign countries. Unfortunately, the number of high-skilled foreigners was unable to compensate for the outflow of human capital. Little has changed since then, and Malaysia is still facing a high net outflow of talent. This outflow is shown in Table 3. (The Star Online, May 16, 2010)

Table 3: Number of highly skilled Malaysian based in Malaysia versus those based overseas

Numbers for brain drain to OECD countries only, thousands

	1990		2000		1990	2000
	High-Skill at Home	High-Skill Overseas	High-Skill at Home	High-Skill Overseas	Brain Drain Intensity	
China	11,593	359	19,893	783	3.0%	3.7%
Hong Kong	379	182	696	292	32.5%	29.5%
Japan	17,399	233	22,128	278	1.3%	1.2%
Korea	3,083	335	7,565	613	9.8%	7.5%
Malaysia	222	79	818	96	26.2%	10.5%
Singapore	84	28	279	47	25.3%	14.4%

Source: "Tracing the brain drain trend" The Star Online, May 16, 2010

The in- and outflow of high-skill individuals tends to be generally well-documented since the highly-skilled tend to migrate legally. But this is not the case of for low- or unskilled migration where illegal migration is more prevalent. Estimates of the number of illegal immigrants in Malaysia vary widely, but it is clear that the total number is high—ranging from half a million to one million, and up—and it can be safely assumed that virtually all of the illegal immigrants are low-skilled. Once illegal migration is taken into account, it becomes clear that the impact of immigration on the domestic skills base is skewed much further to the low end of the spectrum than official statistics would suggest. (The World Bank, 2011).

Brain Drain could also erode skill base and depress innovation. Brain drain could create a vicious circle that may trap a country into an undesirable equilibrium with low levels of human capital and a large technology gap. In this sense, brain drain could contribute to rich countries becoming richer at the expense of poorer countries. (The World Bank, 2011)

Penang Institute chief executive officer Dr Lim Kim Hwa who is a University of Cambridge-trained economist believes the annual total fiscal impact resulting from the brain drain was between a gain of RM2 billion and a loss of RM8 billion.

This is because those who left are not utilizing public expenditure such as fuel, education, food and healthcare subsidies, which resulted in savings. However, this was offset by the two million foreign workers, 95% of whom are low-skilled, and they will eat into the same public expenditure.

The large number of foreign and low-skilled workers in the country also causes more money to be repatriated. In 2012, remittance outflow overwhelmed inflow, resulting in a net remittance outflow of RM19 billion, from a remittance inflow of RM4 billion to an outflow of RM23 billion. (The Malaysian Insider, July 7, 2014)

However, there could be some positive effects from the brain drain phenomena in Malaysia in the areas of remittances, return migration and diaspora effects. They are as follows:

Remittances may compensate for the loss of talent. Remittances from the highly-skilled that left the country may assist at origin in alleviating liquidity constraints, stimulating education investment, as well as reducing poverty.
Return migration may bring additional benefits. Brain drain may lead to brain gain if migrants who upgraded their skills abroad return to the home country. Return migration may also boost entrepreneurship and innovation, if returning migrants put to good use additional knowledge and financial

capital gained abroad. A net benefit is more likely to be obtained if the fraction of time spent abroad is not too large.

High-skill Diasporas could benefit in various ways. Migration may lead to a reduction in international transaction costs, facilitating the exchange of goods, factors and knowledge between origin and destination countries. Diasporas could contribute to better technology diffusion, by the creation of scientific and business networks, and stimulate trade and FDI. They could also contribute to improving institutions in the home country. (The World Bank, 2011).

RECOMMENDATIONS AND SUGGESTIONS

In view of the seriousness of brain drain for any country and its economy, especially for developing countries, various initiatives have been undertaken by governments to address the issue. A variety of ways and strategies have been initiated and proposed to address both the push and pull factors of the brain drain.

A useful way of reviewing some of the government and civil society responses- at the level of both policy and programmatic interventions- is to discuss them under the heading of the "Six R's', a classification that has been developed by Lowell (2001) to distinguish between the various policy responses and interventions that governments have devised to address the brain drain. Lowell's "Six R's" are; reparation, restrictions, recruitment, return, retention and resourcing. (Mouton et.al, 2007)

1) Reparation. The idea of levying tax on companies in rich countries who recruit and employ skilled immigrants from developing countries came into prominence in the early 1070's after being proposed by the Indian economist Jagdish Bhagwati. The proposal for the tax was premised on the idea that the advanced economies, as the main beneficiaries of the international migration of skilled personnel, ought to compensate the developing countries for their loss of skilled labor. However, this idea has never gained currency with any of the Western government that is the beneficiaries of skilled migration. (Mouton, et.al, 2007)

2) Restrictions. Restrictive immigration and emigration policies have been implemented in many countries. Restrictive immigration policies remain the norm and not much is done to ease immigration policies in order to attract skilled professionals. (Mouton, et al, 2007)

3) Recruitment. Recruitment polices and strategies need to be implemented to attract more skilled workers as well as to continue to object vigorously against developed countries recruitment policies which are continuously used to lure and poach skilled workers from underdeveloped or developing countries.

4) Return. Under this initiative, skilled workers and professional are given incentives to come home under various programs sponsored under the government.

5) Retention. Policies under this method try to address the push factors that give rise to the brain drain. Measures that have been introduced include the improvement in salaries of academics, scientists and professionals whose skills are in short supply. (Mouton, et al, 2007)

6) Resourcing. Harnessing the expatriate knowledge networks and using it to obtain feedback regarding government policies and trying to understand exactly what they want and trying to meet those needs.

Other recommendations to stem the brain drain as suggested by Wong (2009) revolve around economic factors namely the wage gaps between developing countries and developed countries.

The fundamental ways to solve the brain drain problem is to raise the local wage rates, so that skilled workers will have less incentive to emigrate. There are at least 3 possible ways to raise the local wage rates. First, the government can provide a general wage subsidy to all skilled workers to close the gap between what they may be able to get elsewhere and what they receive locally. This policy could be more effective in dampening brain drain, but it is costly because substantial subsidies will be needed. That could be beyond the budget capacity of the governments. (Wong, 2009)

The second way is to substantially promote the growth of the economy so that the income levels of the population are raised. Economic growth of the country will boost not only the GDP and national income of the economy, but also the wage rates of the skilled workers. The growth of the economy will substantially diminish the incentive of the skilled workers to move out. Government must invest more in education and infrastructure, the first strategy seeks to slow the rate of depletion of the stock of human capital and the second seeks to promote other growth factors, such as the infrastructure needed to attract foreign direct investment or support high tech development. (Wong, 2009)

The third way is to implement a two tier wage system for skilled workers, one at the prevailing rate in the economy, and a second higher one for those who choose to come back from abroad. The higher wage scale for the returning skilled workers is to attract them to come back. (Wong, 2009)

Another way is to impose an exit tax on those who want to emigrate. Those who want to leave the country would have to pay a tax before leaving the country and that the tax revenue collected would be distributed to the remaining population in some way. The amount of tax could be set at a level so that those left behind would be adequately compensated and might include an amount to cover the subsidy on education the government provided to these emigrants. It has been argued in economic theory that the increase in the income of the emigrants should be big enough to cover the compensatory tax. China had a policy closer in essence to the exit tax suggested here; it required people who went abroad for education to put down deposits before they were allowed to go, and the deposits would be forfeited if after graduation they did not return to China. (Wong, 2009)

Another policy to slow the rate of brain drain and to encourage returning immigrants is to attract foreign direct investment. There are three channels through which the domestic demand for skilled workers can be raised. First, attract foreign firms to invest and produce products locally. Because foreign firms have more advanced technologies than what local firms usually have, foreign direct investment could substantially raise the demand for skilled workers. Second, recent developments of technologies allows local skilled workers (such a telephone operators. computer programmers and accountants) to be employed by firms located in other countries, without having these workers moving out of the country- a phenomenon called off shoring. Third, local production of products to be exported can increase through a process called fragmentation and outsourcing. As firms in developed countries are able to fragment their production processes, they may move the production of some of the components and intermediate inputs of the final products to developing countries where labor costs are much lower. This will raise the demand for skilled workers in the developing countries. (Wong, 2009)

In the Malaysian perspective, what can be done in this country to stem the brain drain, besides trying to recruit non Malaysian expatriates to enrich the pool of our expertise? Here are some of the following recommendations to stem the brain drain in Malaysia.

Firstly, besides pushing on with the reform needed under the New Economic Model and the 1Malaysia programme, Malaysia's government will need to immediately abolish all the gender biased legislative impediments preventing the husbands and children of her female talents, who have married non Malaysian, from becoming citizens, even PRs. Unless this is done, and done retroactively, the thousands of these Malaysian talents will forever be lost from her shores. Further, the thousand of wives of Malaysians who have returned should be immediately given PR or even citizenship so that their expertise can be harnessed in the nation. By one stroke of the pen, Malaysia can immediately enlarge her talent pool. (The Star Online May 16.2010).

Secondly, Malaysia may need to negotiate more country to country youth exchange programmes with OECD nations, like the Malaysia-New Zealand Youth exchange programme. Malaysian youth have been going over to OECD nation shores for decades, and now with these exchange programmes, Malaysia can at least begin to attract some of these youth to her shores instead, first as guests, and later maybe as experts. (The Star Online, May 16, 2010)

Thirdly, Malaysia should get away from our cold war siege mentality mind set, bite the bullet and immediately reform her working permit, PR and citizenship policies. Working permits for expatriates should be quickly approved for applications from employers for bringing in the expertise that they need to

run their business or factories. PR status should be accorded to the top experts that the country wants to recruit. Their coming into Malaysia's midst will result in new innovations and thousands of new high paying jobs for her people. (The Star Online, May 16, 2010)

One of the initiatives so far undertaken by the Malaysian government is the Returning Scientist Programme managed by the Ministry of Science. Between 1995 and 1998, this programme managed to attract 93 overseas and Malaysian scientists on short term contracts to local institutions. Due to its high cost, it was temporarily shelved but revived in early 2001 due to the rising seriousness of the brain drain in Malaysia. This programme provided incentives to encourage Malaysian experts abroad who have the required expertise to return and serve the country. The incentive package includes:

- income tax exemption for income remitted within two years from the date of arrival.
- import duty and sales tax exemption for two cars registered in the country of origin for at least six months
- the husbands/wives and children of Malaysian citizen will now be given PR status within six months of the date of arrival. This provision is very important because in the past husbands who were non citizens were not entitled to PR status, while non citizen wives could only apply for PR after five years residence in Malaysia.

The second term of this programme has approved 73 applications. In the entire programme covers six fields of expertise and skills including information technology, science and technology, industry, finance and accounting, arts and medicine and health. (Mouton et al, 2007)

The latest initiative by the Malaysian government has been the setting up of a Talent Corporation (Talent Corp). This corporation is established under the Prime Minister's Office and hopes to increase the number of talented and quality workforce in the domestic market. Talent Corp. will formulate a National Talent Blueprint and develop an expert workforce database to help the Government attract, motivate and retain talented human capital from within the country and abroad.

Talent Corp's two recent initiatives to target expatriates and returning migrants respectively are:

- Residence pass. (RP). RP holders can work and live in Malaysia up to ten years and can change employers without having to renew the pass. Any foreign talent who has been living and working in Malaysia for at least 3 years on a continuous basis. Preference would be given to experts in areas relating to the National Key Economic Activities (NKEA's), as well as ICT, aeronautics and biotech. The RP would allow foreigners who are posted in Malaysia with a multinational company to have an option to stay longer at the end of their tour of duty. The RP would also provide an option to come back to those who may no longer be Malaysian, such as children of Malaysians who have moved overseas for education
- Returning Experts Programme (REP). Malaysian professionals working abroad are offered a flat income tax rate of 15% for five years. The low tax rate would ensure greater competitiveness with respect to other countries, which have lower marginal tax rates (but also different tax brackets) such as Hong Kong and Singapore. Diploma holders with at least 10 years of overseas work experience would qualify for the REP if they have the relevant industry experience in any of the NKEAs. In the past these efforts were managed under the Expert Scheme introduced in 2001, which up till the end of 2010 managed to attract 750 people with expertise in various fields. (The World Bank, 2011)

TalentCorp chief executive officer Johan Mahmood Merican, said that the REP was the catalyst to encourage Malaysians who do not necessarily want to be fully compensated with incentives to return. "So some won't come back no matter what, while some will," he said. (The Malaysian Insider, July 7, 2014).

CONCLUSION AND DISCUSSION

Brain drain reflects the forces of globalization that marks the world economy today, Brain drain is not unique to Malaysia and neither is it avoidable or to be avoided. The challenge for Malaysia, as for many other countries, is to embrace the global mobility of talent. As Malaysia needs talent, it will need to turn the brain drain to its advantage.

To address the brain drain, Malaysia will need to tackle the underlying determinants of brain drain. Brain drain is symptom—an outcome of underlying, more fundamental factors. Individuals respond to incentives and disincentives—these are the push and pull factors that drive the migration decision. Identifying these factors constitutes the first step towards formulating policy responses to brain drain. Among the factors that matter in Malaysia are differences in earnings potential, career prospects, quality of education and quality of life, relative to overseas locations. However, discontent with Malaysia's inclusiveness policies is a critical factor too—particularly among the non-Bumiputeras who make up the bulk of the diaspora.

The Malaysian government must rise to the occasion by putting policies into effect which will be effective in combating brain drain. The challenge going forward will be to find effective ways to connect with Malaysian citizens to ensure that the push and pull factors of brain drain are properly addressed. Malaysia's future rests in the hands of her own citizens.

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THE IMPACT OF COLLECTIVE TEACHERS' EFFICACY ON ORGANISATIONAL CITIZENSHIP BEHAVIOUR: A REVIEW AND RESEARCH AGENDA

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Abstract

The main objective of this study is to examine the impact of collective efficacy on organisational citizenship behaviour amongst teachers at government school, Malaysia. A research issue is highlighted and discussed in detail and thoroughly. A theoretical background for both construct: collective efficacy and organisational citizenship behaviour have been systematically and clearly discussed. Both constructs are also found to be significantly contributed to the school achievement positively. The conceptual framework is also developed based on past empirical arguments. Numerous contributions are pointed out and adequate justification is provided. Past studies revealed and confirmed the relationship between collective teachers' efficacy and organisational citizenship behaviour. A relevant proposition is formulated that used to achieve research objective.

Keywords: Organisational Citizenship Behaviour, Collective Teachers' Efficacy, Teachers, Perak

INTRODUCTION

In the modern education system, it is challenging for teachers to achieve the desired goal set by the school and nation (Vigoda-Gadot, Beeri, Birman-Shemesh and Somech, 2007; Dipaola and Hoy, 2005a; 2005b). Hence, the adoption of organisational citizenship behaviour is essential to ensure the efficiency and effectiveness of any organization (Jimmieson, Hannam and Yeo, 2010; Yucel, 2008; Erturk, 2007; Bogler and Somech, 2005; Dipaola and Hoy, 2005a; 2005b; Podsakoff, Mackenzie, Paine and Bachrach, 2000). Teachers' organisational citizenship behaviour is important to those country that education system is having problems such as teacher training, the number of students per class and educating (Yilmaz and Tasdan, 2009). It is especially vital to Malaysia economic growth and national development (Malaysia Education Blueprint 2013-2025, 2012). According to Malaysia Deputy Prime Minister and Minister of Education, the education sector is the most important key area amongst the twelve key areas that identified by Malaysian Government in Economic Transformation Programme (ETP) which transform Malaysia to become high income nation by 2020. Additionally, the Malaysia education system is also highlighted and pointed as crucial hub for Malaysia Economic by developing human capital in the New Economic Model (NEM) (Malaysia Economic Monitor: High Performing Education, 2013).

Organizational citizenship behavior is originally developed by Organ (1988). The term of organisational citizenship behaviour has been applied and envisaged as a salient guise in various industries context. This construct has produced dozen of intriguing insights and useful implications in variety of organizational settings (Organ and Ryan, 1995) such as health care industry in The United Stated for job satisfaction and organizational commitment (Bolon, 1997), services, manufacturing, mining and construction industries in Malaysia for transformational and transactional leadership style (Lee, and

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Low, 2012), service industry in China for psychological empowerment and job satisfaction (Jiang, Sun and Law, 2011), Hotel industry in Taiwan for perceived organizational support and psychological empowerment (Chiang and Hsieh, 2012) and 31 companies in Korea for learning organizational culture and organizational commitment (Jo and Joo, 2011). However, the concept of organisational citizenship behaviour has been neglected in schools context (Erturk, 2007; Dipaola and Hoy, 2005a; Dipaola and Tschannen-Moran, 2001). Erturk (2007) indicated that it is lack of study focus on organisational citizenship behaviour in School setting. In 2009, there is only ten studies research on OCB in school context (Yilmaz and Tasdan, 2009; Oplatka, 2006). This is also mentioned in Oplatka (2009). Thereafter, there are more than 20 studies has been conducted in different country in education industry such as Israel (Somech and Drach-Zahavy, 2000; 2004; Somech and Ron, 2007; Belogolovsky and Somech, 2010), Ohio in United Stated (Dipaola and Hoy, 2005a; 2005b; Dipaola and da Costa Neves, 2009), Queensland in Australia (Jimmieson, Hannam and Yeo, 2010) and India (Garg and Rastogo, 2006).

Organizational citizenship behavior was empirically and conceptually benefit to various level which are individual, group and organization (Oplatka, 2009). Dipaola and Tschannen-Moran (2001) was the first authors who have started to apply the OCB into the field of education. Dipaola and Tschannen-Moran (2001) has revised the construct of Smith, Organ and Near (1983). Dipaola and colleague (2001) has included two samples: sample 1 is targeted 644 teachers in 42 public schools situated in Ohio and Virgina and sample 2 focused on 1210 teachers in 97 public schools in Ohio. They found that the organisational citizenship behaviour teachers' is significantly associated with school climate. There are also several studies have been focus on organisational citizenship behaviour in education sectors such as Somech and Drach-Zahavy (2000), Somech and Bogler (2002), Bogler and Somech (2004; 2005), Dipaola and Hoy (2005a; 2005b), Oplatka (2006), Somech and Ron (2007), Vigoda-Gadot, Beeri, Birman-Shemesh and Somech (2007), Dipaola and da Costa Neves (2009), Oplatka (2009), Jimmieson, Hannam and Yeo (2010) and Schwabsky (2014). However, it is still required substantial effort and study on organisational citizenship behaviour in education sector (Schwabsky, 2014). Yimaz and Tasdan (2009) stated that organisational citizenship behaviour is relatively new to education sector.

Likewise, in Malaysia, there is a paucity of empirical study focus on education sector (Khalid, Kamaruzaman Jusoff, Othman, Ismail and Abdul Rahman, 2010; Fatimah, Amiraa and Halim, 2011; Sofiah and Abdul Rashid, 2012; Teh, Boerhannoeddin and Ismail, 2012; Munir, Khan, Khalifah, Asif and Khan, 2014). Meh and Nasurdin (2009) also mentioned that there is limited research on organisational citizenship behaviour among teachers in Malaysia education industry. Based on statistical view, it is also show that not more than 20 studies focus on the Malaysia education sector. Majority of the study are focus on higher education institutions such as Khan and Abdul Rashid (2013), Teh, Boerhannoeddin and Ismail (2012), Mohammad, Habib and Alias (2011;2010), Khalid et al. (2010) and Khalid, Kassim, Ismail, Noor, Abdul Rahman and Zain (2009). Munir et al. (2014) study is emphasized on Chinese teachers in both public and private schools in Malaysia. Another study of Saraih, Ali and Khalid (2014) is study on 390 primary school teachers of one state in northern region of peninsular Malaysia, while Fatimah, Amiraa and Halim (2011) is testing on the eight secondary schools in Selangor, Malaysia. Hence, it is required a substantial effort contributed on the Malaysia education sector, especially to primary and secondary schools' teachers.

Collective-efficacy will be another important construct to be added into the conceptual framework of the doctoral thesis. It can be expressed as "the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students" (Goddard, Hoy and Hoy, 2000). Instead of individual teacher effort, collective efficacy is based on all staff efficacy as a whole to effect on the students' achievement. Additionally, collective efficacy belief is originally formed via cognitive processes. Moreover, collective efficacy belief is also "serving to motivate and regulate the coordinated actions of the group" (Cooper, 2010, pg. 2). Past studies revealed that as level of collective efficacy increased, the student achievement in both math and reading enhanced as well (Goddard, Hoy and Hoy, 2000; Ross, Hogaboam-Gray and Gray, 2004; Tschannen-Moran and Barr, 2004). Jackson (2009) posited that organisational citizenship behaviour and collective efficacy are distinct construct which independently linked to different outcomes in the school settings especially to student achievement. This is also found that collective efficacy is significantly predicted organisational citizenship behaviour in school settings and subsequently improves student achievement (Jackson, 2009; Cooper, 2010). Hence, the main objective is

to study the relationship between collective efficacy and organisational citizenship behaviour among teachers in Malaysia.

LITERATURE REVIEW

Theoretical Background:
Organisational Citizenship Behaviour

The concept of organisational citizenship behaviour can be traced back to the late of 1930's, Barnard is among the first author who introduced and suggested that the formal job duties are difficult to complete a job in an effective manner. He revealed that it is necessary and implicitly to encourage employees' to exhibit citizenship behaviour that is discretionary, go above and beyond their formal job duties. Hence, this will develop a cooperative work environment (Barnard, 1938). In the mid of 1960's, Katz (1964) also introduced and addressed the organizational citizenship behaviour as supra-role behaviour. The supra-role behaviour can be defined as non-prescribed behaviour or behaviours that are not required in advance for a given job (Katz and Kahn, 1966). This behaviour is important for the smoothness of functioning any organization but this behaviour is not prescribed as usual notion of task performance stated in formal job description (Katz and Kahn, 1966). Bateman and Organ (1983) stated that this behaviour "lubricates the social machinery of the organization" (p. 588). For example: assisting and helping co-workers to solve problematic job related issues, ensure workplace cleanliness, helping co-workers with heavy workloads, conserving organization resources and tolerate the inevitable temporary impositions of work without complaining (Bateman and Organ, 1983; Katz and Kahn, 1966).

The term organizational citizenship behaviour is named by Organ and his colleagues (Bateman and Organ, 1983; Smith, Organ and Near, 1983). It's defined as "individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (Organ, 1988, pp. 4). Lambert and Hogan (2013) highlighted that the definition of OCB offered by Organ and his colleague is comprised of three important elements. Firstly, this extra role behavior is not explicitly required as part of their formal job duties. Secondly, this behavior does not have direct benefit to coworkers and organization, but, it is indirectly provide support to coworkers. Thirdly, for those employees that showing OCB will not guaranteed any extra rewards. Most of organizations encourage their employees to exhibit OCB in order to maintain and improve the organization social system. As the result of this effort, it will significantly contribute indirectly to the effectiveness of organization (Organ, 1997). Additionally, this OCB among employees is critical to the survival of the organization (LePine, Erez and Johnson, 2002). However, the omission of practicing OCB will not take any disciplinary action to punish the employees or will not considering of sanctions (Organ, 1988). OCB is including cooperation, accommodation, assisting and helping co-worker in completing their daily tasks.

Until recently, Dipaola and his colleague has started to introduce OCB construct in school context. Dipaola and his colleague are the first authors to investigate and examine the OCB concept in school organizations. All the necessary roles, duties and behaviours are not comprehensively prescribed in teachers' job scopes or job descriptions. Therefore, it is important for scholars and researchers to study how OCB can be cultivated in school organizations (Dipaola and Tschannen-Moran, 2001). Organisational citizenship behaviour concept is found to be vital for betterment of organisation (McKenzie, 2011). There are substantial studies indicated that OCB is significantly improve student achievement in school environment (Blanchard, 2012; McKenzie, 2011; Jackson, 2009; Wagner, 2008; Dipaola and Hoy, 2005a; Jurewicz, 2004; Dipaola and Hoy, 2004). By adopting OCB in school environment, it will assist teachers adapt to the dynamic environment more efficiently (Van Der Vegt, Van De Vliert and Oosterhof, 2003; Miles, Borman, Spector and Fox, 2002).

Collective Efficacy

The construct of efficacy is originally evolved from two main theories named locus of control theory and social cognitive theory developed by Rotter's (1966) and Bandura (1977, 1986, 1993, 1997, 2002) respectively. The self-efficacy can be defined as "the beliefs in one's capabilities to organize and

execute course of action required to produce a given attainment" (Bandura, 1997, p.3). In Rotter (1966) locus of control construct, the control of reinforcement is either lay on the teachers themselves or the environment. The locus of control theory is an individual belief that the outcome of his or her actions is contingent on either within their control or lay on environment or events beyond their control (Rotter, 1966; Zimbardo, 1985).

Basically, the locus of control can be divided into internal control and external control (Rotter, 1966). If the control of reinforcement is not entirely based on his or her action, but it is result of his or her luck, chance, fate or other external factors, then these forces are considered as external control. While internal control is refer to the outcome of his or her that is controllable by himself or herself. There is no one outcome resulted of perfect internal locus of control or perfect external locus of control. Instead, most of us fall in between the two extreme types of control.

For social cognitive construct, it is a "psychological model of behavior that emerged primarily from the work of Bandura (1977)" (Denler, Wolters and Benzon, 2014). For self-efficacy, it has emerged as one of important concept within social cognitive theory (Denler, Wolters and Benzon, 2014; Bandura, 1997). Bandura (1997) also identified that teacher with high efficacy will belief to have better capability to perform a particular task successfully. For social cognitive theory, it is belief of one's own capability to produce certain actions which is very much related to self-efficacy. Whereas, the locus of control theory is the belief of one's outcome is affected by themselves or external factors. It is imply that the perceived self-efficacy has little or empirically shows no relationship with locus of control theory. Hence, the nature of teacher efficacy should be born within the social cognitive theory instead of locus of control theory (Bandura, 1997).

According to Goddard (2001), social cognitive theory is referring to individuals and collectives that have control over their lives via agentive action which is influenced by their perceptions of efficacy toward a specific task. The term of agency is an important fundamental assumption for social cognitive theory. The efficacy belief is the important key to the operation of agency as when an individual and collectives believe they have better capability to perform the task or duty successfully, then he or she or collectives are more likely to perform the activities (Goddard and Goddard, 2001). In Goddard and his colleague research work, they contended that efficacy belief in both individual and collective level are underpinning of social cognitive theory (Goddard and Skrla, 2006; Goddard, Hoy and Hoy, 2004; Goddard, LoGerfo and Hoy, 2004; Hoy, Sweetland and Smith, 2002; Goddard and Goddard, 2001). Both teacher efficacy and collective efficacy are anchored in agency assumption which highlighted by Bandura. For teacher efficacy, it could be through the human or personal agency which he or she is belief in him or her self-capability to control over their lives activities (Hoy, Sweetland and Smith, 2002). If a teacher possess of efficacy belief on his or her capability, then he or she will overcome obstacles persistently and facing failure obstinately (Goddard, Hoy and Hoy, 2004).

For collective efficacy, it could be work through organisational agency that all teachers' beliefs combined as a faculty with perceptions of conjoint capability to achieve the organisational or faculty objective (Goddard, LoGerfo and Hoy, 2004; Hoy, Sweetland and Smith, 2002). Teachers with favorable collective efficacy beliefs will directly influence their behaviour in performing their job duties and belief to have ability to influence their student academic performance as well as tenaciously overcome adversity (Hoy, Sweetland and Smith, 2002). This is also ensuring of setting of higher goals and willingness to welcome challenges (Goddard and Skrla, 2006). In short, the belief of collective efficacy will bring creativity, effort and persistence in order to attain a goal successfully.

The concept of collective efficacy is further defines as "the perceptions of teachers in a school that the faculty as a whole can organize and execute the course of action required to have a positive effect on students" (Goddard, 2003, p. 184). If the teachers have the sense of collective efficacy, it will further improve student achievement and organisational performance (Goddard, Hoy and Hoy, 2000). Therefore, Hoy and his colleague purports that the perceived collective efficacy are important collective perceptions which considered as organisational property (Hoy, Sweetland and Smith, 2002). Goddard, Hoy and Hoy (2000; 2004) highlighted that there is limited research tested the effect of collective teacher

efficacy with various consequences as compared to teacher efficacy. Hence, this construct is included in present study.

Collective Efficacy and Organisational Citizenship Behaviour

A number of consequences of collective efficacy which are improve of school accountability for student performance (Goddard, LoDerfo and Hoy, 2004), socioeconomic status (Goddard and Goddard, 2001) and education decision (Goddard, Hoy and Hoy, 2004). Studies have indicated that collective teacher efficacy (Goddard, LoDerfo and Hoy, 2004; Hoy, Sweetland and Smith, 2002; Goddard, 2001; Goddard, Hoy and Hoy, 2000) and organizational citizenship behaviour (Burns and Dipaola, 2013; Dipaola and Hoy, 2005a; 2005b) are significantly predicted student achievement. Goddard, Hoy and Hoy (2004) purports that collective efficacy is considered as most recent constructs as compared to self-efficacy. Addition to this, there is lack of empirical literature to support and validate the relationship between collective efficacy and organizational citizenship behaviour amongst teachers in school context (Jackson, 2009: Goddard, Hoy and Hoy, 2004).

Somech and Drach-Zahavy (2000) have tested the relationship between collective efficacy and organizational citizenship behaviour among teachers from 13 elementary schools in Israel. They found that collective efficacy is significantly related with OCB towards team but no any relationship with OCB towards students and organization. This might be due to the nature of the research sample bias. Based on the proportion of sample, 231 samples out of 251 are female teachers and only 20 samples are male teachers. Several studies have demonstrated that male perceived higher sense of commitment towards their job and organization as compared to female workers (Choong, Keh, Tan and Tan, 2013; Choong, Tan, Keh, Lim and Tan, 2012; Akintayo, 2010; Shapira-Lishchinsky, 2009). Choong and his colleague further clarified that female married academics are required to perform dual role in their lives. Female academics that are married have the responsibility to take care about their children and committed to their own job as well as organisation.

However, male academics are only need to commit themselves to their work. The larger part of the sample in Somech and Drach-Zahavy (2000) study is female teachers. Thus, this is indirectly affected the result which generated insignificant result. Further to this, it is posited that collective efficacy can be strengthening by enhancing the collegial interactions will influence the willingness of teachers to exhibit OCB or extra role behaviour within their workplace (Somech and Drach-Zahavy, 2000). Additionally, the construct of CTE is originally rooted in teacher self-efficacy. Tschannen-Moran and Barr (2004) contend that the most obvious different between CTE and teacher self-efficacy is CTE based on school level effect and teacher self-efficacy referred to individual perspective. Hence, it can be conclude that CTE is closely link to OCB. Therefore, a proposition is developed as follow:

Proposition:
Collective Teacher Efficacy is significantly related to organisational citizenship behaviour.

CONCEPTUAL FRAMEWORK

Based on above literature discussion, a proposed conceptual framework is constructed. The collective efficacy is expected to influence on organisational citizenship behaviour amongst teachers in Malaysia. If an individual has strong belief on their group or departmental or school capabilities as a whole is able to encourage teachers' to exhibit organisational citizenship behaviour in school.

Figure 1: Proposed Conceptual Framework
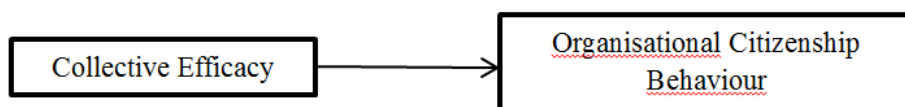
CONCLUSION

Through this research, it would be able to provide school principal with better knowledge and insight regards to the relationship between collective teacher efficacy and organisational citizenship behaviour in school context. By reviewing literature concerning on the proposed and predicted relationships, this would provide insight to policy maker and principals on the importance of collective efficacy in school working environment. This constructs is found to be vital and related to organisational citizenship behaviour (Dussault, 2006). Additionally, there are some useful notions could be provided to Malaysia Ministry of Education through understanding the concept: organisational citizenship behaviour. The concept of OCB is proved to be one of the powerful antecedents of student achievement (Burns, 2012; Oplatka, 2009; Yilmaz and Tasdan, 2009; Dipaola and Hoy, 2005a; 2005b). Vigoda-Godat and his colleague contended that if school would like to be success by achieving their objective, the school management and principals are need to ensure teachers willing to exhibit citizenship behaviour in school workplace such as handle student special needs, involve in monitoring those students with discipline problem, provide innovative teaching and willing to devote his or her extra time and effort to guide poor students (Vigoda-Godat et al., 2007).

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Adjustments and Intention to Leave among Academic Expatriates in Malaysian Higher Education Institutions.

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Abstract

Study on adjustments and intention to leave among academic expatriates been study widely researched in United States and Britain. These study on growing relationship determinant on adjustments and intention to leave among academic expatriates in Malaysia. This paper intended to contribute to less research done on how an academic expatriate had an intention to leave in Malaysian public university. This paper proposes five antecedent variables in determining relationship on predicting the psychological and sociocultural adjustment among academic expatriates. Further, academic achievement is proposed as a result of successful adjustment to the psychological and sociocultural. Based on this relationship, several propositions are developed.

Keywords: Academic Expatriates, Personality Traits, Psychological Adjustments, Sociocultural Adjustment and Intention to Leave.

INTRODUCTION

Currently, the world is rapidly going geographical borderless. This increases the numbers of highly educated population to look beyond their home countries for better employment opportunities and lifestyle. Knowledge-based economies become the current trend in a borderless environment which increases the demand of international staffing and retention of highly educated people across the world. In conjunction to this situation, Malaysian higher education institutions are striving to attract many academic expatriates to boost up the economy level as a developing country (Goldin, Cameron and Balarajan, 2011).

Malaysia undergoes many challenges as a developing country competing in the 21st century to remain competitive in crucially transforming marketplace (Yahya, Mansor & Warokka, 2012). One of the most demanding challenges faced by Malaysia is to develop, attract and retain highly educated and talented people that are culturally adaptive, technologically intelligent and entrepreneurially motivated for its economy development. As to become a developed country by the year 2020 (Malaysia, 2010b), Malaysia needs to transform its higher education institutions to produce human capital with first class mindset of knowledge and innovation (Malaysia, 2010a). This transforms and strengthens the foundations of Malaysian higher education institutions to own a reputable and world class standing education sector.

According to Chai (2007), there are about 20 public universities, 21 polytechnics and 37 community colleges, 32 private universities and university colleges, 4 branch campuses of international

universities and 485 colleges in Malaysia. Many quality improvement strategies are established among higher education institutions in Malaysia as to achieve world class standing of higher education (Yahya et al., 2012). The National Higher Education Strategic Plan (NHESP) advocates several thrusts to establish Malaysia's reputation as an international hub of excellence in higher education, primarily among the Muslim countries by making education as an export industry (Malaysia, 2012). As to intensify internationalisation in Malaysian higher education, 15 percent of academic expatriates from research universities across the world need to part of the faculty members among higher education institutions in Malaysia. This encourages to deliberately seeking for academic expatriates to participate in the higher education institutions transformation towards world class standing education system. A balanced numbers of local academics and academic expatriates lead to a healthy infusion of international experience and knowledge into higher education institutions (Yahya et al., 2012). Hassan and Diallo (2013) mentioned that academic expatriates must beware of the amount of creative tension that they need to experience between academia at the institutional and national levels.

In this study, we focused to examine and explore the relationship between the Big Five personality traits that affect academic expatriate's psychological and sociocultural adjustments towards their intention to leave. Meanwhile, the management of higher education that serves better management system in the higher education institutions motivates the personality traits to avoid the intention to leave among the academic expatriates.

LITERATURE REVIEW

Big Five Personality Traits

Neuroticism

Neuroticism can be a propensity to understand an unpleasant emotion easily, such as anger, anxiety, depression, and vulnerability (Jeronimus, Sanderman, Ormel, 2014). It also refers to the degree of emotional stability and impulse control and is sometimes referred to by its low pole, "emotional stability". According to Eysenck's (1967) theory of personality, neuroticism is interlinked with the low tolerance for stress or aversive stimuli.

Extraversion

Extraversion characterized by the breadth of activities (as opposed to depth), urgency from external activity/situations, and energy creation from external means (Laney, 2002). The trait marked by pronounced engagement with the external world. Extraverts enjoy interacting with people and often perceived as full of energy. They tend to be enthusiastic, action-oriented individuals. They possess high group visibility, like to talk, and assert themselves. Intraverts have lower social engagement and energy levels than extraverts. They tend to seem quiet, low-key, deliberate, and less involved in the social world. Their lack of social involvement should not interpret as shyness or depression; instead they are more independent of their social world than extroverts.

Openness

Openness is a general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and the variety of experience (Boileau, 2008). People who are open to experience are intellectually curious, open to emotion, sensitive to beauty and willing to try new things. They tend to be when compared to closed people, more creative and more aware of their feelings. They are also more likely to hold unconventional beliefs.

Conscientious

Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement against measures or outside expectations (Costa & McCrae 1992). It is related to the way in which people control, regulate, and direct their impulses. High scores on conscientiousness indicate a preference for planned rather than spontaneous behavior. The average level of conscientiousness rises among young adults and then declines among older adults.

Agreeable

The agreeableness trait reflects individual differences in general concern for social harmony (Rothmann and Coetzer 2003). Agreeable individuals value getting along with others. They are considerate, kind, generous, trusting and trustworthy, helpful, and willing to compromise their interests with others. Agreeable people also have an optimistic view of human nature.

Psychological Adjustment & Sociocultural Adjustment

Due to the increased number of academic expatriate, researchers had suggested that expatriate should be able to adjust effectively to reduce frustration in the host country. There are two aspects of adjustment that concern the expatriate, specifically psychological adjustment and sociocultural adjustment (Searle and Ward, 1990).

Psychological adjustment has been defined as the adaptation of expatriate that concern about the emotional well-being and their satisfaction in the host country. Previous scholars had agreed that the psychological adjustment is related to the expatriate's emotional and mental adaptation to the culture of the host country (Ward, Adam and Stuart, 2010). It has been expanded that psychological adjustment is evident by feeling satisfy with various attributes of life especially in the host country. In a study done by Helen and Xiong (2006), among the Chinese students in Britain, psychological adjustment is generally associated with how well they can manage with the stress and the environment while they are in the host country. Further emphasized by Gregersen and Black (1990), great level of psychological adjustment (high level of satisfaction) could result in the high intention to stay of the expatriate.

Sociocultural adjustments signified as the adaptation of expatriate in terms of society engagement and interpersonal connection with the people of the host country (Aycan, 1997). Sociocultural adjustment also refers to the capability to understand and engage in the culture of the host country, where the expatriate assimilate their routine with the sociocultural factors such as culture norms of the host country. As supported by Ward et al., (2010), sociocultural adjustment is also affected by interaction with the host residents, the duration of their stay in the host country and the general knowledge of the culture.

As per Ali, Van der Zee and Sanders (2003) and Ward, Leong and Low (2004) previous research has been conducted regarding the connection of personality traits and the cross cultural adjustment. It been underlined that widely accepted Big Five personality traits (namely; neuroticism, extraversion, openness, conscientious and agreeable) has correlation with psychological and sociocultural adjustment of the expatriate (Ward et al., 2004). However, the results of the relationship were varying due to circumstances factors in the host country.

Intention to Leave among Academic Expatriates

Many researchers have examined on turnover intentions and turnover among expatriates (Black and Mendnehall, 1990; Caligiuri, P., Cerdin, J., and Taniguchi, M., 2009; Kraimer, M.L., Shaffer, M.A., and Bolino, M.C, 2009) and intention to leave is predicted to be an important predictor of employee turnover (Loi et al., 2006). Cross cultural training programs and Spouse family issues has been a great concern on expatriate turnover (Black, Mendnehall and Oddou, 1991).Similarly, job satisfaction, work life balance and individual characteristics are the fundamental issues concerned in the faculty member regarding the turnover rate (Roseer, 2004). Zhou and Volkwein (2004) stated that academic turnover may be induced

by any number of factors like race, gender, family responsibility, citizenship status or any other demographic issue, or a combination of these factors including academics working in a minority circumstances.

Besides that, another reason turnover among academician is age and marital status also has a vast effect on the turnover rate (Ambrose, S., Huston, T. and Norman, M. (2005).Married academics and young faculty members had high turnover rates since they had many issues while considering a job transfer. It is said that expatriate turnover is higher than or equivalent to domestic turnover (Bhaskar, Harrison, Shaffer and Luk, 2005)

Nevertheless, based on Birdseye and Hill (1995) study, expatriates working in different political, cultural, and economic environment might face difficulties among job and personal related problems. Different environment can create stress and disappointment which may eventually lead to turnover.

Social Exchange Theory

Social exchange theory is a social psychological and sociological perspective that explains social change and stability as a process of negotiated transactions between parties (Homans, 1961). Social exchange theory posits that human relationships a formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. The theory has roots in economics, psychology, and sociology. Social exchange theory features many of the central assumptions found in rational choice theory and structuralism. It is also used quite frequently in the business world to imply a two-sided, mutually contingent and rewarding process involving transactions or simply exchange.

Relationship of Neuroticism with Psychological Adjustment and Sociocultural Adjustment

Neuroticism is the degree where one's experience negative emotional stability such as anger, sad and nervousness and it plays important role in the cross cultural adjustment. Neuroticism would assist expatriate to adjust themselves in the host country. It has been emphasized and argued that expatriate who are in the stable condition of their own emotion may be able to handle difficult situations that could improve their performance in the host country (Deller, 1997 and Shaffer, Harrison, Gregersen, Black and Ferzandi, 2006). Expatriate who demonstrated low neuroticism are normally calm and will have less difficulties in building up the relationship with host nationals. In the study done by Muhammad, Mohammad, Ahmed and Veera (2014), among 201 expatriates working in Malaysia, showed the findings that there is positive relationship of neuroticism and it had influenced expatriate job performance through expatriate adjustment. It also supported by Peltokorpi and Froese (2012), that neuroticism had positive correlation with adjustment of expatriates among 181 of them in Japan. Less neuroticism level was linked directly to psychological and sociocultural adaptation, as in the case of Singaporean students in Australia (Ward et al., 2004). There is a correlation between sociocultural adjustment and neuroticism, yet the relation was insignificant.

Nevertheless, there is inconsistency in the results pertaining to neuroticism with expatriate adjustment. In the research by Huang, Chi and Lawler (2005), among the 83 US expatriates in Taiwan, it has been concluded that there is no influence of neuroticism on the psychological adjustment or if any, the relationship was weak. In addition, neuroticism also has not related to expatriates' social adjustment. As cited in Michelle and LaRae (2005), the research done by Leong, Ward and Low (2000), among the Australian expatriates in Singapore, supported that neuroticism has been negatively related to psychological adjustment.

Relationship of Extraversion with Psychological Adjustment and Sociocultural Adjustment

Extraversion refers to the degree of a person appreciate social interactions and gatherings. Greater extraversion would link to greater adjustment in sociocultural and psychological aspects as expatriate need to communicate well with the host residents. Scholars had agreed that extraversion would accommodate the psychological wellbeing and sociocultural adjustment of expatriate in the host country (Wang, Freeman and Zhu, 2013).

As per study done by Huang et al., (2005), using the sample of eighty-three US in Taiwan, it has been agreed that there is a positive correlation between extraversion and the sociocultural adjustment, specifically the interactions with host residents. It has been suggested that extraversion would assist expatriate to portray positive attitude in the host country. This could result to the open-sharing knowledge among the host residents (Muhammad et al., 2014).

Again, as highlighted in the study done by Ward et al. (2004), in the samples of the study, extraversion has direct connection to sociocultural adjustment and psychological adjustment. Extrovert expatriates will enjoy their adjustment in the host country and their performances are higher in contra with introverts expatriate (Caligiuri, 2000). This is due to their voluntarily involvement with host residents. This group tends to mingle around and actively engage in the communication with the host country nationals.

In Huang et al. (2005) study in Taiwan, it been argued that local colleagues might prefer the expatriate that are more reserve than the one who possess higher degree of extraversion. Nonetheless, the study accentuated that American expatriates who dominate the extraversion would be able to adjust themselves well in the host country. In addition to that, extraversion is not only affected the psychological adjustment, but also positive impact to sociocultural adjustment. Outcomes of the study completed by Muhammad et al. (2013), has highlighted that the results were consistent with the theory of extraversion by Black (1990), Caligiuri (2000) and Judge, Heller and Mount (2002). In Judge et al., (2002) literature also has agreed that expatriates who has significant degree of extraversion will enhance the bonds between the local residents and ease the expatriates' routine and increase their performance.

As per study conducted by Ramalu, Wei and Rose (2011), total of 322 expatriates assigned to Malaysia, it has been emphasized that there was a positive correlation between extraversion and psychological adjustment. This finding was actually aligned with findings by Huang et al. (2005) that give emphasis that extrovert expatriate will able to adjust them accordingly and at the same time essentially acquire the knowledge culture of the host country.

Relationship of Openness with Psychological Adjustment and Sociocultural Adjustment

Expatriates who defined as openness is actually those that non-judgmental, insightful, open minded and ready to accept new environment around them (Mount and Barrick, 1995). Past literature has highlighted that expatriate who have high degree of openness to experience, could better adjust themselves in the host country. Arthur and Bennet (1995) suggested that openness is one vital aspect of expatriates in order for them to adjust better in the host country. In addition, study by Ward, Berno and Main (2002) among the student in New Zealand highlighted that openness was positively related to the sociocultural adjustment.

Huang et al. (2005) found that US expatriates able to adjust well in their psychological adjustment in Taiwan as a result of high openness to experience. It has been agreed that openness to experience has positive impact on the psychological adjustment. Ramalu et al. (2011) contended that there is a positive relationship of openness and psychological adjustment. It indicated that those expatriates were enthusiastic in learning and adapting the culture in Malaysia and willing to adjust themselves accordingly.

Muhammad, Sharan and Mohamed (2013) has findings that are consistent with theoretical points by Caligiuri (2000), where openness to experience is positively related to the psychological and sociocultural adjustment among expatriates working in Malaysia. The expatriates, who are keeping the separation of the cultural difference between them and the host country nationals, would be able to fit better in the environment.

Relationship of Conscientious with Psychological and Sociocultural Adjustment

It is the ability to exhibit high levels of thoughtfulness, with good impulse control and goal-directed behaviors; those high on conscientiousness tend to be organized and mindful of details (McCrae & Costa, 1987). According to Ward et al. (2004) studied adjustment across two samples of sojourners and host

nationals in Australia and Singapore. They specifically looked at personality characteristics and their relationship to foreign change. In both samples, expatriates high in conscientiousness spent more time on job-related tasks and were more psychologically well adapted than those scoring lower in conscientiousness (Ward et al., 2004).

According to Ones and Viswesvaran (1996) also found that conscientious individuals were more likely to spend time on job-related tasks, were better able to obtain job-specific knowledge, and were less likely to engage in counterproductive work behaviors (CWBs). The term conscientiousness dimension described as a form of conformity to rules and standards, and linked to traits like responsibility, organization, hard work, impulse control, and prudence (Barrick & Mount, 1991; Hogan & Ones, 1997). Individuals high on conscientiousness is also dependable and trustworthy (Costa & McCrae, 1992). Conscientiousness (competence, order, dutifulness, achievement-striving, self-discipline, and deliberation) and agreeableness (trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness) have also been demonstrated to be significantly (albeit weakly) related to psychological adjustment (Costa & McCrae, 1992).

There has been little cross-cultural work in the area, although Chen and Piedmont (1999) also found that agreeableness and conscientiousness relate to psychosocial health in their research with Taiwanese students. Although the relationship between these dimensions and sojourner adjustment has not beenwidely explored in the literature, it is easy to see how these factors could function as psychological resources for acculturating individuals. Conscientiousness has been linked to motivation and, more specifically, effort expenditure and persistence (Chamorro-Premuzic & Furnham, 2003). Geisler-Brenstein, Schmeck, and Hetherington (1996) found a positive relationship between Conscientiousness and methodic and analytic learning. Intellect was shown to be associated with deep approach to learning, elaborative learning (Geisler-Brenstein, et al., 1996; Slaats, VanderSanden & Lodewijks, 1997), meaning-directed learning, and constructive learning approach (Busato, Prins, Elshout, & Hamaker, 1999).

Relationship of Agreeable with Psychological and Sociocultural Adjustment

According to McCrae and Costa (1987), agreeable individuals demonstrate attributes such as trust, altruism, kindness, affection, and other pro-social behaviors. According to Swagler and Jome (2005) found that being more agreeable might facilitate collectivist interaction among expatriates. Not only that, Ones and Viswesvaran (1999) found that expatriates high in agreeableness were more likely to avoid conflict, to be more compliant, and to be obedient to authority. These findings suggest that expatriates high in agreeableness will better adapt to a "high power-distance" culture; that is, expatriates with an agreeable nature are more likely to harmonize with foreigners who demonstrate awareness of and respect for individuals holding positions of authority in the workplace. Thus, being obedient to and respectful of power will most likely aid workplace adjustment for expatriates entering a high power-distance culture (e.g., Mexico) from a low power-distance culture (e.g., USA, Europe). Cultural customs and norms 10 can vary significantly across several of Hofstede's (1983) cultural dimensions; placing an expatriate in an environment that is noticeably different from their own can present difficulties in developing relationships. Those high in agreeableness should, therefore, adapt better to more extreme cultural differences.

Barnett (1953) noted that individuals differ in their propensities and abilities to deviate across the "normal boundaries of acceptable deviation... these differences predispose some of them to a hesitant and retractile attitude toward experimentation with the new while others are much more adventurous and intrepid. In short, some people, for whatever reason, are temperamentally more conservative than others" (p. 20). Of course, traditional behavior by an expatriate can limit their opportunity to initiate interaction with host nationals, restricting potential bonds and result in maladjustment or loneliness. Agreeableness has been associated with conformity with others and friendliness in the interpersonal setting (Hogan & Hogan, 1986). Individuals high on agreeableness tend to be more helpful and sympathetic towards others, as well as more trusting of the intentions of other people (Costa & McCrae, 1992).

According to Laursen, Pulkkinen and Adams (2002), agreeableness trait related to higher levels of social compliance and self-control, and lower levels of aggression. Agreeableness was found to correlate positively with effort, and surface (reproductive) learning (Slaats et al., 1997; Vermetten, Lodewijks & Vermunt, 2001). In explaining these results, Vermetten et al. (2001) speculated that Agreeableness involves compliance and cooperativeness, which makes the agreeable individuals morelikely to consolidate their learning and regulate their study habits in response to external demands. The willingness tomake aneffort in learning is consistent also with the traits of imperturbability, which is typical of the agreeable individuals (McCrae & Costa, 1987).

The relationship between psychological adjustments and sociocultural adjustment with turnover intention

Psychological and cultural adaptation problems happens due to the differences between the present culture and home culture and in the long run when greater differences are perceived and felt, it will impact on stress and adaptation problems , hence depression (Babiker, Cox, & Miller, (1980). When these feelings occur and one decides to leave voluntarily, it is labeled as turnover intention (Whiteman, 1999). According to Ballou, 2013, psychological contract breach has a relationship with turnover intention. When an organization breaks the promises and violates the responsibilities, it automatically gives a negative impact on the outcome of the employees., Psychologically, when there is a vast differences in cultural values between their dominant and host nations , expatriates discover themselves in an anxiety situation where they exhibit undesirable behaviour (Eric Delle* Marco Elikem Mensah, 2013). Thus, when psychological needs are being satisfied, it could result in negative turnover intentions (Baard et al., 2004).

On the other hand, sociocultural adjustment is about adapting to the daily difficulties experienced by the host culture (Ward and Kennedy, 1996). In addition, Eisenberger, Huntington, Hutchinson and Sowa, (1986) highlighted that to lower expatriate turnover by improving their cultural adjustment, organizations provide a variety of support practices. This kind of support practices have an impact on what expatriates perceive about the extent an organization cares and values the employee's contributions and welfare. When employee value fits the culture of their organization, they tend to be more committed, hence reducing the thought of leaving the organization (Verquer, Beehr & Wagner, 2003). Stress and disappointments within an expatriate life can lead to turnover which can be costly (Lee and Liu, 2006). According to Crowley-Henry (2012), sociocultural aspects like flexible work schedules, career development opportunities and staff benefits influences turnover.

On encountering the foreign environment, the expatriate may experience disorientation, foreignness and sensory overload (Louis, 1980). The expatriate may be unable to cope with these experiences because of disillusionment, difficulty in understanding the language and local practice (Tu and Sullivan, 1994). It was supported by (Poyrazli and Kavanaugh 2002) that language skills is found to be positively related to sociocultural adjustment. When the expatriates exhibit these experiences, it can lead to turnover intention.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework
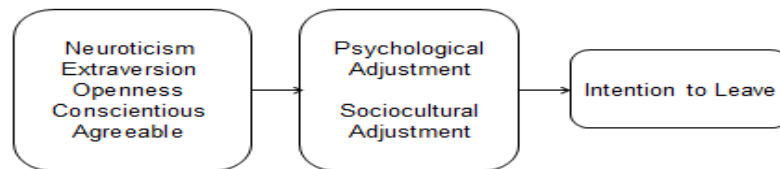
For the proposed conceptual framework showing above, the five independent variables which encompass are neuroticism, extraversion, openness, conscientious and agreeable. Meanwhile, the dependent variable is psychological and sociocultural adjustments and the outcome is intention to leave. On the other hand, the five independent variables which are neuroticism, extraversion, openness, conscientious and agreeable will have significant positive effect towards the dependent variable which is academic expatriate's psychological and sociocultural adjustments which leads to intention to leave or not.

IMPLICATIONS

Theoretical Implications

Based on this study, researchers may able to construct new knowledge to cope with current situation. Meaning to say, based on current economically situation, 21st generation and government policy, it will impact the turnover rate among academic expatriates in Malaysian higher education. Future researcher can use the result from this study to investigate the turnover among local academics practitioners in Malaysian higher education. It will be more interesting when the future researcher will include other factors of moderating or mediating factors potential. In future, in order to facilitate the personality traits, organizational support can be used as a medium to reduce the turnover intentions among expatriates in the future.

From the other perspective, it would be great for examine the relationships between foreign language ability and factors in sociocultural adjustment. Factor in sociocultural are the factors influence, or lack thereof, will only be confirmed when examined in a multitude of different linguistic and communication environments. Additionally, these results lead to further research questions that should be explored.

In practice, this research would contribute to human resource practitioner in helping them to identify the factors that influence intention to turnover among expatriates in Malaysian higher education. Supervisors or manager who involve in selecting and recruiting will able to understand the needs and expectation from higher education in Malaysia among academics expatriates. Likewise, it will improve and can produce accurate feedback for future use. HR practitioner need to supports and encourage employees to see their road career progress in host country by identifying the best strategy to retain employees though the expatriate's personality and their interest.

Managerial Implication

This outcome of this study will contribute in improving the quality of expatriates that will join the Malaysian higher education. It is very obvious that personality traits of expatriates are important for their

psychological and sociocultural adjustment. According to Hofstede (1991), individual with high personality traits tend to adjust and adapt effectively to different new cultural environment. Expatriates will be more cautious and eager to learn on the criteria and requirement aspect in Malaysian culture in order to adapt to the working environment and to prepare them. It also emphasizes that top management of the higher education's institutions to find constructive measures on retaining their valuable employees in the organization. Furthermore, Malaysian higher education institutions should consider proper selection through the big five personality traits test in finding or recruiting prospective academic expatriates with high self-adaptation to changes of the environment instead of emphasizing on their skills and qualifications. On the other hand, organizations that send expatriates on foreign assignment can also use the same way to reduce turnover intention thus producing a better outcome.

CONCLUSION

In conclusion, this study gives a better understanding towards the academic expatriate's psychological and sociocultural adjustments in Malaysian higher education institutions. The Big Five personality traits can be conceptualized composing two important constructs which are adjustments and intention to leave. The conceptual framework only focused peculiarly on academic expatriates who are working in Malaysian higher education institutions. The purpose of this study is to develop a model which suggests the relationship between personality traits with adjustment processes and intention to leave. This paper has adopted five crucial traits of Big Five personality traits which are neuroticism, extraversion, openness, conscientiousness and agreeableness. According to the literature review, these five personality traits were suggested to contribute in adjustment processes and intention to leave. The proposed framework model serves a better understanding about academic expatriate's adjustment processes and their intention to leave or not and offers many ways for future empirical analysis.

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EXPLORING FACTORS INFLUENCING LOCAL AND INTERNATIONAL TOURIST SELECTION OF ECOTOURISM

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Abstract

The unique memorable tourism experiences provided to tourists directly determine a destination's competitiveness. The extant tourism literature has provided limited explanation of the factors that characterize this tourism experiences. This study attempts to address two purposes: first, to assess the motivating ecotourism experience factors that leads different tourist group to different preferences when selecting their ecotourism destination, and second, to evaluate the respective relevance of the identified factors in the destination's competitiveness. A paper-based survey, with a specific reference to a Malaysian ecotourism destination in Mulu National Park, Sarawak, was conducted in a sample size of 100 travelers. A multiple chi-square analysis was performed to identify factors that lead to specific selections and to assess the relationship between tourist group (local and international) and tourist experiences. Further analyses were performed to identify the primary reasons for differentiation in the selection of ecotourism destination. The findings show group differences in the ecotourism experiences and the respective conditions that tourists use while choosing or reselecting an ecotourism destination. Finally, this study draws conclusions, provides some managerial implications, and several suggestions for future work.

Keywords: Tourist group, ecotourism experience, motivating factors destinations', competitiveness.

INTRODUCTION

Tourists' expectations and demands have evolved in forming the tourism experience. Destination nowadays no longer sells 'places' but experiences. In order to satisfy these experiential dimensions, tourism managers have to understand traveler's reasons for travelling. Earlier motivations rest on perceived needs which are culturally, sociologically, and psychologically derived (Cooper et al., 1993), while tourists themselves expressed their reasons for travelling such as the desire for new experiences and adventures, to discover different cultures, enjoy nature, and relax.

In many countries, the lack of effective market segmentation forms a significant gap in knowledge about travelers to an ecotourism destination. There is often inadequate differentiation between the perceptions and needs of different user-groups, even though travelers' perceptions, needs and profile vary enormously. Without a more thorough understanding of visitor motivation and behavior, there is little hope of managing the ecotourism destination successfully and sustainably in terms of resource conservation and a satisfying experience for travelers.

This study aims to address two main issues including the evaluation of motivating tourism experience factors that help lead travelers from different nationality to different perspectives when selecting their ecotourism destination. In addition to this, this study attempted to assess the respective relevance of the identified factors in the destination's competitiveness.

RESEARCH METHODOLOGY

This study used a quantitative survey questionnaire method to analyses the motivating tourism experiences of tourists from local and international group and why they chosen Mulu National Park, Sarawak as their ecotourism destination for vacation. One hundred participants from 16 countries of origin were used, with the division between local (Malaysia) and foreign countries focusing on their geographic location. The survey focused on a range of questions that the participant had to answer, including the purpose of their trips, potential tourism experiences that attracted them the most, preferred types of accommodation, means of transport, and a wide range of other topics. This enables the researcher to assess comprehensively the tourism habits and experiences of local tourist in comparing with those of international tourist. The survey focused on an ecotourism destination in Mulu National Park, Sarawak. Tourists were asked to answer the questionnaire upon exiting Mulu National Park, Sarawak at the Mulu National Airport after they had experienced Mulu. The analysis of data was performed using multiple chi-square analysis in identifying factors that lead to specific selections and to assess the relationship between tourist group (local and international) and tourist experiences. From the literature, the chi-square analysis gives a "criterion for verifying on probabilistic grounds, the consistency of a theoretical hypothesis with a set of experimental data" (Fornasini, 2008, p. 193). Moreover, possible relationship between two categorical variables can be investigated (Healey, 2011; Howell, 2008; Larson-Hall, 2010). Using the chi-square method, it was possible to test the differences using the chi-square testing form of analysis (Clark, Riley, Wilkie, & Wood, 1998; Seba, 2011). This enabled the researcher to achieve more detailed information and provide results that could be observed via different nationality background as means to an end.

DATA ANALYSIS

The results for this study presented a number of interesting findings from the perspective of nationality group differences between the locals and international tourists. The study involved 100 participants and the numbers were fairly evenly split between the two nationality groups. The group was that of those Malaysian origin (50%) and Non-Malaysian origin (50%). The non-Malaysian group consists of respondents from various countries including Norway, USA, Switzerland, Japan, German, Netherlands, Sweden, Spain, UK, Australia, Canada, Hong Kong, Iceland, New Zealand and Belgium. The demographic information also indicates that the majority of those questioned in the survey were female (54%) (Table 1). The application of the chi-square testing format of analysis led to a number of key findings in the study. The most important finding in terms of significance was that of the chi-square testing of the nationality group and the variable of the purpose of the trip (Table 2). The chi-square between this two groups and purpose of the trip was significant, $\chi^2(5) = 32.63$, $p = .000$, which suggested that there was a relationship between nationality group and purpose of the trip. Malaysian preferred to vacation more for relaxing and business. Non-Malaysian preferred to vacation more for pleasure and not for business. It is obvious that those from the Malaysian origin were far more likely to want to experience a combination of interests, combining relaxing and pleasure as their most important purpose, followed by business.

Table 1: Demographic Information from Study

Demographics	n	%
Male	46	46
Female	54	54
Local Malaysian Origin	50	50
Foreign country of Origin	50	50

Table 2: Purpose of Trip

Purpose	Tourist Group		X²	df	p
	Local	International			
Pleasure	17	42	32.63	5	0.000
Visiting friends and relatives	0	2			
Volunteer work	5	0			
Business	1	0			
Relaxing	23	4			
Others	4	2			

Another important finding, specific assessment and results focused on the accommodation types preferred by the two individual groups in the study (table 3). Respondents from Malaysia preferred staying in the homestay the most, and less in bungalow. Non-Malaysians were more interested in staying in bungalow and less in the homestay with the local operators. When further questioned on whether it is costly to travel and make a trip to Mulu National Park, majority of the Malaysian (64%) stated as costly (table 4). Furthermore, when asked on whether Mulu is easily accessible, the chi-square between this two groups and convenience of accessing Mulu National Park was significant, $\chi2(1) = 7.868$, $p = .005$ suggesting a relationship between the two. International tourist feels that it is inconvenient to get to Mulu National Park, while local tourist findings stated otherwise.

Table 3: Preferred Accommodation Types

Accommodation Type	Tourist Group		X²	df	p
	Local	International			
Resort	11	15	25.634	5	0.000
Bungalow	1	14			
Chalet	5	2			
Longhouse	3	2			
Dormitory	6	11			
Homestay	24	6			

Table 4: Tourist Perception of Cost

Costly	Tourist Group		X²	df	p
	Local	International			
Yes	31	17	7.903	2	0.019
No	8	15			
Unsure	11	18			

In terms of participant's general attitudes toward vacations, was concerning their interests at the ecotourism destination. Participants were asked about their preferences surrounding ecotourism activities of Mulu National Park's cave tour, the bat flight, the pinnacle climb, the forest walk, Penan local market, the canopy skywalk or adventure caving. In addition, the chi-square between tourist group and what interests the participant the most about their ecotourism destination, $\chi2(6) = 16.786$, $p < .010$. The finding suggested that there was a relationship between local and international tourists and the interest.

International tourists were more interested in forest walk, canopy skywalk and adventure caving and less interested in cave tour seeing the bats. In this way, the findings not only suggest that the preferences between different tourist groups are different but also give us the information that those from international tourists are much more specific in their vacation plans and wish to go on holiday for a particular purpose rather than including a range of interests within the holiday.

Similar to the above findings, the chi-square between preferred number of nights staying at the chosen destination and tourist group, $\chi2(4) = 12.019$, $p = .017$, also shows that there was a relationship between preferred number of nights and tourist group. Local tourist tended to prefer short stays (2 nights, 3 nights). International tourist tended to prefer staying longer (3 nights, 4 nights, 6 nights).

The results also indicated that there were differences in the challenges in experiences for activities in ecotourism destination for those from the local and international tourist. The results show that local tourists where experiencing physical challenges while doing the ecotourism activities, whereas the international tourists does not feel that the activities done challenged their physical ability (Table 5).

Table 5: Physical Challenge

	Tourist Group		X^2	df	p
	Local	International			
Yes	37	27	4.340	1	0.037
No	13	23			

Table 6: Companion

	Tourist Group		X^2	df	p
	Local	International			
Alone	3	5	11.233	5	0.047
Spouse	6	14			
Family with children	6	10			
Colleague	12	4			
Strangers	19	11			
Acquaintance	14	6			

The family value of vacations was also assessed by this work. The analysis of the data provided by the survey results suggests that international tourists were more motivated for families than local counterparts. As can be seen from Table 6, it is evident that those from the international tourist were more concerned about family vacation, 28% traveling with their spouses and 20% with their family with children. Local tourist tended to prefer traveling with their co-workers and strangers. The lack of other demographic information in this question limits the findings.

CONCLUSION AND DISCUSSION

The study wished to analyses the motivating tourism experience factors that help lead travelers from different nationality to different perspectives when selecting their ecotourism destination and found that the analysis of local tourists to that of international tourists ensured that significant differences existed between participants from the two groups. The study used chi-square analysis tests to assess the data and found that those from International origin were more likely to have a specific interest or purpose for a trip, travelled more for pleasure, and did not wish to combine a range of interests in their vacation.

The results have an impact on revolving around tourist from different origin differences and the impact that this can have on the tourism decision-making process. The findings indicate that there are many tourist origin differences in terms of the selection of the traveling destination and that this should be enhanced by further study.

The data collected by this study have importance to the tourism industry and to the industry stakeholders. It highlights how ecotourism destinations could advertise and attract tourists from different origin and provides them with information on the types of vacation desired by potential tourists. The research findings also highlight the differences between the tourists from the local and international cultures and the types of vacation that they are attracted by.

Cultural values are another important aspect that can be included because they affect all aspects of life, including the motivation of tourists as shown in this study. The cultural values pertaining to individualistic cultures seem to prevail in the respective choice of destinations, and thus the aspect of tourist satisfaction differs based on the tourist's motivations and specific activities (Livin, Crotts, & Hefner, 2004). The concept of individuality-collectivity in the tourism context of this study shows the dominant role of cultural differences between local and international tourists. The individualism-collectivism value dimension reflects important predictions in terms of destination image and preferences (Quintal, Lee, & Soutar, 2010). Ultimately it turns an important determinant of tourist satisfaction.

Differences in cultural values between tourists origin indicate that individuals based in different parts of the world tend to experience tourism products in a different manner. Nevertheless, the process of constant socialization and social interaction suggests that such individuals are thoroughly oriented to narrow cultural boundaries in their way of experiencing and perceiving different tourism aspects (Livin et al., 2004).

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ORGANIZATIONAL COMMITMENT, JOB SATISFACTION AND SERVICE QUALITY OF HIGHER EDUCATION: CASESTUDY OF UNIVERSITY IN PERAK

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Abstract

This research discusses the relationship between organizational commitment, job satisfaction and service quality in higher education. Hence, SERVQUAL is the method that has used to measure the service quality in case university by measuring the service quality from staffs' point of view via the five dimensions of SERVQUAL. At the same time, this research explored the relationship among the variables, which are Organizational Commitment (OC), Job Satisfaction (JS), and Service Quality (SQ) from staffs' perspective.Self-report questionnaire was used to reach the target respondents, and therefore 100 sets of questionnaires have been distributed equally to staffs from four main faculties of university. SPSS software version 18.0 was used to analyze the data. While, the data analysis methods that used for this study were included Reliability and Validity test, Person's correlation, and Linear Regression. Result shown the relationship between OC, JS and SQ were significant
.
Keywords: Organizational Commitment, Job Satisfaction, Service Quality

INTRODUCTION

The major objective of this research was to discuss the relationship between organizational commitment and job satisfaction and how it related to service quality in higher education. In the recent years, service quality is increasingly more important in many different industries including higher education (Martínez-Argüelles, Castán & Angle, 2010).The reason is service quality is able to help company to raise the revenue and profit by increasing customers satisfaction level, and stay customer loyalty. In higher education industries, consider students as consumers, and universities had responsible to understand and satisfy theirs need and want. Therefore it is necessary for universities to understand that the difference perspective toward service quality among staff, in order to improve service performance in higher education institution (Lim, 2008; sharifuddin, Hairolnezam, Asma, & Noorhidayah, 2014). SERVQUAL model is one of the measurement tools of service quality developed by Zeithamal, Parasuraman and Berry, which used to determine the five dimensions of service quality (Tangible, Reliability, Responsiveness, Empathy and Assurance) to identify the service quality among the staff in university.

In this research, the authors like to discuss the relationship between organizational commitment and job satisfaction and how it related to service quality in higher education. Besides, understand organizational commitment and job satisfaction of employee addressed an important issue of service quality, the future researches should consider quality as a holistic framework which related to suppliers and consumers.

LITERATURE REVIEW

Organizational Commitment

Organizational commitment received lots of attention in academic and management for many years. According to Meyer and Allen (2001), they cited Mowday, Porter and Steers (1982) to define attitudinal commitment as the process of people think about the relationship with organization and find out whether their own values and goals are congruent with the organization. Meyer and Allen (2001) also described another approach of commitment as the process of people stay with the organization because of no choice and how they deal with this problem. Li (2014) said the turnover rate of employee can be predicted by organizational commitment and the employees who perform well have higher level of organizational commitment. Tumwesigye (2010) indicated that individual will maintain high level of affective, normative and continuance organizational commitment if the company cares about their well-being and their contribution is valued by organization.

There are different definitions for organizational commitment, however Meyer and Allen (2001) provided a comprehensive perceptive of organizational commitment-came three-component model (TCM). Affective attachment defined as a need of individual who want to maintain membership with organization and gain a lot of work experiences which make staff feel comfortable and get personal competence too (Meyer & Allen, 2001). Employees who were emotionally attached to their organization will actively involve in the company activities (Preston & Brown, 2004). They have a tendency to contribute large financial and spend more time with their organization (Preston & Brown, 2004). Normative commitment can be described as the individual employee who is responsibility and stay with the organization (Meyer & Allen, 2001). According to Preston and Brown (2004), normative commitment causes the employees give slightly more time for their job but not much else due to the sense of obligation. Employees who have normative view of commitment will stay with the company because they think the thing they do is right and moral (Wiener, 1982). Continuance commitment represents "a desire to remain, and results from recognition of the cost associated with leaving" (Meyer & Allen, 2001). It means that if the activity stop then the "side bets" such as pension or seniority will be lost. This side bets theory was originally came out by Becker (1960). Becker (1960) said that there is no commitment if individual did not recognize the tendency to continue the action.

Job Satisfaction

Job satisfaction is the major concern for every organization. The term job satisfactions refer to an individual's attitudes and feelings towards their job. In 1969, Locke defined job satisfaction as an emotional state related to the positive or negative appraisal of job experiences. According to Davis and Nestron (1985), job satisfaction means the result of the worker's appraisal of the degree to which the work environment fulfills the individual's needs. Aries and Rizqi (2013) support this view by defining job satisfaction as the appraisal of one's job that result a pleasure or positive emotional state of the person. The more pleasure the individual, the greater the job satisfaction.

Job Descriptive Index (JDI) and Minnesota Satisfaction Questionnaire (MSQ) had been wildly accepted as a measurement tool for job satisfaction. The most difficult process in evaluating the level of employees' job satisfaction is that the employee might satisfy with certain aspects of the job whereas dissatisfy with the others (Spagnoli, Caetano, & Santos, 2012). Previously, the long version of MSQ consist 100 items which measures job satisfaction across 20 different dimensions (Ahmadi & Alireza, 2007). However, in 1967, a short version of the Minnesota Satisfaction Questionnaire has been developed, which consist 20 items and each item is rated on a 5-point Likert scale (Martin & Proença, 2012). This short version of MSQ includes only 20 of the 100 original items which main on assessing the level of satisfaction with intrinsic and extrinsic aspects of the job (Fields, 2002).

Service Quality

Quality can be variously defined as cited in Yeo (2009), according to Babakus, Yavas, Karatepe, & Avci (2003), quality always to be catchword that drives organizations to be greater, determines how the

good or bad on its products or services based on customers' perceptions. Generally organizations such as higher education sector are always do quality assessment to remain their competitive advantage as well. Besides, service organization always uses quality as a range to determine whether how services delivered to meet the customer's expectation (Khanchitpol, 2014).

According to Parasuraman, Zeithaml and Berry (1988), service quality has been defined as the comparison between expectation and perceived experience by customer before they accept the real services and experiences. Customer able to do an interpretation and comparison between the quality of a certain goods and services rendered with service they perceived. It able to influence they perceived value and their satisfaction (Cronin, Brady & Hult, 2000). It's about the different between customer's opinion and services delivered by a services producer.

Research Hypothesis

According to Malhotra and Mukherjee (2004) mentioned that service quality can be positive influence by the organizational commitment of frontline employee. These commitments are refer to the enthusiasm and willingness of employee to serve the best interest of the customer in order to achieve the service quality (Kandampully, 2002). Employees who bring emotional attachment with affective commitment to organizational goals are more likely to perform better in the organization since they will do identify and involve in the activities of the organization. Meanwhile, employees who only follow the obligation of the organization (normative) or individual necessity (continuance) are contribute lower performance in service quality (Malhotra, Mavonda, Mukherjee & Hooley, 2013). Besides, according to O'neil (2000) also have mentioned about the internal customer commitment to service quality are able to satisfy external customer which also increase the competitive advantage by wishing their external customer to appeal word of mouth activity. These arguments lead to the following hypothesis: These arguments lead to the following hypothesis:

H1: There is a significant relationship between organizational commitment and service quality.
H2: There is a significant relationship between organizational commitment and job satisfaction.

The relationship between job satisfaction and service quality has been examined by Hartline and Ferrell (1996). They found the job satisfaction have a great influence on service quality. According to Weatherly and Tansik (1993), employees with high level of satisfaction are more willing to assist customers. A positive relationship between the employee satisfaction and customer satisfaction is existed; it proved that satisfied employees delivered high quality services to the customers (Xu & Geoodegebuure, 2005). An observation conducted by Bitner (1990) showed that the employee's service performance can be influences by employee's job satisfaction. "It is well known that there is a significant correlation between employees' job satisfaction and service performance" (Bitner, 1990).

It means that the employee with high level of job satisfaction will result a high tendency in satisfying the customers. Thus, job satisfaction has a positive impact on service quality, which can directly influence the customer satisfaction. Also, Bolton and Drew (1991) suggested that a customer's perception on service quality can be directly influence by employee's job satisfaction. In addition, job satisfaction has greatly influences on service quality as proven by Albrecht and Zemke (1985). According to the previous research finding, authors found that the employee's job satisfaction is positively correlated with service quality. Based on these findings, we propose the following hypotheses about the relationships among job satisfaction and service quality. These arguments lead to the following hypothesis:

H3: Job satisfaction has a significant effect on service quality.

RESEARCH METHODOLOGY

Sampling Design

Target population is referring to a group of people, who the researchers are interested to get some useful information with the purpose of drawing conclusion in their research. While, due to the nature of this research is regarding the perspective from staff toward the service quality in case university. In this study, 100 respondents were involved and participated in the survey, and response rate is 91%. The questionnaire is distributed to respondents through survey and the questionnaires are collected back immediately. To ensure the privacy of the respondents, the survey was strictly anonymous. Also, to allow for confidentiality, respondents were asked to put their completed questionnaire in a sealed envelope and the envelopes are collected by the research coordinator and then returned directly to the researchers. Each set of questionnaire was distributed to 100 of internal employees of four main faculties in case university.

Questionnaire Design

The questionnaire was concluded three parts and Likert scale with five-point was used for questionnaire. The initial result of the measurement for the three components of commitment from Allen and Meyer (1990) was three-eight item scales. In this research, the authors adopted the organizational commitment from Allen and Meyer, consisted of 24 items. For the job satisfaction, Job Descriptive Index (JDI) and Minnesota Satisfaction Questionnaire (MSQ) had been wildly accepted as a measurement tool for job satisfaction. The most difficult process in evaluating the level of employees' job satisfaction is that the employee might satisfy with certain aspects of the job whereas dissatisfy with the others (Spagnoli, Paola, Caetano, Antonio & Santos, Susana, 2012). In our research, we use the short version of MSQ as the main measurement for job satisfaction. The core reason for us to use the short version of MSQ instead of the long version of MSQ is that the 20 items in MSQ "short form" are best representing each of the 20 scales of the 100 original items (Ahmadi and Alireza, 2007). And the last part is the service quality. The five dimensions are used to calculate the gap between expectation and perception of service quality, and the five dimensions are included reliability, responsiveness, empathy, assurance, and tangibles. Reliability are refer to the ability of service provider are able to perform the service as promised. Responsiveness are refer to employee are willing to provide prompt service whereas empathy are indicate that organization or employee are willing to provide caring and attention to individual. While assurances are refer to the ability of employee to inspire trust and confidence toward others and tangible refer to equipment and physical facilities. The final part had 22 items, in the final draft of questionnaire are 66 items.

DATA ANALYSIS

Data analysis is used to transform the data collected into useful information for our study object. SPSS 18.0 was used to analyze the data collected through survey and the outputs from SPSS are shown in the statistical tables. Face validity is used to measure a research project based on its face value. It is built upon the standard of reading through the questionnaires and evaluating the viability of the research with minimum objective measurement. The authors have invited three experts conducted the face validity for questionnaire items. The internal employee's questionnaire was given to three internal staffs in order to do pre-survey and some amendments. All the variables for reliability has been proven to be consistent and reliable due to all alpha coefficient value are above 0.5. The Cronbach's Alpha has showed that 0.832 for 24 items Organizational Commitment (OC), the three types of commitment includes affective commitment with the Cronbach's Alpha value of 0.693 (8 items), continuance commitment with the value of 0.694 (8 items) and normative commitment with 0.743 (8 items). The alpha coefficient value is 0.904 for job satisfaction which contains 20 items and it is 0.899 for 22 items of service quality on the perspective of internal employee. From service quality, it includes tangible (0.753, 4 items), reliability (0.740, 4 items), responsiveness (0.750, 5 items), assurance (0.676, 3 items), and empathy (0.742, 6 items).

According to Table 1, among the organizational commitments, affective commitment shown the highest mean value at 25.960 with standard deviation of 3.958 while normative commitment shows the lowest mean value at 24.410 with standard deviation of 4.305.

For job satisfaction, it has the mean value of 70.840 with standard deviation of 9.612. Besides, on the part of service quality, empathy recorded the highest mean value of 22.110 with standard deviation of 2.810 while assurance shows the lowest mean value of 11.380 with standard deviation of 1.444.

Table 1: Statistical Summaries of Employees

Variable	Organizational Commitment			JS	Service Quality				
	AC	CC	NC		Tangible	Reliability	Responsiveness	Assurance	Empathy
Mean	25.960	24.660	24.410	70.840	12.950	14.320	19.100	11.380	22.110
Standard Deviation	3.958	4.026	4.305	9.612	2.596	2.134	2.512	1.444	2.810

Note: AC: Affect commitment, CC: Continuance commitment, JS: Job satisfaction

Based on Table 2, the correlation coefficient between each component of organizational commitment (OC) and service quality (SQ) is 0.544, 0.296, and 0.388. All the values are fall under the range of ± 0.21 to ±0.70, a moderate coefficient range. However, the result showed that affective commitment has the most significant relationship toward SQ as compare to continuance commitment and normative commitment. Therefore, we can conclude that there is a significant relationship between OC and SQ. Table 2 presents that all components of OC has significant relationship on JS except continuance commitment.

Overall, the relationship between the organizational commitment and job satisfaction were significant, expected the relationship between continuance commitment and job satisfaction. And all organizational commitment and job satisfaction had significant relationship with service quality in the case university.

Table 2: Correlation of Variables

VARIABLES	Affective Commitment	Continuance Commitment	Normative Commitment	Job Satisfaction	Service Quality
Affective Commitment	1				
Continuance Commitment	0.368**	1			
Normative Commitment	0.571**	0.265*	1		
Job Satisfaction	0545**	0.029	0.449**	1	
Service Quality	0.544**	0.296**	0.388**	0.622**	1

** $P < 0.05$

As result of table 3, organizational commitment and job satisfaction had significant influence on service quality. The R^2 value between organizational commitment and service quality is 0.314. It means that there are 31.4% of employees' service quality is significantly affected by organizational commitment. The R^2 value of the organizational commitment and job satisfaction is 0.364 and it brings the meaning that the strength of relationship between organizational commitment and job satisfaction is 36.4%. For the

R^2 value of job satisfaction and service quality (0.387) showed that 38.7% service quality of employees is explained by job satisfaction. All three hypotheses had been support based on the finding.

Table 4: Regression of organizational commitment and job satisfaction on service quality

Variable	Service Quality (Dependent Variable, DV)			Job Satisfaction (Dependent Variable, DV)			Service quality (DV)
	AC	CC	NC	AC	CC	NC	Job Satisfaction
B	0.445	0.104	0.107	0.496	-0.212	0.222	0.622
R^2		0.314			0.364		0.387
Adjusted R^2		0.290			0.342		0.380
F		13.257**			16.572**		56.139**

Note: AC: Affect commitment, CC: Continuance commitment, JS: Job satisfaction
** $P<0.05$

CONCLUSION AND DISCUSSION

The authors can conclude that organizational commitment had the significant relationship with service quality from staffs' perspective and job satisfaction, at the same time job satisfaction shown the significant relationship with the service quality from staffs' perspective as well. From our analysis, we found that affective commitment has the most significant relationship on the service quality of employee. Previous studies showed that employees with high level of affective commitment will put more effort on their job rather than continuance and normative commitment employees (Meyer & Allen, 2001). It showed the same result for our study. Staff of case university will be affected the most on their service quality if the management level of university focuses more on the emotion of internal employee. When employees are emotionally attached to their organization, they will provide higher standard of service quality. Medical allowance, insurance, transportation incentives, accommodation and travel benefits for working purpose should be given to employees by organization in order to advocate the affective commitment towards the organization. When employees had emotional attachment with their company, they may remain loyal to the company and supervision. At the same time, employees will try their best to boost up their performances and the service quality of the organization may be enhanced. This research was conducted with the objective to investigate the impact of job satisfaction on service quality of the academic and non-academic staff in case university. Hartline and Ferrell (1996) have been proven that there is a positive relationship between the job satisfaction and service quality of the employees. This statement is further support through our research, which has been proven that job satisfaction has the tendency to improve service quality of university employees. It means job performance of university employees will be enhanced if the employees are more satisfied with their job. Therefore, the good employee's performance will result to customer satisfaction.

Overall, service quality sounds important in any service sectors in order to bring customer to satisfy. As the result shows that, organizational commitment and job satisfaction actually have the significant relationship toward the service quality in staffs' perspective. In other words, staffs of case university would perform a better service, as long as long they are satisfied with their job, loved their company, and also high willingness in putting effort for performing their tasks. Therefore, the organizations shall concern more on its staffs' feeling and benefits, since they are someone who has the direct interaction with students. As we know that, understanding customers' needs and wants plays an important role in every industry. Therefore, higher education institutions should concern on those stakeholders' point of view toward service quality, hence find out the solutions to reduce down the gap between them.

Some limitations are found in this research, and thereby some suggestions are provided for future researchers and scholars who are interested in this area. First of all, the number of sample size in this research can actually be increased in order to get a more accurate result. Thus, we recommend to future researchers conduct the research in getting a larger sample size in order to get a more significant result.

Next, this research is specifically studied on the perspectives of staff toward service quality in case university only. Therefore, we suggest that future researches to focus on the respondent diversity of universities in the future to get better understanding of the actual service in higher education industry. By comparing the service quality from variety of university, and thus it would bring a better meaning for service quality of universities around Malaysia.

Furthermore, consider the specialty of higher education, using the different approach and questionnaire can enhance the significant of finding. The EDUSERVE is a measurement scale also used for evaluate the service quality in education sector which are using SERVQUAL as a basic. In EDUSERVE, they used to come out with the finding which including the educator' expectation and also perceptions about the service quality in the education (Ramseook, Naidoo, Nundlall, 2010). For the future researchers, they are suggested to use EDUSERVE. Lastly, according to our survey, we found that the majority of our staff respondents were academic staffs, and the time of interaction between students and academic staffs is actually short. Therefore, the authors suggestion increase the diversity of respondents for the future researches.

In conclusion, the main study purpose of this research is to identify the factors that influence service quality and the gap between students and staffs' point of view toward service quality in case university. Moreover, the results showed that organizational commitment has the significant relationship with job satisfaction and service quality, and JS also has the significant relationship with service quality. Hence, this research is beneficial for future researchers and higher educations by showing out the direction of service quality improvement.

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Student Perceptions of Employability in ICT Industry in Malaysia

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Abstract

There is a sharp increase in trend level of unemployment in global. Especially, rising joblessness among fresh graduates, has become critical issue. However, the unemployment amongst the ICT fresh graduates was remain the biggest challenges by the government of Malaysia. The statistics shown by Minister of Education in 2013 the number of unemployed ICT graduate are 4,328 among the 18,000 of total number of ICT graduate which is 24% of total ICT graduates. Therefore, the research is significant to investigate the determinants that affect the employability among the ICT's fresh graduates. As the ICT industry had becomes the central source of revenue for business and Malaysia had enrolled into new economy with potential growth in ICT industry, especially in Southeast Asia. The targeted population would be ICT's student university. The student selected were studying ICT related courses. Five universities student which are University Malaya (UM), university Putra Malaysia (UPM), University Science Malaysia (USM), University Technology Malaysia (UTM), and Multimedia University (MMU) was selected. The number of questionnaire distributed to ICT students was 300 sets. All the usable data are analyzed by Pearson correlation and multiple linear regression. Theoretical and practical implication were discussed. The limitation of study and recommendation for future study were discussed.

Keywords: Perceived Employability, ICT industry, Technical Skills, Soft Skills, personal flexibility, and self-efficacy

INTRODUCTION

According to statistics, there are 161,000 graduates who completed their studies in the last six months or 8.8 per cent of youths, aged between 20 and 24 years, had yet to find a job. Currently, there are 399,500 unemployed individuals in the whole country in year 2014, stated by Minister in the Prime Minister's Department Datuk Seri Abdul Wahid Omar. ("Graduate unemployed," 2015).

However, the unemployment amongst the ICT fresh graduates was remain the biggest challenges by the government of Malaysia ("Malaysian ICT salary", 2014). The statistics shown by MOE in 2013 the number of unemployed ICT graduate are 4,328 among the 18,000 of total number of ICT graduate which is 24% of total ICT graduate. The number of unemployed of ICT graduate were from 4,047 in 2012 increase to 4328 in 2013. Report also shown only 8,697 number of graduate employed which is less than 50% total number of graduate (National Education Statistic 2013: Higher Education Sector, 2014). The remaining graduate are either unemployed or further study upgrading skills waiting for work placement. According to PIKOM's ICT job market outlook, only 10% of the new entrants to the workforce are directly employable while the remaining require extra training before they can fully undertake the work. Job-

hopping also took places due to low salary as compared with regional markets (ICT Job Market Outlook In Malaysia, 2014).

LITERATURE REVIEW

Employability

McQuaid and Lindsay (2004) preferred the term "employability" to its earliest definition. It is defined as "dichotomic" which is division of two mutually exclusive group due to its focus on the employable and non-employable only. Employability is defined as the potential of employee to secure, safeguard, and grow in a particular job at the workplace. Employability is also the work and ability of employee being marketable in their specific industry which is about being adept at getting and retaining in job industry ("National Graduate Employability blue print", 2012). As stated by MOE (Ministry of Education of Malaysia), employability is about the potential of getting and building a successful career by continuous acquiring of skill that can be applied from one employer to another industry employer ("National Graduate Employability blue print", 2012).

However, the term self-perceived employability are widely used in the context of employability (Bertenson, 2008). Perceive employability becomes more important in definition of employability as the individual perceived of the situation will affect it feeling thought as well as behavior on the situation. When individual feel they would have difficulty to find a new employment, regardless whether it actually difficult or not, they will find it difficult. The reason is the behavior of individual is affected by their perception of getting the jobs or not. In conclusion it is how the individual perceive their possibilities of getting the new employment that influences their behavior, action, and thoughts. The perceive employability is defined as "the individual's perception of his or her possibilities of obtaining and maintaining employment and it also highlight the perceived possibility to maintain current employment next to obtaining new employment." (Rothwell, Herbert and Rothwell, 2008).In his study, the reputation or brand image of university studied by the student is one of component of student self-perceived employability measurement.

Soft Skills

Mishra (2014) defined soft skills as a collection of skills that are interpreted and dissimilar. In accordance with Institute of Electrical and Electronics Engineers (IEEE), one of the world's largest technical professional societies, expresses, "Soft skills are the competences you require to work with others." Soft skill is also defined by Kantrowitz (2005) as "an interpersonal capability of an individual. It is a behavioral capability which is demanded when knowledge and technical skills are practiced in organization". Deepa and Seth (2013) expressed that soft skills are a group of distinct skills, for instance, emotional intelligence, interpersonal skills, communication skills, team skills, leadership qualities, time management, stress management and negotiation skills. Soft skills are attitudes, behaviors, character traits—rather than knowledge or technical aptitude.

There are few soft skills that are important which teamwork, problem solving skills, and leadership skills. Team work is the ability to perform in a group, which is one of the most desired skills required by labor force due to development of corporations are based on the unified efforts of the workers. Problem solving skills and decision making skills of staffs positively assist in eradicating conflicting issues and enhancing job performance (Kesselman, Lopez & Lopez, 1982).A general definition of leadership is "an action of social influence by which an individual obtains the aid and support of other individuals in the achievement of a task or mission" (Chemers, 1998).

Technical skills

Technical skills are also known as hard skills. According to Babic and Slavkovic (2011) stated that technical skills can be termed as "what you know" because it is related with specific technical abilities or solid factual knowledge which required by employee apply to a job. It is the basic knowledge of a job in an industry required by employee. Technical skills are tangible, specific and teachable skill because it can be easily known, understood, quantify and seen by people through the technical procedures or practical tasks (Coates, 2006). Technical skills can be implementing effectively and excellently after employee learning, on the other hand non-technical skill it is depend on employee's personal qualities and it is hard to apply excellently and effectively in a job by employee. These technical skills are programming, systems analysis, database design or management, operating system, and network and security. Programming is

the process of implementing instructions electronic devices to perform tasks, solve problems and provides human interactivity. Examples of programming are Net, Java, C, C++, Fortran, Assembler and Visual basic. Database management or design is important because it is the software that assists users to easily access the data in a database. The feature of database is to collect information of users and it allows users to accessed, updated, and managed easily. Operating system is use to manage software and hardware of a computer. All programs that apply by users to complete task require operating system to function it. Network security system consists of networking monitoring and security software.

Personal Flexibility

According to Bucki and Pesqueux (2000) flexibility is defined as ability to adapt in both reversible and irreversible manner. In other words, it reflects the ability of individual to remain functioning in a changing environment in spite of foreseeable or not. According to past finding from Heijde and Heijden (2006), personal flexibility was found not related to flexibility of an individual at his job's level. Nonetheless, employee's flexibility are expected to adapt the constant changes passively that would occur in their working environment (Heijde and Heijden, 2006). Fugate, Kinicki and Ashforth (2004) studies have shown the fundamental element of personal adaptability is openness to change. Openness to change is being keen and willing to accept changes of organizational such as company policies or new system of management. Openness individuals are prone to display flexibility when faced with challenges in uncertain circumstances, such as they are open toward changes events at work (Miller, Johnson, & Grau, 1994). Individual with strong optimistic value will manage future challenges and expectation in positively (Judge et al., 1999; Peterson, 2000). However, as stated by Carver & Scheir (1994), optimistic employees are more likely to perceive opportunities in the organization as compared to those who are not. Third element in personal adaptability is internal locus of control. Internal locus of control known as an individual's work and ways of predominate their life. Employee with such value is more likely to adapt to work environment and make smoother on work role transition (Wanberg & Banas, 2000).

Self-efficacy

Azizli, Atkinson, Baughman, Giammarco (2015) defined that self-efficacy as individual's creeds on meeting their desired outcome based on their ability and it also regard as factor to influence how individuals reasoning and experience emotions. From the research of Pool and Sewell (2015), we understand that self-efficacy can be known as self-confidence as well as self-esteem. However, Rosenberg (1965) argued that self-esteem as the different attitude that people have on themselves. High self-esteem proves that individual is satisfied with themselves whereas low self-esteem felt the opposite way. Nevertheless, Little & Hafdahl (2000) argues that self-esteem as an indicator of how people react to different events. In Jain and Jain report (2013), career linked self-efficacy (CLSE) is stated to be similar to self-efficacy. It is defined as one's belief in their capabilities in pursuing their particular career which helps them cultivates related employability's insights and create action plans which makes them affords to work independently in the career (Jain & Jain, 2013).

Self-efficacy also refers as the individual's perceptions on the level difficulty of career-related tasks and the perception on how well the tasks are able to be conducted (Potgieter, 2012). It also refers as the ability to cope, perform and thrive. There are 6 dimensions in self-efficacy stated by Potgieter (2012) namely the ability to make decisions, ability to work independently of others, capability to keep oneself up to date with latest developments, being consistent with challenges, confidence in achieving goals and favored with new solutions discovery. In addition, self-esteem is defined as the way people feel on themselves and reflect the way how they deal things with the people whom they come into contact (Potgieter, 2012). According to Potgieter (2012), self-esteem can be differentiated as the people adulthood as there is interaction with others.

Figure 1: Proposed Theoretical / Conceptual Framework
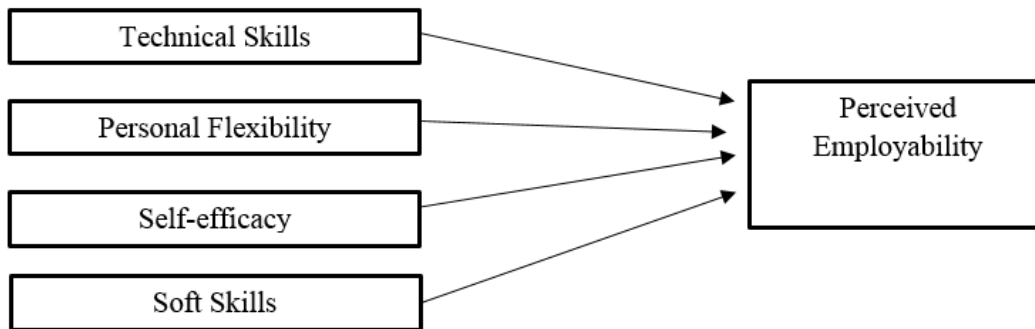
Adapted from: Developed for the research

A conceptual framework has been proposed and developed based on the literature review.

RESEARCH METHODOLOGY

Personal self-administration questionnaires is used for data collection. The question from the questionnaire is adopted from several journal. The questionnaire consists of 32 question. For our research, our target population would be ICT's student university. The student selected must be studying ICT related course include Computer Science, Information technology, Data Communication and Networking, software engineering, information system engineering. Five universities which are University Malaya (UM), university Putra Malaysia (UPM), University Science Malaysia (USM), University Technology Malaysia (UTM), and Multimedia University (MMU) was selected based on the MSC status in institute of higher learning entities. All these five universities recognizes by MSC as mark of world class service and achievement granted by government of Malaysia to the ICT industry (MSC,n.d). The five university are also awarded by QS World University Rankings by Subject of computer science and information technology 2013/2014.

For our research, due to number of target population and detail of full list of respondent is unknown therefore non probability sampling technique is used which convenience sampling and snowball sampling. Convenience sampling is non-probability as the information collected is extract from member of. Snowball sampling method is a procedure in which initial respondent are selected by probability methods and additional respondent's information obtain through initial respondents. By snowball sampling technique, information of target respondent is obtain through initial respondents that willing to answer the questionnaire.

DATA ANALYSIS

Results of survey questionnaire shows that total 152 (50.67%) are male and 148 (49.33%) are female respondent. There are 101 (33.67%) Chinese respondent, 153 (51%) Malay respondent, 27 (9%) Indian respondent and 19 (6.33%) others race respondent. Most of the respondent are from University Putra Malaysia 103 (24.33%), next is from University Malaya 85(28.33%), University Multimedia 50 (16.67%), follow by University Technology Malaysia 35 (11.67%) and remaining is from University Science Malaysia 27 (9%). Majority of respondent enter University with STPM qualification 101 (33.67%), follow by Matrikulasi 89 (29.67%), Diploma 43 (14.33%) and Foundation 43 (14.33%). Minor of respondent are enter with A Level 12 (4%) and other qualification like UEC are 12 (4%) respondent.

Table 1: Reliability Test

Dimension	Cronbach's Alpha	Number of Item
Soft skill	0.729137	**5**
Technical skill	0.820593	**5**
Personal Flexibility	0.818352	**5**
Self-efficacy	0.812651	**6**
Perceived Employability	0.797314	**7**

The variable soft skill (0.729137) and perceived employability (0.797314) have good reliability. Technical skills variable has highest Cronbach alpha value of 0.820593. Meanwhile, personal flexibility and self-efficacy has the Cronbach alpha value of 0.81352 and 0.812651 respectively.

Table 2: Pearson Correlation Analysis

		Perceived Employability
Soft skill	Pearson correlation Sig. (2-tailed) N	0.38913 <0.0001 300
Technical skill	Pearson correlation Sig. (2-tailed) N	0.24663 <0.0001 300
Personal Flexibility	Pearson correlation Sig. (2-tailed) N	0.3888 <0.0001 300
Self-efficacy	Pearson correlation Sig. (2-tailed) N	0.4209 <0.0001 300

The result demonstrated that the four independent variables are revealed to have positive significant relationship with perceived employability. For the outcome, the highest correlation coefficient is the relationship between self-efficacy and perceived employability which is 0.4209, while the second highest correlation coefficient is the relationship between soft skill and perceived employability which is 0.38913. The correlation coefficient of the relationship between personal flexibility and perceived employability was found to be 0.3888. The lowest correlation coefficient is the relationship between technical skill and perceived employability which is 0.24663 respectively at P value 0.05.

Table 3: Model Summary of R-square

Root MSE	0.46986	**R square**	0.2403
Dependent Mean	3.87095	**Adj R-Sq**	0.2303
Coefficient Variance	12.13800		

Variable	Degree of freedom	Parameter estimates	Standard error	t value	Pr>[t]
intercept	1	1.63554	0.23641	6.92	<0.0001
Soft skill	1	0.19187	0.06491	2.96	0.0034
Technical skill	1	-0.00339	0.04325	0.08	0.9377
Personal flexibility	1	0.14660	0.05885	2.49	0.0133
Self-efficacy	1	0.2461	0.06085	4.0	<0.0001

The self-efficacy is the predictor variable that contribute the highest to the variation of the perceived employability with the highest parameter estimate of 0.2461. The second contributor to the variation to the perceived employability is soft skill with parameter estimate of 0.19187. The third highest contributor to the variation of the perceived employability is personal flexibility with parameter estimate of 0.14660. The lowest contributor to the variation of the perceived employability is technical skill with 0.0039 parameter estimates.

Implication

Theoretical

The study of perceived employability is significant as there is lack of study perceived employability from the perspective of ICT's student. Major of the study from the perspective of employer. The theoretical framework developed will help the researcher for further study in the concept of perceived employability. The study will enhance the student on the knowledge of student on the perceived employability. As students who perceived themselves as highly employable, their self-confident to overcome the flexible competitive environment. Therefore, the concept will help student to emphasis on soft skills, technical skill, personal flexibility, and self-efficacy for them to get employed easily.

Managerial

One of the implication is management of the university will be aware of the raising unemployment rate of ICT graduates although the pay of ICT professional are raising tremendously. Thus, university should provide the students the programme that will increase student's self-efficacy so that they will be employed easily by employers. University should have motivation talk or workshop on employability for the students. University also need to have to redesign their curriculum of student activities to enhance student employability. Moreover, the research also important to government policy maker. The skills that have significant relationship with perceived employability would help the final year student to improve themselves on that skills that will increase the perceived employability. Therefore, MQA should emphasis on the skills that need to increase student's perceived employability. As the role of MQA is uphold the standard of tertiary education in Malaysia. Furthermore, the research are important to Minister of education of Higher education department in the report of Graduate Employability Blue Print. With this research will enable MOE to know the underlying factor in employability of the graduate. The report of graduate employability blue print will underlying the issue of graduate employability and programme for enhancing the student employability.

CONCLUSION AND DISCUSSION

First limitation of the study is the other factor that are important in explain the perceived employability. Which are not explain in the research such as the situational factor which consist of labour market condition and labour market oppotunies that will affect the employability of graduate. Next limitation is only questionnaire are used to collect the data in the research will cause item context effects. The respondents will be less flexibility to answer the question and respondents may have answer that

beyond the fixed answer (Meade, Watson & Kroustalis, 2007). The number of question in the questionnaire for the each of the independent variable asked may not enough to ask the respondent for interpretation of data. Researchers are also recommended that dual approach should be introduced effectively which are open-ended questions and personal interview. Open-ended responsive questions should be adopted

In conclusion**,** from the inferential analysis showing that the independent variable (soft skill, technical skill, personal flexibility, and self-efficacy) and perceived employability have significant relationship. This study theoretically contribute to the formulation of model that affect the perceived employability of student. The study of perceived employability is significant as there is lack of study perceived employability from the perspective of ICT's student. The concept of perceived employability also important in explaining the employability.

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The Practice of Information Security Behaviour among Government's Employees in Tanzania: A Conceptual Framework Using Health Belief Model (HBM)

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Abstract

Information and Communication Technology (ICT) has become a key driver of business processes in organizations. The application of ICT in business processes has yielded numerous advantages to organizations. However, its application is hampered by security concerns. Users of ICT- based systems are the weakest link and thus the main cause of ICT systems insecurity in organizations. This study found that the following elements – poor security awareness, non-compliance to security policies and habit of sharing login credentials are the security concerns faced by Tanzania's public servants. To address the above security concerns, this study proposes a conceptual model based on the Health Belief Model (HBM) to investigate the intention of the government's employees to practice protective security behaviour. The authors propose to extend modified HBM by including the construct of security habit to address the poor security habit currently practiced by the government's employees.

Keywords: Intention, HBM, security behaviour

INTRODUCTION

The success of e-government initiatives heavily depends on citizen's trust of the e-service's security (Jiménez et al., 2012; Wimmer & Bredow, 2002). Currently, security threats to Tanzania's e-government systems are caused by: (1) lack security awareness among the government's employees (Bakari, Magnusson, Yngström, & Tarimo, 2007; Dewa & Zlotnikova, 2014; Shaaban, Conrad, & French, 2012); and(2) non-compliance to Organization's information security policies Waziri and Yonah (2014)due to poor facilitating conditions, individual perception on susceptibility, severity of security threats, security habits, and inconvenience to execute the existing organizational security control (Pahnila, Siponen, & Mahmood, 2007;TCRA, 2012).In addition, the existing habit of sharing login credentials and use of personal modems to access the internet may invite attackers to enter the systems (Bakari, 2013; Dewa & Zlotnikova, 2014).

To address the above-mentioned problems confronted by the Tanzanian Government, the objectives of this study are: 1) to measure the relationships between the HBM constructs and the intention to practice information security behaviour; and2) to extend the HBM by including security habit to measure the Government employees' habitual actions on intention to practice information security.

The conceptual paper contributes to the body of knowledge in threeways:1) To fill the literature gap, the HBM model is extended to measure the impact of security habit on government employee's intention to practice information security behaviour;2) The study will help the policy makers to plan information security efforts more effectively. Examples of information security efforts include training, awareness programs and security investments, which can be integrated with e-Government maturity model (eGMM);and 3) This study will provide indications to policy makers in developing security

intervention programs(such as security awareness program) that can encourage the government employees to practice information security behaviour.

OVERVIEW OF RELEVANT BEHAVIOUR THEORIES

Literature on information security behaviour suggests that the adoption of only one information systems (IS)behavioural theory may not be able to explain the information security behaviour adequately.Therefore, many past IS researchers have integrated IS behavioural theory with one or more theories that is or are currently used in the same or other research areas. For example, TPB was integrated with protection motivation theory (PMT)to study security behaviour related to utilization of protective security technologies such as the use of anti-virus to protect computer systems (Ifinedo, 2012).Initially, PMT was developed in the health care field to explain the role of fear appeals. Later, PMT was extended to explain the cognitive processes that can mediate change of human behaviour (Rogers, 1983).Technology Threat Avoidance Theory (TTAT)is best used to explain security avoidance behaviour rather than protective behaviour which is the main focus of this study(Liang & Xue, 2009).

TTAT posits that individual will adopt passive behaviour by performing emotion-focused coping to avoid IT threats(Liang & Xue, 2009; Williams & Hawkins, 1986). Comparatively, general deterrence theory (GDT) assumes that individuals tend to avoid doing unpleasant behaviour because of sanctions from the organizations(Liang & Xue, 2009;Williams & Hawkins, 1986). In brief, TTAT is limited to non-working setting while GDT is more appropriate for the study of criminal related behaviour(Liang & Xue, 2010; Lieberman, 2010).TPB is a useful theory to addresses the behavioural issue of poor security awareness(Ng et al., 2009).The impact of security awareness, poor perception on threats severity and susceptibility can be explained by several theories such as PMT, TTAT and HBM.

This study is proposing to use HBM as the fundamental theory because the model goes beyond addressing security awareness, poor threat perception on threats severity and susceptibility issues and could address the barriers that can influence the Government employees to practice protective security behaviour in a work setting phenomenon.

CONCEPTUAL FRAMEWORK OF HBM

The original HBM consists the following constructs and the dependent variable is likelihood of taking the recommended action(see figure 1).
   a) Perceived susceptibility refers to an individual's belief of the possibility that a computer system is vulnerable to the attack of information security (Claar, 2011). When perceived susceptibility levels is high, the person may likely to practice protective information security behaviour (Ng, Kankanhalli, & Xu, 2009).
   b) Perceived severity shows an individual's belief of the seriousness of the security incident. Consequences of the security incident may spread to the organization, job and family of the employee.(Ng et al., 2009).Higher severity of the security incident may motivate an individual to practice protective information security behaviour.
   c) Perceived benefits represent a person's belief of the advantages that the users could gain from the use of protecting computer information systems. Higher benefits may motivate an individual to practice protective information security behaviour (Ng et al., 2009).
   d) Perceived barriers refers to an individual's belief that to engage a particular health preventive actions, such behaviour may be constrained by a number of issues such as financial, psychological etc. (Akey, Rintamaki, & Kane, 2013). In information security context, barriers such as additional security controls may discourage and individual to perform an information security behaviour(Claar & Johnson, 2012; Ng et al., 2009).

Figure 1: Conceptual framework of the original HBM
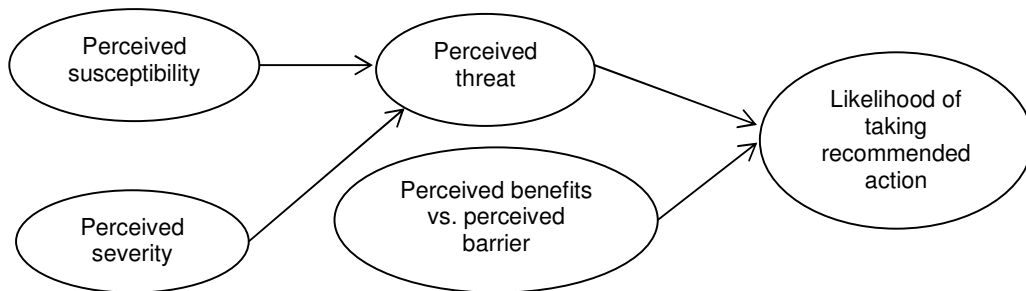
Source: Rosenstock (1966)

The original HBM was later modified to include self–efficacy, cues to action, and modifying factors constructs(see figure 2).

a) Self-efficacy shows a person's ability and confidence to perform information security behaviour (Bandura, 1977).

b) Cues to action constitute stimuli that can trigger an action towards an appropriate preventive behaviour such as a message from the software vendor to install security patches and security updates.

c) Modifying factors such as age, gender, ethnicity, education level has an indirect effect on the relationship between perceived threat, perceived benefits and barriers on the likelihood of taking a recommended action. In the context of information security, modifying factors such as prior experience with security incidents may influence an individual to perform an information security behaviour(Claar, 2011).

Figure 2: Conceptual framework of the modified HBM
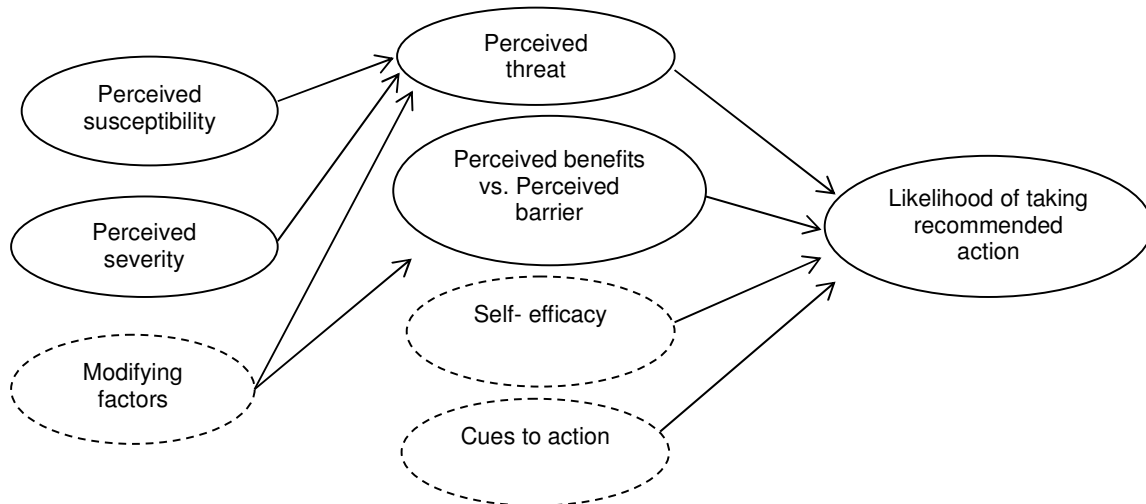
Source: Janz& Becker (1984) and Rosenstock (1974)

REVIEW OF PAST STUDIES RESEARCH MODELS

Many IS researchers that adopted the modified HBM have operationalised the constructs differently. For example, in studying end users' computer security behaviour at their working place ;Ng, Kankanhalli and Xu (2009)proposed the moderation role of perceived severity on the HBM constructs instead of causing the change in perceived threat(see figure 2 and 3).Part of the authors' justifications are as follows.1) In PMT, perceived severity could moderate the effects of perceived susceptibility on likelihood to practice health behaviour(Milne, Sheeran & Orbell, 2000); 2) The effects of perceived benefits and perceived barriers would be reduced if an individual perceives that negative consequence may emerge if an individual adopts the recommended action; 3) Similarly, the negative consequence may cause the individual to feel inconvenience to practice the relevant recommended action; 4) An individual is more likely to respond to cues and perform a security behaviour if the perception on severity of the security threat is high; and 5) If an individual perceive that the security threat is severe is more likely use skills and knowledge to respond to the security threat.

Figure 3: Conceptual Framework Proposed by Ng et al (2009)
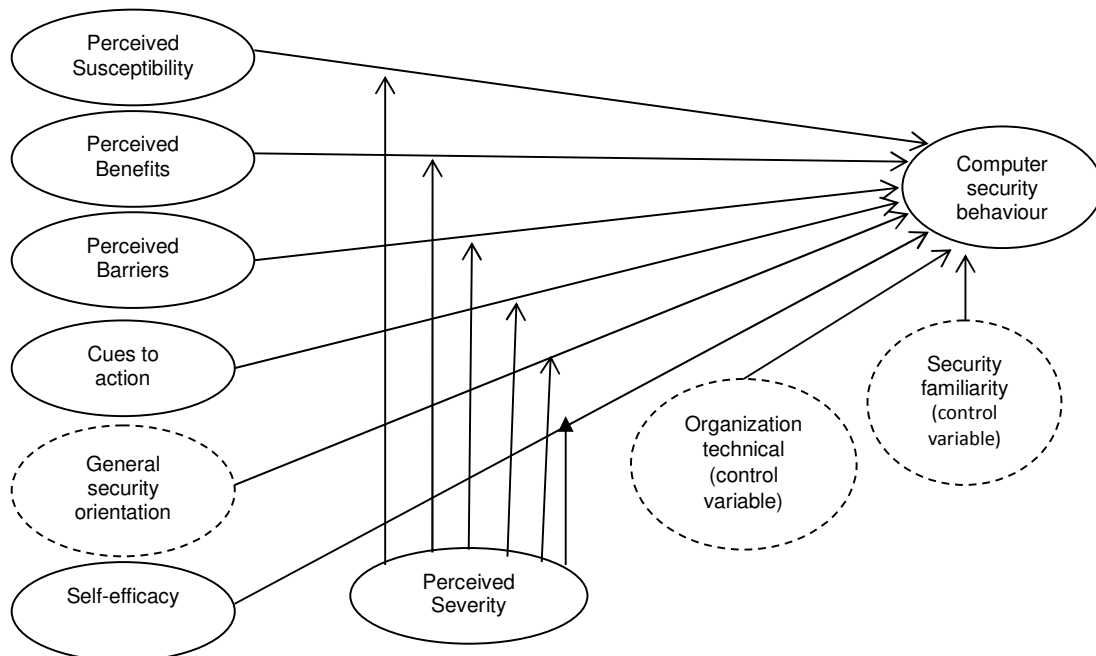
In studying the adoption of computer security among end users in domestic setting, Claar and Johnson (2012) suggested that the modifying factors could moderate the effect of the HBM constructs (except cues to action)on their tendency to practice computer security behaviour (see figure 2 and 4).

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Figure 4: The Conceptual Framework Proposed by Claar and Johnson (2012)
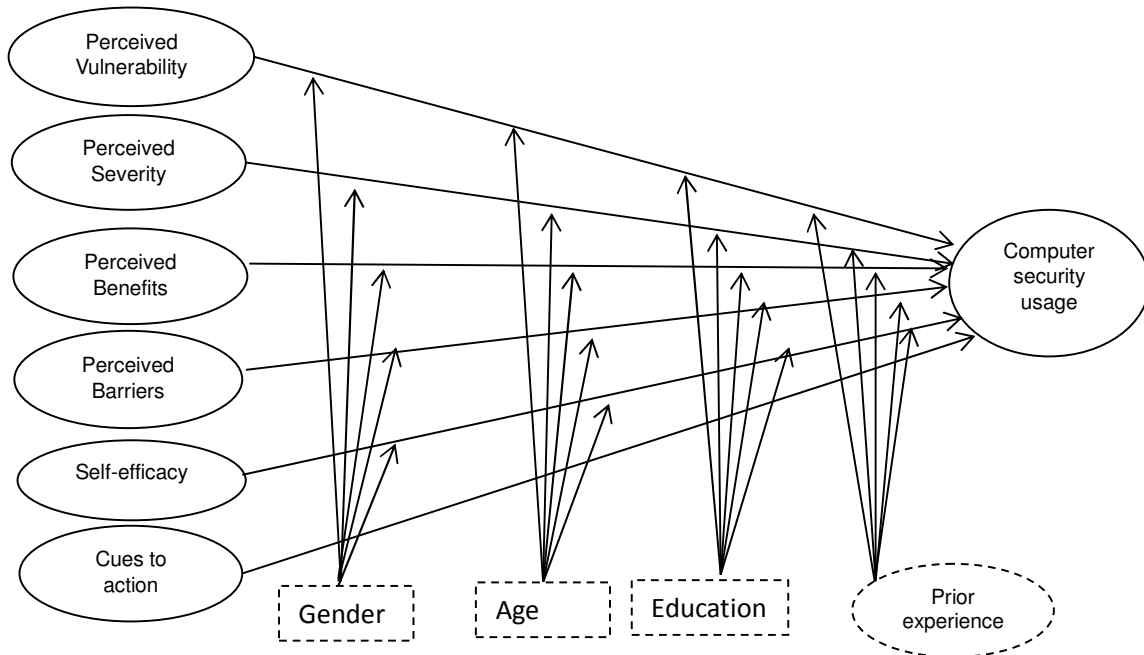
To study to investigate the adoption of Telecare, Chuang, Tsai, Hsieh and Tumurtulga (2013) defined a new relationship between HBM variables (see figure 5).Cues to action were predicted to mediate the relationship between the between HBM's constructs on adoption intention. Unfortunately, justification for modelling cues to action as a mediating variable was not stated in the conceptual paper. The conceptual model may be useful to studies which focus of studying the influence of cues on persuading users to perform a certain act. For example, in Faradillahet al (2014) study, cues was used as mediator variable on the intention to practice food security behaviour.

Figure 5: The Conceptual Framework Proposed by Chuang, Tsai, Hsieh and Tumurtulga (2013)
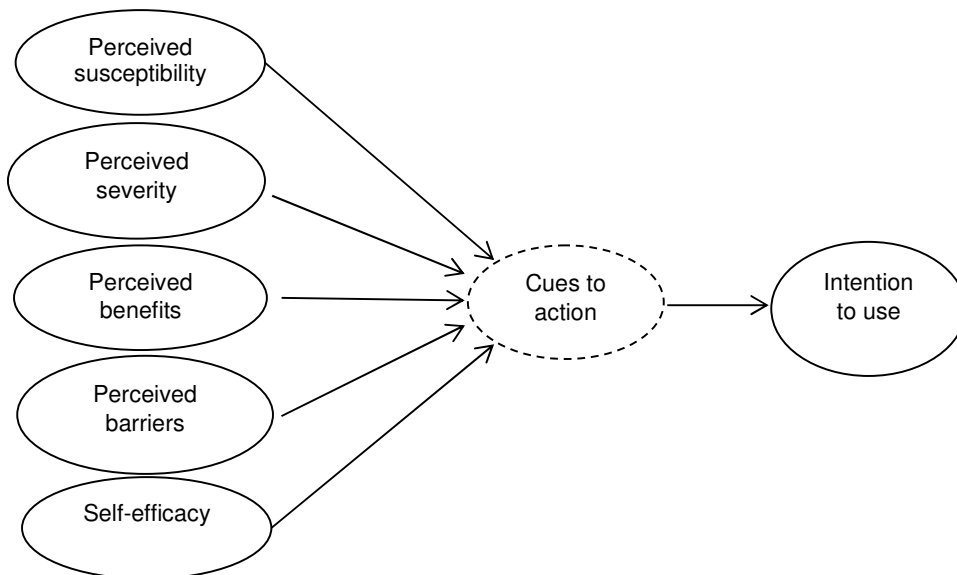
Past researchers have added new variables in the modified HBM to increase the model explanatory power (Rosenstock, Strecher, & Becker, 1988) that can allow them to achieve their studies' objectives. For example, Ng et al. (2009) added three new variables, two of which (organization technical control and security familiarity) served as control variables (see figure 2)to control internal factors that may produce any opposing explanations with regard to the influence of study's variables on dependent variables(Nanka-Bruce, 2011; Ng et al., 2009).A third variable, general security orientation was added to address security consciousness or predisposition of end-user when accessing computer systems.

Past researchers have decomposed the original construct: perceived benefits vs. perceived barrier into two separate constructs: perceived benefits vs. perceived barriers. The decomposition was suggested as the perceived barrier is measured by quantifiable items while perceived benefit involves non-quantifiable items. As the concept of measurement of both constructs is different, past researchers suggested to decompose the construct into two separate constructs: perceived benefits and perceived barriers (Claar& Johnson, 2012; Ng et al., 2009; Ali et al., 2011;Cheney & John, 2013;Sharafkhani, Khorsandi, & Shamsi, 2014).

Past HBM-based research tended to study only the volitional factors, where users were assumed to be rational: i.e. able to make their decision consciously and willingly (Henderson, 2005). In other words, users may conduct a cost-benefit analysis before performing certain behaviour. Nevertheless, some literature also suggests to include the study of habitual factors (Pahnila et al., 2007; Ouellette & Wood, 1998), where users may perform certain act automatically or unconsciously (Pollard, 2005). Compare to literature, this authors proposed to study both volitional and habitual behaviours in the present research framework (see figure 6).

PROPOSED RESEARCH MODEL

This study is proposing to extend the modified HBM by including the construct of security habit to address the habitual security practiced by government's employees. Literature showed that Tanzania Government employees have the habit of sharing passwords and use of personal storage devices and internet modems in office computers (Bakari, 2013; Dewa & Zlotnikova, 2014). Such habits may jeopardize security of government information systems (see figure 6).Perceived susceptibility and perceived severity are proposed as the direct predictors of intention to practice security behaviour (see figure 6).

In the original HBM, perceived susceptibility and perceived severity are assumed to be the antecedent factors of perceived threat (see figure 2). However, many past researchers argued that treating perceived threat as a predictor of the intentional behaviour was inappropriate because such suggestion may violate the expectancy value of the HBM (Sheeran & Abraham, 1996). Instead, the antecedent factors of perceived threat: perceived susceptibility and perceived severity should produce direct effect on behavioural intention (Sheeran& Abraham, 1996)and the suggestion was widely used in literature –Claar, (2011);Claar and Johnson, (2012);Ng et al. (2009);and Orji, Vassileva, and Mandryk, (2012).

In the original HBM, modifying factors are predicted to have indirect effects on the behaviour intention through individual perceptions (perceived severity, perceived susceptibility, perceived benefits and perceived barriers) (Janz& Becker, 1984) (see figure 2). Modifying factors include age, gender, education levels, race, ethnicity and religion. Previous researchers have been choosing different modifying factors to suit their research objectives(Rundall & Wheeler, 1979).

The authors suggest employing the level of education as the modifying factor based on following justifications: 1) education level is a key determinant in the recruitment of new employees to operate thee-government information systems; and 2) to ensure the government employees apply good information security practices when using e-Government information systems, the delivery of the training materials may need to be customized according to the employee's education level (PCI, 2014). For example, level of security training may differ between an employee with master's degree in IT and an employee with a professional qualification in IT (Furnell & Clarke, 2005).

Figure 6: Current Research Model
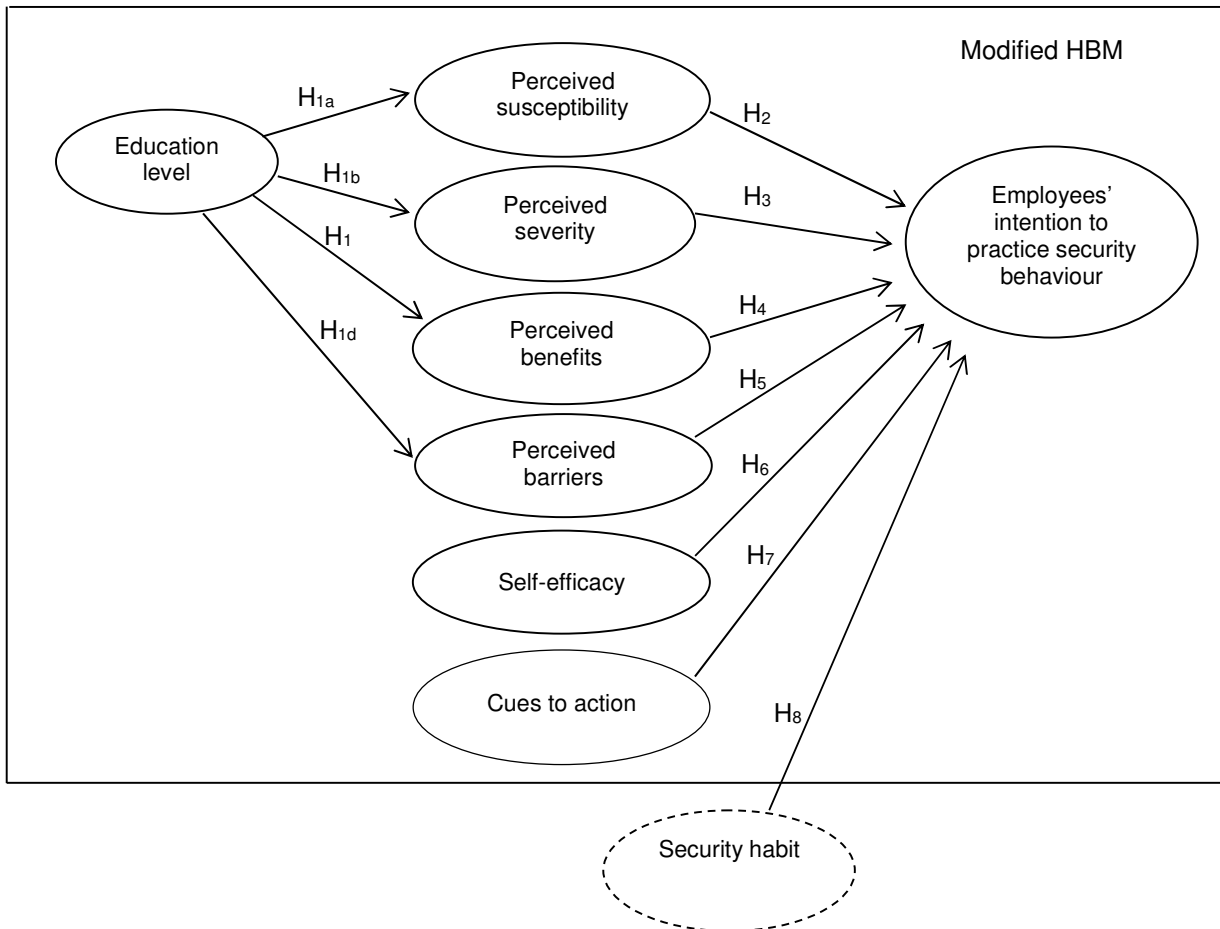
The Development of Present Research's Hypotheses

Health care studies suggest that education level play a key role in enhancing an individual's susceptibility and severity perceptions to illness. For example, Rundall et al.(1979) argued that individuals with higher education level are more likely to participate in health preventive actions so that relevant risks and severity of contracting a disease can be reduced. In the context of IS studies, individuals with higher education level are more likely to avoid phishing attacks which is connected to their level of susceptibility and severity on phishing attacks(Sheng et.al., 2010). Thus, the hypotheses are:

H1a: Education level have positive influence on perceived susceptibility.
H1b: Education level have positive influence on perceived severity.

According to Shaw and Spokane (2008), individuals with higher education are more likely to perform certain behaviour if they are aware of the benefits that could be generated from their actions. Literature in health care shows that respondents with higher education level may participate in prostate cancer screening if the perceive the cancer screening would produce positive returns (Gibbs,2007).In IS literature, farmers who are computer literature may perceive higher benefits if perform the studied act (Sharma,2006). In the context of information security, individuals with higher IT education level are more likely to practice protective information security behaviour because they are aware of the benefits of safe computing. Positive relationship between education level and perceived benefits is also found in the

following studies: Miran and Rasha, (2013);El Aziz, El Badrawy, and Hussien, (2014). Therefore, the authors predict that,

H1c: Education level have positive influence on perceived benefits.

Education can boost an individual's perceived barriers to engage a preventive behaviour as well. For example, nurses with lower level of academic qualifications are more likely to perceive higher barrier to utilize research outputs in their daily practices(Chien et al 2013;Dean, 2004). Similarly, it is expected that individuals with lower level of IT education will perceive higher barrier to practice information security behaviour due to limited skills and knowledge. Hence, the authors hypothesize that,

H1d: Education level have negative influence on perceived barriers.

Perceived susceptibility refers to an individual's subjective risks of getting a disease. This perception differs widely between individuals (Orji et al., 2012). Health care literature suggests that individuals with high levels of susceptibility to disease are more likely to engage in preventive health behaviour (Rosenstock, 1966). For example, individuals are more likely to refrain from smoking because of the risk of contracting a lung cancer (McDonaldet al., 2010;Reisi et al., 2014). IS literature argues that individuals with high levels of susceptibility are more likely to engage in safe computing or behave more cautiously while online (Ng et al., 2009). Thus, this study predicts that,

H2: Perceived susceptibility have positive influence on the intention of employees to practice information security behaviour.

Health care researchers argued that perceive seriousness (severity) of a disease motivates an individual to engage in recommended health behaviour (Janz & Becker, 1984;Orji et al., 2012).Depending on the level of disease severity, an individual may choose to engage or not to engage in a health preventive behaviour. For example, when a person perceive that the chance of contracting a disease could be severe, he or she would more likely to engage in health preventive behaviour such as attending diagnosis, doing exercise etc. (DiMatteo, Haskard, & Williams, 2007et al, 2000).The IS researchers argued that if an individual perceive the severity levels on the consequences of the security incident is high, that person would be more likely to engage in safe computing behaviour (Ng et al., 2009). Therefore, the authors expect that,

H3: Perceived severity have positive influence on the intention of employees to practice information security behaviour

According to Janz and Becker(1984), the perceived barrier can be measured by using quantifiable items, such as unavailability of time, and the measurement of the perceived benefit was not easy to be quantified, such as reducing chances of getting hypertension. As the measurement concept of both the perceived barrier and perceived benefit is different, past researchers suggested to decompose the construct into two separate constructs: perceived benefits and perceived barriers (Claar& Johnson, 2012; Ng et al., 2009; Ali et al., 2011;Cheney & John, 2013;Sharafkhani, Khorsandi, & Shamsi, 2014).The researchers of health care suggested that individual will intent to engage in health behaviour if the derived benefits is positively perceived(Lee, 2013; Reiser, 2007). IS researchers argued that the users will practice information security behaviour if they feel that their work productivity would increase (Bowen, Chew, & Hash, 2007; Rahman &Donahue, 2010). The review of literature has made the author to postulate that:

H4: Perceived benefits have positive influence on the intention of employees to practice information security behaviour.

Past researchers found that respondents were less likely to perform certain act if: (1) the perceived barriers such as rivalry in business activities were highly anticipated (Lüthje and Franke, 2003); (2) the users were lack of business knowledge and financial support, and thereby may confront higher risk (Pruett et. al., 2009). In health care research, barriers such as the perceived side effects of cancer

treatment may discourage the patients to seek medical consultation (Lee,2013).IS studies indicates that perceived barrier can affect user's intention to practice security behaviour(Claar, 2011;Claar & Johnson, 2012;Ng et al., 2009). For example, Claar (2011) argued that additional security controls in computer systems and higher time costs may impede employee's intention to practice security behaviour. Hence, we foresee that:

> H5:Perceived barriers have negative influence on the intention of employees to practice information security behaviour.

In health care study, individuals with higher confident of their ability to perform a particular health behaviour are likely to engage in health preventive behaviours and counselling(Longo, Lent, & Brown, 1992;Rimal, 2000). For example, an individual would perform certain health behaviour if that person has the determination and commitment to perform that behaviour (Armitage & Conner, 2001; Floyd, Prentice-Dunn, & Rogers, 2000; Milne et al., 2000;Peyman et al., 2009; Schwarzer & Fuchs, 1996;White, Terry, & Hogg, 1994).In the context of IS research, users who have IS security knowledge, confidence and ability to perform certain security behaviour, they would likely practice the security behaviour(Claar& Johnson, 2012; Ng et al., 2009; Workman, Bommer, & Straub, 2008). Based on the above findings, we hypothesize that:

> H6: Self–efficacy has positive influence on the intention of employee's to practice information security behaviour.

Health care literature argues that cues to action may stimulate an individual to engage into an appropriate health behaviour(Janz& Becker, 1984; Strecher & Rosenstock, 1997). For example, Bleiker et al., (2005) indicated that reminders letters may motivate a patient with high risks of contracting colorectal cancer to turn up for routine check-up. In the context of IS studies, cues to action refer to security tips, advices, remainders, word of mouth that reminds or motivates a person to practice information security behaviours (Claar, 2011). Cues to action may boost employee's susceptibility level, awareness of the potential risks associated with improper security behaviours and severity of the security threats. Great cues to action may motivate an individual to engage into protective information security behaviour (Ng et al., 2009).Therefore, the study predicts that,

> H7: Cues to action has positive influence on the intention of employee's to practice information security behaviour.

The current conceptual framework propose to add a new variable: security habit to suppress the HBM's failure to consider the influence of repeat behaviour (habit) in predicting preventive health behaviours(Maguire & Lizewski, 2010). HBM posits that health behaviours are always under volitional control but in reality most of health behaviours are determined by individual's habit (Taylor et al., 2007). Literature in nutrition studies indicate that a person's habit is highly correlated with the person's intention to consume: (1) milk (Saba, et al., 1998), and (2) food containing fats(Saba, Vassallo & Turrini,2000).Past studies also showed that intention to use (1) condom among university students Trafimow (2000), and (2) ecstasy conducted by Orbelll, Blair, and Essex (2001)was closely associated with the respondent's habit. IS researchers have been predicting the similar positive relationship between individuals 'habit and behavioural intention (Jia & Hall, 2014; Limayem & Cheung,2008). Hence, based on the past studies propositions, the authors expect that:

> H8:Security habits against security threats has positive influence on the intention of employee's to practice information security behaviours.

CONCLUSION

The current authors observed that, the original HBM was vastly modified in four different ways (see figure 3, 4 and 5). Nonetheless, all modifications observed in the past studies are not sufficient to address in full the current research problem. HBM constructs can only address lack of security awareness and non-compliance with security policies while poor security habit among government employees cannot

be addressed by it. Besides, HBM constructs are incapable to address non volitional actions such habit (Maguire & Lizewski, 2010).Thus, in order to address problem of poor security habit among government employees in Tanzania and at the same time to suppress the weakness of HBM to address non volitional actions (habitual actions), this study extends the modified HBM used in the past studies by including security habit construct in the research model.

The study has identified the following research gaps 1) Literature argues that behaviour is jointly determined by volitional (intentions) actions and habitual behaviours (Ouellette & Wood, 1998). However, past research models suffers from inability to address habitual security behaviours. Thus, the current conceptual model takes into account both volitional and habitual security behaviours to address the weakness of past studies research models and thus offer a better approach to study security behaviour in work setting. 2) Past studies asserts that, modifying factors affects the behaviour intention indirectly through individual perceptions (HBM constructs) (Janz & Becker, 1984). Little attention has been paid in past studies to measure the influence of modifying factors (such as age, gender, ethnicity, and education level) on individual perceptions on intention to practice protective information security behaviour. Thus, the current study measures the relationship between education level and individual perceptions.

The developed conceptual model can be used by policy makers as a base for enhancing the existing security policies for the government entities. Ng et al. (2009) argue that development of information security culture depends on the understanding of security behaviours among the users. Hence, the outcome of the study (i.e. security behaviours) can be integrated with national strategies for cultivating information security culture among government employees. The study conducted by Saudi Arabia, Alfawaz, Nelson and Mohannak (2010) showed that understanding of individual information security behaviours is a key step in ensuring the development of information security culture.

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ANALYSIS TOWARD HOME OWNERSHIP IN RURAL AND URBAN AREAS: A CASE STUDY OF INDONESIA

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ABSTRACT

The purpose of this study is to examine the resident ownership situation in Indonesia in 1995 and 2010. It's been divided into three objectives. The first objectives focused on the analysis of resident ownership, whether it is owned or rented and secondly, this analysis identified about the factors that affect the resident ownership in the urban and rural areas in year 2010 at Indonesia. Analysis of the first objectives used Probit Model showed that owned resident ownership is the person who increased in age, already married higher level of education and worked. Meanwhile, the second analysis showed that individuals living in the city among 45 years old and above, married, higher level of education and working. Lastly, the third analysis focused on factors that affect the type of resident in Indonesia in 1995. The analysis used Ordered Logit Model showed individual tends to stay in double storey housing when literacy rates are increasing particularly among men. Beside that, individuals who lived in double storey are between 55 years old and above, higher of income and high level of education. These studies also suggest some policy implications for the improvement of housing development policies, particularly in urban and rural areas in order to reduce the problems of resident ownership among the population in Indonesia.

Keywords: Probit Model, Logit Model, Ownership

INTRODUCTION

Home is a place for an individual to shelter and to hold up in this life. According to Nor Malina Malek and Azrina Husin (2012), home is one of the basic human needs apart from food and apparel. If one of these human needs were not satisfied, so human life in thefuture will be difficult. Started from the house, individual can build a family and get a job to fulfill self need. Through comfortable life, individuals can contribute to economic growth for the nation. According Maria and Bruno (2007), the house is a human need, but housing also a primary asset in the household portfolio all over the world. Nowadays, home ownership is viewed as a long term investment for the future.

Increasing in world population now a days had improved a housing requirement from the society caused an increasing a housing supply among developer to fulfill society demand. Nevertheless, from the supply side, it involves various transactions such as housing construction material that sold separately.In accession,it will causeincreased in a unit of houses price offered by developers to accommodate higher construction cost. Housing price per unit become expensive, according to housing location with job area, especially in urban areas with limitedground space.

In fact, limited land space in urban areasdue to industrial development to attract foreign investor to invest in the state and increasing the economic level. Moreover, an urban area is a strategic place to attract the investors because it will show the country development.This lead migrates rural to urban regions, which have more job opportunities and stable income. This will cause urban area have to accommodate a total population in the city also the population of rural expanse. Nonetheless, industrial focusing in urban area, causing a big gap and erode the border between urban and rural area that focus

to the third sector such as agriculture, fishery and mining and widened resident's socioeconomic gap, Nurbaity and Amilia (2011).

The socioeconomic gap can be seen through economic growth, whether in rural or urban area. For instance, less economic development in rural area contributes to less job opportunity in that place and the next will create many lowest income people. The lowest income people will chew over the programmed implemented by the government, whether if it's effective in that area. This is because; the lower income people will do anything such as criminal, vagrant or go to another country to looking for a better job to support their life. As consequences, the respective party or the governments have to spend bunch money to overcome the criminal issues and also to sustain the economic level.

Hence, the differences in economic activity and development can cause the differences in income, types of home ownership and type of resident they stay. This situation will reflect the importance of living accommodations to individual to continue their life and also to contribute to economic growth. Then, analysis of home ownership and type of resident in stay should be extended out for policy improvement in increasing the quality of life at every level of society, Triples and Wills (1994).In order to overcome these issues, the household and society problem should be identified because the purchasing power to own a house rises at their hand. The analysis about home ownership either fully owned or rented in a developing nation is asignificant tool to create policy intervention in order to promote the welfare through the housing market, Maria Angelica, Roberto and et.al (2011).

To review these matters, this analysis will analyze about the home ownership in Indonesia case to reflect the home ownership in developing countries.In fact, with a high density of population, this study is very substantial to developing country, especially Malaysia to achieve a population of 70 million people in *Dasar Kependudukan*. Moreover, this analysis will explain the home ownership phenomena in Indonesia and the factors which caused reduced in home ownership in that country. This issue should to economic growth and become the reference to all other research in the future policy legislation and development planning in Indonesia.

According to Global Property Guide for Indonesia 2014, property market in Indonesia from 2008 until 2010 decline due to increasing in property price rose by 2.91%. Increasing in the property market is due to increasing in material price by 7 to 12 percent and high labor wage. This showed, housing construction sector influenced by construction cost, construction period, industrial focusing, skill ratio and imported building material give a negative effect on housing supply and altogether, causing a changing in household demand are also known as supply price elasticity.Indonesia itself is one of the countrieswith thehighest population that is 237,641,326 million people or 3.44% of the world population. Beside that, continuous economic development since 1980 totaled $554,161.727 billion and increase to $2,463,241.965 billion in 2011. This is because why Indonesia becomes foreign direct investment focus (Foreign Direct Investment - FDI) too invested in Indonesia.

This analysis concentrates in thehome ownership in Indonesia in year 2010. In year 2010, home ownership in urban areas had dipped to 67.61% compared to 69.42%. Likewise home ownership in rural area is decliningfrom 88.71% to 88.28%. Compared to rental house or contract showed improvement,that is 16.55% to 18.84% and 1.67% to 1.89% respectively in urban andrural area.According to Global Property Guide for Indonesia 2014, property market in Indonesia from 2008 until 2010 decline due to increasing in property price rose by 2.91%. Increasing in the property market is due to increasing in material price by 7 to 12 percent and high labor wage. This showed, housing construction sector influenced by construction cost, construction period, industrial focusing, and skill ratio and imported building material. But, the dominant factors that affect onthe housing market in Indonesia are high mortgage interest rate, foreign ownership restriction, high cost of building materials, high tax rate and red tape in government, the Global Property Guide, 2015. But these factors didn't give a direct impact to the home ownership in Indonesia.

However, these factors will give an impact through demographic factor, such as individual income and so on. So, decreased in home ownership rate in urban areas or in rural area not only due to individual demand on housing supply solely but it also influenced by various factors like individual

demographic factor, income, occupational class, education, illiterate and others will be analyzed in the next part.

Beside that, economic growth in Indonesia causes a migration from rural to urban area and increasing population in urban areas. For example, develop city in Indonesia such as Jakarta have about 28 million populations and it's assumed to be increased because of the migration from all over Indonesia. In this case, home ownership like rented or contract will increase because migrate people tend to rent a house with their friend due to the housing price in the city because of limited land space. This situation is one of the reasons why Indonesia made as analysis subject other than ASEAN or developing country. Furthermore, with the width size of the country and high density of population, so the systematic development planning is needed to ensure the comfortable house for the society. In fact, with economic growth from year to year, Indonesia will be a reference foranother country to preserving economic growth and to resolve the housing issues in their country.

Among the variable that be used in this analysis is socio- economic factor such as income, education, illiterate and class work, demographic factor such as marital status, age and gender, family size and number of children. Base of the past studies (Guris. S, Caglayan. E et. al (2011), Lauridsen. J and Skak. M (2007), Grinstein-Weiss. M, Charles. P et. al (2011), Subhan. S and Ahmad. E (2012), Gandleman. N (2006), Intan Sari Zaitun Rahma (2010), Piedade Morais and Oliveira Cruz (2007), Maria Angelica, Roberto Steiner et. al (2011), Fontela. M and Gonzalez. F (2007) and Nuzhat, Shafi et. al (2002) showed factors such as family size, age, education level of head of household and marital status is the main core factor that affect home ownership by individuals. Therefore, this analysis will study home ownership status in Indonesia, and factors which influenced home ownership in year 2010 and type of residence in Indonesia in year 1995. It is because, increasing in population growth not in line with home ownership in Indonesia. However, if people fully own the residence, the residence still not qualified to stay.

The scope of the study will focus on the factors that influenced home ownership in 2010 and type of resident in 1995 in Indonesia. This analysis depends on secondary data from Integrated Public Use Microdata Series International that suitable with this quantitative analysis. This analysis consists three main objectives. The first objective will analyze the homeownership status, whether the house is fully own or rented in Indonesia and the second objective will analyze about the factors that will affect the homeownership in rural and urban in Indonesia. Lastly, the third analysis will examine the type of resident in 1995 in Indonesia. So, in evaluating housing sector in Indonesia, the home ownership data in one country or area used as development indicator. This is because, with regard the number of population, home ownership among low and high income level and the type of resident can be distinguished. In fact, this study is important to reflect housing sector performance in measuring how far this industry functioned in view-parties involved and housing industry in Indonesia whether improved or otherwise through implementing programs.

LITERATURE REVIEW

Analysis and discussion on home ownership, housing demand and tenure on a house have been carried out and mostly focuses on the developed country like the United States of America, Germany, Japan and Organization for Economic Cooperation and Development. Most theanalysis among developing country is to increase comprehension and toimprove the policy system that implemented in the country, Fontela and Gonzalez (2009). Most of the home ownership analysis focused on developing country to home ownership by rental or full possession. This is because, ownership of rental and full possession influence the pattern of consumer behavior, housing commodity nature and housing market, Subhan and Ahmad, (2012). Home ownership influenced by many factors, but the major factor is demographic and sosio economic factors

Socio Economic Factors

According to Ludrisen and Skak (2007) that analyzed home ownership probability, by using 20 houses random samples in Danish finds out, home ownership will increase when increases in revenue, marriage

period and higher education. Home ownership rates will decrease causing by factors which influenced financial resource depreciation, namely pension acceptance, head of household that divorce and individual that migrating from rural area to urban area or better area. This survey results coherently with issues carried out by Salfrina, A.G et al. (2010). The housing purchase in Malaysia influenced by demographic factor, especially education, age, gender, and income. The home ownership period will affect social interaction, cultural and house owner satisfaction with neighbors. This study also found the key factor which influenced house purchase in urban is housing location price.

Demographic Factors

Selahatin, Caglayan et. al (2011) analyzes home ownership probability in urban and rural in Turkey by comparing between Logit model, Probit and Gompit. Result showed, income, age and marital status are factors which influenced home ownership in urban. Meanwhile, a variable which influenced home ownership in rural areas is age, income, education, and head of household. This survey results in line with Subhan and Ahmad (2012) and Purbawijaya and Suputra (2009) which found variable like family size, age, income and education positively influence home ownership between rural and urban.

Brueckner (2012) used the data from Indonesia to show the relationship between household and ownership feature in developing countries. Result showed higher income level and education will influence ownership features house structure. This result strengthened with factors like household size that is large also possesses a lot of children. In fact, religion also plays important role in home ownership. These survey results in line with Andrews and Sanchez (2011) find outthey changed in household feature including age, household structure, income and education.

Based on past research studies that was discussed, many studied carried out in developed countries, and just discussed on official ownership and rent. Meanwhile, in developing countries, formal part sub, squatter and unofficial property tenancy play role in providing housing for poor group. Therefore, a study which involves developing country, especially in Indonesia is important as policy implementation reference in the future and fulfillsa person's requirementin Indonesia.

CONCEPTUAL FRAMEWORK

This analysis focuses on household in rural and urban area in Indonesia in 2010 that coincide with an issue analyzed on factors which influenced home ownership rural and urban area in Indonesia. Apart from that, this study also analyzed factors which influenced type of residence in Indonesia in year 1995 and analyzed using quantitative method. Meanwhile, variables used in this analysis covering the individual samplefrom rural and urban area.

In this analysis, dependent variable identified is home ownership (OWNERSHIP) analyzed to own houses or do not own a house, rural and urban (URBAN) analyzed for rura land urban and type of residence (STOREY) analyzed to residence one storey, double storey and has no residence. Meanwhile,independent variable that used in the analysis is such asnumber of children in families, income, age, education, gender, marital status, working class and illiteracy rate as shown in Table 1.

Control variable also used in this analysis to overcome collinearity problems in estimation analysis besides ensuring result analysis is conceded and sit with an issue or area studied. Among the control variable is like age, marital status, education level and occupational class as shown in Table 2.

Table 1 : Dependent and Independent Variables Description

Variables	Ceoficient	Clasification
Dependent Variables		
1. Home Ownership (*OWNERSHP*)	*Y = 0* *Y = 1*	*0 – Not own house* *1 – Own house*
2. Urban and rural (*URBAN*)	*Y =0* *Y = 1*	*0 – Rural* *1 - Urban*
3. Storey (*STOREY*)	Y = 0 Y = 1 Y = 2	0 – Not own house 1 – Single storey house 2 – Double storey house
Independent Variables		
a. Number of Children (*NCHILD*)	X_{2i}	
b. Literacy rate (*LIT*)	X_{3i}	0 – Illiterate 1 – Literate
a. Gender (*GENDER*)	X_{4i}	0 – Women 1 – Man
b. Age (*AGE*)	X_{5i}	25 to 29 years old 30 to 34 years old 35 to 39 years 40 to 44 years old 45 to 49 years old 50 to 54 years old 55 to 59 years old 60 to 64 years old 65 to 69 years old **(control variable)**
c. Income (*INCWAGE*)	X_{5i}	
d. Marital Status (*MARSTD*)	X_{6i}	Single / not married **(control variable)** Married Separation / divorce Widow
e. Education Status (*EDATTAND*)	X_{7i}	Not school **(control variable)** Primary school Complete secondary school Secondary technique degree Education in Secondary Technique Complete Uniersity
f. Occupational Class (*CLASSWKD*)	X_{8i}	Employer Employee Salary Work with family **(control variable)**

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Table 2: Control Variable Clasification

Variable	Clasification
a. Age (*AGE*)	65 to 69 years old
b. Marital Status (*MARSTD*)	Single / Not married
c. Education Status (*EDATTAND*)	Not school
d. Occupational Class (*CLASSWKD*)	Work with family without salary

RESEARCH METHODOLOGY

Sampling Design

Data used in this analysis include the year 2010 and 1995 that obtained from Integrated Public Use Microdata Series website, International (IPUMS International). Data includes microdata sample based on peoples' data cluster sub phased individual, household cluster, and a few weight weights. Most of the data obtained through questionnaire conducted in Indonesia through Biro Indonesia Statistic Centre.

Research Prosedure

In this analysis, analysis Probit model is a regression which dependent variable having only two categories. This model used in two first analysis, namely to identify home ownership standard in Indonesia in year 2010 and identify factors which influenced home ownership in town and countryside in the year 2010. Meanwhile, to clarify the type of residence phenomenon in Indonesia in year 1995, Ordered Logit model used. Ordered Logit applicablemodel when dependent variable has two or more categories and value in every category has a special significance arrangement where latest value is higher from value before.

1. Analysis on Home Ownership Status in Indonesia 2010

To analyze home ownership standard by full home ownership or rental, the relationship between dependent variable, namely residence (OWNERSHP) possession and the independent variable as equation (1):

$$\begin{aligned}Y = 1 \text{ (not own house)} \\ Y = 0 \text{ (own house)}\end{aligned} = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_8 X_{8i} \qquad (1)$$

Equation (1) estimates used Probit model and dependent variable, namely URBAN = Yi valued as follows:

$Pr = E (Yi = 0: \text{not own house})$
$Pr = E(Yi = 1 : \text{own houses})$

Assumed, equation (1) model is as follows:

$$Pr\begin{Bmatrix} Y = 1 \\ Y = 0 \end{Bmatrix} | X) = F (\beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} \qquad (2)$$

Where, Pr = probability
F = Cumulative Distribution Function (Cumulative Distribution Function-CDF) for normal distribution standard (standard normal distribution)
β = parameter

Based on by Probit Model (1), it is also known as hidden variable model. Supposed exist random variable in the analysis, so,

$$Y = 1 \text{ (not own house)} \quad = \beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i +$$
$$Y = 0 \text{ (own house)} \quad B7X7i + \beta 8X8i \qquad (3)$$

Where $\mu \sim N(0, 1)$. So Yi considered as an indicator whether variable hidden is positive or negative, namely:

$$Y = \begin{cases} 1 \ if \ Y* > 0 \\ 0 \ otherwise \end{cases}$$

To observe the two equations are same, so:

$$\rightarrow Pr(Y* > 0) = Pr(\beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i +$$
$$\beta 7X7i + \beta 8X8i + \mu i \qquad (4)$$
$$= Pr(\mu > -X'\beta)$$
$$= Pr((\mu < -X'\beta)$$
$$= F(\beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i + \beta 7X7i + \beta 8X8i \quad (5)$$

2. Analyzing Homeownership in Urban and Rural in Indonesia 2010

By using the same estimation, the step using for second analysis is the same as first analysis. For the objective estimation, dependent variable, namely rural and urban (URBAN) valued as follows:

$$Pr = E(Yi = 0) : Urban$$
$$Pr = E(Yi = 1) : Rural$$

Then ꓔ　　　　　　　　　ꓔdent variable and independent variable liberated in this analysis is like in the equation (6):

$$Y = 1 \text{ (not own house)} \quad = \beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i + \beta 7X7i + \beta 8X8i$$
$$Y = 0 \text{ (own house)} \qquad (6)$$

Assumed, the Model Probit for equation (7) is as follows:

$$Pr \begin{Bmatrix} Y = 1 \\ Y = 0 \end{Bmatrix} | X) = \quad F(\beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i + \beta 7X7i +$$
$$\beta 8X8i \qquad (7)$$

Where, Pr = probability
F = Cumulative Distribution Function (Cumulative Distribution Function - CDF) for normal distribution standard (standard normal distribution)
β = parameter

Based on by Probit (8) model, it is also known as hidden variable model. Supposed exist random variable in the analysis, so

$$Pr \begin{Bmatrix} Y = 1 \\ Y = 0 \end{Bmatrix} | X) \quad = Pr(Y* > 0) = Pr(\beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i +$$
$$\beta 6X6i + \beta 7X7i + \beta 8X8i + \mu i \qquad (8)$$
$$= Pr(\mu > -X'\beta)$$
$$= Pr((\mu < -X'\beta)$$
$$= F(\beta 1 + \beta 2X2i + \beta 3X3i + \beta 4X4i + \beta 5X5i + \beta 6X6i +$$
$$\beta 7X7i + \beta 8X8i) \qquad (9)$$

3. Analysis on Type of Residence in Indonesia 1995

Home ownership not only focus the ownership to a type of houses only, but it involves various types of houses,such as do not own a house, single-storey houses or a double-storey houses by using Ordered Logistic Regression Model (OLR Model) estimation method. Ordered Logit appliance model analysis when dependent variable has two categories or more and value in every category have where special significance arrangement latest value is higher from value before. In this analysis, Ordered Logit model used to to determine the type of residence inhabited by residents in Indonesia whether residence one storey, double storey or do not own residence. The relationship between dependent variable and independent variable liberated in this analysis as in equation 10:

Y = 1 (single story houses)
Y = 2 (double storey houses) $= \beta1 + \beta2X2i + \beta3X3i + \beta4X4i + \beta5X5i + \beta6X6i + \beta7X7i + \beta8X8i + \beta9X9i$ (10)
Y = 0 (not own houses)

Where Yi = Type Of Residence (STOREY)
X5i = Income (INCWAGE)

In this analysis, dependent variable that identifier is

Y = 0 (not own house)
Y = 1 (single story houses)
Y = 2 (double story houses)

By model, third - three equations are as follows:

Pi (Y = 0 (not own house)
P0 =E (Y=0)= In1 - Pi = (12)
E Pi(Y = 1 (single storey houses)
P1=E (Y=1)= In = (13)
E Pi(Y =2 (double-storey house)
P2=E (Y=2) = In = (14)

DATA ANALYSIS

1. Analysis Home Ownership Status in Indonesia 2010

Income variable omittedin this analysis because unavailability of the year 2010 data. To estimate the analysis, estimation to every variable should be done based on theceteris paribus assumption,the effect of an independent variable on home ownership dependent variable when others independent variables such as family size, number of children, illiteracy rate, sex, age, marital status, education and occupational class change.

Result analysis showed in Table 3, individual with many numbers of children tend to own houses by rental. This mean, number of a child in families will cause z-score, home ownership decline as much as 0.0524. This analysis result showed the contrary relationship between the number of children and home ownership. This is because, individual who have many children in a family require space to be more comfy. In fact, they even tend to control their residence, for examplehead of household free to do improvement in space and housing structure so that can accommodate the number of children in the house.

In this analysis, increasing in age of the individual's causethe z-score of home ownership increase 0.8880. This mean, increasing in individual age, will result in increasing of permanent of homeownership. Based on result analysis showed, thedemandforfully homeownershipin Indonesia increase when individual reach 25-year-old and on. This is because, atthis age level, most individuals already have their own career and salary to enable them to own a house. For the analysis, the age level

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between 65 to 69 years become as a control variable because, individual in this group level tend to stay in their own houses or with other family members. Finding showed demand for fully homeownership more increase when individual age fell within 65 to 69 years old.

Apart from that, results also showed individual that is literate tends to fully ownership compared to individual who illiteracy. This mean, is increasing percentage of individuals that are literate in Indonesia, so z-score home ownership increase 0.133. Furthermore,the individual that is literate namely those who able to read, count and write are able to earn better jobs and ensure income turnover that is higher and able to have a residence by full possession.

In Indonesia, z-score of home ownership decline 0.0974 among womenfolk. This means, womenfolk in Indonesia more inclined towards home ownership by rental compared to home ownership by full possession among men folk. This explained, men more emphasize life for the future, for example, life after marriage, child comfort and so on.

Fully home ownership also tends among those who married including individual who divorced or widow.This is because, individual who was married can share their financial resources and allowed them to own a house by full possession compared to individualswho still single. Based on analysis result, increase in married individual will increase the z-score home ownership of 0.5049. Meanwhile, increase individual that separated and widow increase the z-score ofhome ownership respectivelyby 0.6662 and 0.5844. This mean, increasing in the number of married individuals tend to make fully homeownership increase compared to rental homeownership. In this analysis, an individual who still singlesbecome as a control variable and assumed own a house by rental compared to an individual who was married.

Beside that, the level of education showing a positive relationship with the home owner. This mean, increase in the level of education causes an increase in fully homeownership. Based on finding, individual with secondary technique degree education cause z-score, home ownership increase by 0.3455 compared to individual with primary school level, year 6 education, technical education and university respectively, with a z-score of home ownership is 0.1199, 0.0893, 0.0802 and 0.0428 percent. In this analysis, variable for individual that does not receive education made as a control variable and assumed own house by rental. This is because individual who have educational foundation can involve self in the field of professional employment and can guarantee an appropriate income turnover.

These proven when class occupier can guarantee individual tend to own a house by fully possession. Based on result analysis, individuals who work as employee cause z-score of home ownership increase by 0.4052 compared to individual who work as employer that only increase z-score home ownership of 0.1574. This mean, individuals that work as an employee or employer, will cause an increase in home ownership by full possession compared to ownership by rental. For the analysis, individual factor that works with family without wage payment made as a control variable and assumed reside in household chief residence with other family members.

2.   Analyzing Home Ownership in Rural and Urban in Indonesia 2010

In this part, the analysis focused to identify factors that determine home ownership in Indonesia especially in the year 2010. Variable involved is the number of children factor, illiteracy rate, gender, age, marital status, education and occupational class analyzed on the dependent variable namely urban area and rural (URBAN).

Number of children variable used in this analysis refers to the number of children in a family and does not include head of household. Resultin Table 4 showed, individuals witha large number of children's tend to reside in rural compared to town. This mean, number of children in a family in Indonesia causes z-score, home ownership in town decrease in 0.0180. In Indonesia, an individual who illiteracy tends to reside in rural compared to the individual that is literate. This explained that, an increasingly higher total individual that is literate, so z-score home ownership increase by 0.3079. Based on the result, increased withhigher education standards for example,individuals who graduated primary school, secondary, technical education, secondary, technical degree and university, causes z-score home ownership in town

increase by 1.1339. In this analysis, an individual who receives less education become as a control variable and assumed reside in rural.

Furthermore, single individual made as a control variable in this analysis assumed to reside in rural compared to a city. Result analysis showed individual who was married, divorce or separate and also widow even more tend to reside in town compared to rural.Itmeans, increased inmarried individual tend to increase the z-score of home ownership in town by 0.0884.

Therefore, age also influenced individual to stay in rural area. Result analysis shows, increase inindividual aged between 25 to 44 years cause reducedin z-score home ownership in a city of 0.8880. This mean, most individual who including in this age group tends to reside in rural compared to town. However, individuals who aged between 45 to 64 years tend to reside in town compared to in rural. This condition explained that individual's age increase from 45 to 64 years, cause z-score, home ownership in town increase totaled 0.0345. In this analysis, the age level between 65 to 69 years become a control variable. It means, individuals who including at this age level assumed to reside in rural compared to the city because increasing higher someone's age, especially when reaching retirement age level that is among age groups of 60 years and upper, individual preference is to undergo life calmly and comfortable in rural area.

Apart from that, women tend to reside in rural compared to men. Result showed, increasing in the number of women cause z-score of home ownership in town decline as much 0.1254. Meanwhile, women folk mostly stays in rural area is a housewife or still studying. Based on source from *Badan Pusat Statistik Indonesia* year 2010 find total individuals which include in group which manage household amounted to 32,419,795 people and 32,971,456 people in January and August year 2010.

Apart from that, result analysis also showed individual who works in occupational class that is professional tends to reside in town compared to in rural. Result showed more individuals that work as employer or employee will increase the ownership z-score residence in a city of 0.4895. This mean, increasing of employer and employee, the tendency to maintain in town will increase. Compared to individual who only temps or got involved with job with family without wage made as control variable more tend to reside in rural compared to a city.

3.   Analysis on Type of Residence in Indonesia 1995

This part explains the of type residence in Indonesia in year 1995. Analysis covered type of residence variable as dependent variable and independent variable, namely the number of children, illiteracy rate, sex, age, marital status, education and occupational class.Number of children variable used in this analysis refers to the number of children in a family does not include head of household. Result analysis in Table 5 showed when the number of children in a family increase, so individuals tend to stay more in medium residence. This means, the large number of children in families cause decline of -0.0547 in log odd ordered when other variables assumed not changed. This is because, number of children in a family, so financial allocation has been larger and is obstacle to individuals to have larger residence.

Apart from that, result analysis for individual that marry cause decline of -0.2872 in log odd ordered when other variables assumed not changed. This analysis result also parallels for individuals that divorced or with the status of widow. This reflects difficulty people in Indonesia to achieve satisfaction tostay in a more comfortable house for family in the year 1995. In this analysis, variable for individual that not married made as variable control and assumed tend to reside in large residential.

Analysis log odds ordered for literate variable estimation between literate and illiteracy based onthe expectation of the type of individual Iresidence when other variables assumed unchanged. Result analysis Ordered Logit for an individual that is literate increase log odds ordered, namely 0.3584 when other variables assumed not changed. This mean, increasing in literate individual in Indonesia, so demand for bigger residence will increase. Therefore, the estimation result showing men folk will increase log odds ordered as much 0.1454 compared to womenfolk when other variables assumed to have not changed.

Furthermore, age factor also influenced individual to stay in bigger residence. In this analysis, age level between 65 to 69 years made as a control variable and assumed reside in medium residence or resides with other family members. Log ordered estimation analysis for age factor is to estimate the relationship between individual's age levels with type of residence in Indonesia when given types of residential category expectation when different variables assumed not changed.

Result analysis showed, individual from age level 25 to 29 years, 35 to 39 years, 40 to 44 years, 45 to 49 years, 50 to 54 years reduce the log odds ordered to get better abode totalled 0.4678, 0.2089, 0.0400, 0.1580 and 0.1519 respectively. This is because, the individual's tendency in this group focus to venture job field for having family life continuity and capable to stay residence that is medium. Meanwhile, individual at age level 30 to 34 years, 55 to 59 years and 60 to 64 years show improvement in log odds ordered as much 0.3454, 0.0042 and 0.0911 when assumed others variables is unchanged.

Result analysis showed, individuals who university graduated is important factor which contribute to log odds ordered an increase for individual to get a better residence. Likewise,individuals who graduated in primary school level, secondary technique degree and secondary technical education respectively, increases the log odds ordered as much 0.1081, 0.1878 and 0.5105. This is because, with high education standard, individuals can involved in job field that is more professional which in turn ensure thein come that is appropriate and ensure them to have a comfortable residence. However, log odds ordered estimation for individual with an education standard less from primary school or not graduated at primary school level have slashed log odds ordered totalled -0.1965 when assumed others variable unchanged.

Dominant factor which influenced individual's tendency to have a comfortable residence in Indonesia is income factor and wage. This mean, when revenues and wage accepted individual is increasing, will cause log odds ordered increase 2.69 and 2.4778 respectively when another variable assumed unchanged. So, highly income and wage a very important to determine the type of residence that is comfortable for the individual.

The statement above in proving by job class factor that is positively related with type of residence in Indonesia. Result analysis showed, increase in total individuals that work will cause an increase of 0.6024 in log odds ordered in Indonesia. In this analysis, individual who work with family without wage made as control variable. Individual who include in this group assumed to stay in medium residence and only stay with family.

CONCLUSION AND DISCUSSION

Analysis finding in year 2010 showed, among factors which influenced home ownership by full possession in Indonesia is the men folk tendency compared to womenfolk to have a residence by full possession, increase in individual's age, an individual who was married, divorced or widow, high education standard, and individuals who had been working. However, in second divisional analyses find out individual tend to stay in town when individual that is literate, men folk tendency to maintain in town, individual in age group of 45 years and on, individual who was married, high educational standard and increasing in total individuals that work. On the other hand individual tend to reside in rural when the womenfolk tend to stay in rural, low education standard and individual who in the age group 25 to 44 years.

Meanwhile, analysis in third section show individual in Indonesia in year 1995 tends to reside in residence that is larger when the increase of literacy rate, men folk tendency, individual's age increase between 55 years and on, increase in individual income and high education standard. Meanwhile, tendency to medium residence increase when the increase of the number of children in families, individual who was married, separation or widow, educational qualifications standard that is low, and the individual's tendency that aged between 25 to 54 years that reside in high average residence.

Assessment and Housing Scheme in Indonesia

Based on analysis result, housing development planning in Indonesia can be done more systematically. This is because, through the past study, society and individual issues about home ownership in Indonesia can be identified, such as number of family member, income, job, education and others. This is because, all this factor is a dominant to influence individual to get a comfortable resident. According to Badan Pusat Statistik Indonesia 2010 stated, total population in Indonesia is about 237, 641,326 people and it have been divided into 33 districts. So, Indonesia as a big country needs a guideline as a basis to their housing, planning development that can contribute to their society stay in comfortable resident. In Indonesia, various programmed has been done by the respective party at federal or local level.

However, according to Badan Perencanaan Pembangunan Daerah Kabupaten Grobogan 2012, there are several problems which contribute to housing development among people in Indonesia. For example, the bigger problem in Indonesia is a population that grows rapidly and not asymmetrical with housing supply prepared by developers. In fact, increase of urbanization and also the difference between urban and rural can drive this problem worse and cause the distribution of population in Indonesia irregular. According to Badan Pusat Statistik 2010, fully home ownership decline to 78 percent in year 2010 from 79 percent in 2009. Sourced from Viva News said, declined in fully home ownership occurred due to a workforce which often migrate before getting a permanent job. This condition causesthe younger workforce to take initiatives by renting residence compared fully owned.

Therefore, this analysis also provides some suggestion as animprovement to planning homeownership development in Indonesia. Respective party in Indonesia either in urban or rural have to provide basic education facility to society. This educational foundation must aim to individual with a low income level. Although most job types in the villagedon't require higher education, but with an educational foundation in every individual enable them to develop the employment sector in the village and give work opportunities to all local residents.

Besides that, family planning in every country level should be carried out. Based on analysis result, married individual impact home ownership and they more tend to reside in urban area. However, when a number of children's growth in a family, individual tends rent a house and reside in rural. Family planning is animportant step to pay intention by limiting the number of children in a family for a certain period.

Indonesian government also should identify the group with low and middle income to enable the government planning the national budget on group with low and middle income so they can also stay in comfortable resident. In the other hand, respective party should provide lower cost houses to low and middle income group. However, these low cost houses should be monitored by respective parties. This is because, issues that usually arise is when the respective party monitored the project after the houses already done. The respective also didn't care about who are going to stay at that houses, whether the lowest income people or the highest income people.

Besides that, Indonesia government also should provide schooling aid togroups that cannot afford. Through this action, can be done by the census from house to house and the inability family can be identified to give schooling aid for free under certain budget allocation. This move includes giving education to vagrant children, such as teach some skill in certain fields and basic to read and count. This can be done through association or non-government association to make sure the quality of the education.

CONCLUSION

As a conclusion, decline in Indonesia home ownership in the year 2010probably due to the factors such as family size, number of children, illiterate, gender, age, marital status, education, working class and individual income level. However, this ownership decline cannot only be explained by these factors.

However, global economic changes such as rising oil price affect the price of food and service around the world and altogether influence economic growth of a nation. Increase in total population in

Indonesia had changed the facts become the major factors which influenced home ownership in Indonesia. Therefore, further analysis should be carried out by involving some macroeconomic variable such as national income, Gross Domestic Product, unemployment rate and so on. This is to avoid convergence only on one part of the factor as carried out in this analysis.

Table 1: Analysis of Home Ownership Status in Indonesia, 2010

Home Ownership	Coefficient	Standard Error	P>|z|
Number of Children	-.0523677	.0023751	0.000
Illiterate	.1331043	.0216586	0.000
Gender	-.0973568	.0073162	0.000
AGE			
25 to 29 years old	.888042	.0230904	0.0000.
30 to 34 years old	.86856	.0228767	000
35 to 39 years old	.7275784	.0231439	0.000
40 to 44 years old	.5771964	.0232524	0.0000.
45 to 49 years old	.4379544	.0231426	0000.00
50 to 54 years old	.2896903	.0232991	00.000
55 to 59 years old	.1382775	.0243642	0.006
60 to 64 years old	.0726312	.0265642	
65 to 69 years old (control variable)			
MARITAL STATUS			0.0000.
Married	.5049302	.0154675	0000.00
Separate / Divorce	.6662445	.0248815	0
Widow	.584399	.0206256	
Single / Not married (control variable)			
EDUCATION			0.0000.
Primary School	.1199061	.0218132	0000.00
Complete Primary School	.0892806	.0218525	00.001
Secondary Technique Degree	.3454758	.025425	0.075
Education in Secondary Technique	.0802121	.0251395	
Complete University	.0427537	.0240357	
Not School (Control Variable)			
			0.000
WORK CLASSES			0.000
Employer	.1573623	.017799	
Employee	.4052492	.0080034	
Work with Family Without Salary (Control Variable)			
cons	**-2.148436**	.0424121	**0.000**

Table 2: Analysis on Home Ownership in Urban and Rural, 2010

URBAN/RURAL	Ceofficient	Standard Error	P>|z|
Number of Children	-.0180261	.0023008	0.000
Illiterate	.3079754	.023781	0.000
Gender	-.1254089	.0072296	0.000
AGE			
25 to 29 years old	-.2051382	.0204482	0.000
30 to 34 years old	-.1512354	.0201132	0.000
35 to 39 years old	-.0832336	.0202429	0.000
40 to 44 years old	-.0254736	.0201777	0.207
45 to 49 years old	.0345266	.0198818	0.082
50 to 54 years old	.0644844	.0198216	0.001
55 to 59 years old	.0870106	.0204355	0.000
60 to 64 years old	.0198206	.0223151	0.374
65 to 69 years old (control variable)			
MARITAL STATUS			
Married	.088415	.0151028	0.000
Separation / Divorce	.1383528	.0253517	0.000
Widow	.1012437	.0198552	0.000
Single / Not married (control variable)			
EDUCATION			
Primary School	.2506192	.0238841	0.000
Complete Primary School	.377086	.02373	0.000
Secondary Technique Degree	1.133855	.0269258	0.000
Education in Secondary Technique	.8786085	.0264021	0.000
Complete University	1.22476	.0254952	0.000
Not School (control variable)			
OCCUPATIONAL CLASS			
Employer			
Employee	.4895445	.0164494	0.000
Work with Family Without Salary	.6832587	.0077709	0.000
(Control Variable)			
_cons	**-1.900977**	**.0446493**	**0.000**

Table 3: Analysis on Type of Residence in Indonesia, 1995

Type of Residence	Coefficient	Standard Error	P>|z|
Number of Children	-.0546571	.0111759	0.000
Illiterate	.3584467	.098601	0.000
Gender	.1453587	.0372547	0.000
Income	2.69e-07	6.21e-08	0.000
AGE			
25 to 29 years old	-.4678126	.1129382	0.000
30 to 34 years old	.345396	.1096833	0.002
35 to 39 years old	-.2088614	.1090103	0.055
40 to 44 years old	-.0400023	.1100774	0.716
45 to 49 years old	-.1580762	.1140855	0.166
50 to 54 years old	-.1519365	.1145418	0.185
55 to 59 years old	.0041884	.1145666	0.971
60 to 64 years old	.0910854	.1198341	0.447
65 to 69 years old (control variable)			
MARITAL STATUS			
Married	-.2871703	.0747843	0.000
Separation / Divorce	-.1964877	.107558	0.150
Widow	-.4636273	.0979709	0.000
Single / Not Married (Control Variable)			
EDUCATION			
Primary School			
Complete Primary School	-.1939484	-.1939484	0.048
Secondary Technique Degree	.1080827	.1080827	0.287
Education in Secondary Technique	.18784	.18784	0.101
Complete University	.5104799	.5104799	0.000
Not School (Control Variable)	.7760552	.7760552	0.000
OCCUPATIONAL CLASS			
Employer			
Employee	.6023771	.6023771	0.000
Work with Family without Salary (Control Variable)	2.477803	2.477803	0.000
_cons	**5.574792**	**.6502494**	

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THE INFLUENCE OF A CULTURAL VARIABLE ON WORK-FAMILY BALANCE: POWER DISTANCE

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Abstract

Family-supportive culture has often been the focus in work and family literature over the past two decades. Indeed, the success of helping workers to balance their work and family life should not heavily and solely rely on the aforementioned culture. Researchers seem to have overlooked the other cultural value and belief that is believed contributes to the employees' work-family balance experience. The aim of this paper is to draw the attention of researchers to look into the Hofstede's cultural value and belief which is the degree of *power distance* as it is possible to be viewed as a barrier or catalyst for one to achieve their desired work and family life. Power distance is proposed as a moderator in explaining the inconsistency of the findings between some of the antecedents and work-family balance in the prior literature. Besides, power distance is also proposed as a predictor of work-family balance. The importance and implications of incorporating power distance in the study are stated in the discussion.

Keywords: Power distance, communication, supervisor support, family-supportive policy, work-family balance

INTRODUCTION

Family supportive policy has been developed to help employees to achieve better work-family balance. However, the effectiveness of the policy remains unanswered. The policy may not necessarily fit to all employees in an organization. According to Carlson and Kacmar (2000) and Odle-Dusseau, Britt, and Bobko (2012), individuals' value on work and family life tends to influence one's work-family balance experience. Lack of fit between the family supportive policy and the individuals' value may contribute to the family hour and work hour discrepancies. The discrepancy has been reported to have influence on one's experience of work-family balance (Odle-Dusseau, Britt, and Bobko, 2012; McNamara, Pitt-Catsouphes, Matz-Costa, Brown, and Valcour, 2013). The discrepancy may be owing to the culture such as power distance which superiors and subordinates perceive unequal power distribution that inhibits communication and the subordinates' preferred policy options and their work and family lives' needs are not made known to their superiors.

Cultural influence is crucial in work and family lives integration. Family-supportive culture (managerial support, career consequences; organizational time demands) provides several evidences of its influence on work-family conflict or interference either directly or indirectly (Ahmad and Omar, 2010; Allard, Haas, and Hwang, 2011; de Janasz, Behson, Jonsen, and Lankau, 2013; Mauno, Kinnunen, and Pyykkö, 2005; Major, Fletcher, Davis, and Germano, 2008; McNamara, Pitt-Catsouphes, Matz-Costa, Brown, and Valcour, 2013; Thompson, Beauvais, and Lyness, 1999). Although culture has been proven as important condition to manage work and family lives, however, the focus on cultural studies in work-family literature has been given to family-supportive culture and little attention is given to Hofstede's (1983) power distance cultural value and belief over the two decades despite several comparison studies have been conducted across countries.

The understanding of national or individuals' power distance value and belief may provides resourceful insights of the effectiveness of family-supportive policy implementation in multinational

corporations to reduce the employees' work-family conflict and better juggling their work and family lives. Power distance culture should be given attention in work-family balance study to answer the following questions. Is certain family-supportive policy universally accepted, accessible, and effective by employees regardless of the level of power distance cultural value and belief held or the acceptance, accessibility and effectiveness only occur in certain level of power distance in a multinational corporation across its abroad operations? Does the policy benefits need to be negotiated by employees with their superiors in order to utilize them for juggling their work and family lives? Does the influence of supervisor support differ with different level of power distance in achieving work-family balance? The aforementioned questions draw the need of understanding from multinational corporations' Human Resource Managers and immediate supervisors or managers in their attempts to take care of employees' well-being in managing work and family lives.

LITERATURE REVIEW

Power Distance and Work-Family Conflict

Power distance is one of the Hofstede's (1983) national cultural dimensions. It often refers as cultural value or belief of inequality of power distribution in international organizational studies. Despite people tend to live with the cultural value and belief from their countries' national culture identified by Hofstede (1983), socialization may influence the cultural value and belief of people hold. Organization leader is also has some influences. Therefore, multinational corporations that have similar organizational value but practice differently may due to subculture exist in their operations abroad. Employees with the value and belief of high power distance tend to accept the power of their superiors. They are more directed to meet their task responsibilities and often refuse to challenge or voice out the disagreement with their supervisors (Casper, Harris, Taylor-Bianco, and Wayne, 2011; Madlock, 2012). The distinct national cultural value or belief of high and low power distance seems has made some differences in several work-family conflict studies. Lu, Kao, Cooper, Allen, Lapierre, O'Driscoll, Poelmans, Sanchez, and Spector (2009) have reported that the supervisory support had stronger work-family conflict mitigation for Taiwanese from high power distance than British employees from low power distance national culture. The effect of cross-over between family and work domains on employees' life satisfaction differs between employees from high and low power distance national cultural background in Aryee, Fields, and Luk's (1999) study. The well-being is primarily influenced by work-to-family conflict among Hong Kong (high power distance) employees while family-to-work conflict among U.S. (low power distance) employees. Jeffrey Hill, Yang, Hawkins, & Ferris's (2004) comparison study have shown that the East sample from high power distance national culture has weaker effect of family-work conflict on work-family conflict, and the stronger effect of work-family conflict on family-work conflict than the West samples with low power distance culture. The study has also indicated that the effect of job workload on work-family conflict is much stronger for Westerners than is Easterners. Hassan, Dollard, and Winefield's (2010) comparison study also shows the significant lower work interference with family life in Malaysian sample with high power distance national culture than Westerners with low power distance national culture, but family interference with work life has been found significant higher among Malaysians than the westerners. O'Brien, K. Ganginis Del Pino, Yoo, Cinamon and Han (2014) also reported that Korean women from high power distance oriented national culture experience the lowest levels of work–family enrichment and experience highest depression compared with the Israeli and American mothers from low power distance oriented national culture. With the above circumstances, the following proposition is formed:

Proposition 1: There is an effect of power distance on work-family conflict.

Power Distance and Family-Supportive Policy

Family-supportive policy is designed to enable employees to meet their work and family role responsibilities. The policy involves childcare or eldercare services, leave arrangements, flexible work scheduling or arrangements such as compressed work week, flextime, telecommuting, temporary work, part-time work, contract work, and shift work (Brewer, 2000; Poelmans and Sahibzada, 2004; Raghuram, London, and Larsen, 2001; Kossek and Ozeki, 1999; Thomas and Ganster 1995). Despite the flexible

work scheduling exists as company policy, however, the accessibility of the policy is restricted by power distance barrier which employees posses unbalanced power in negotiations with their supervisors and consequently the employees do not take up the option (Brewer, 2000). Raghuram, London, and Larsen (2001) found that the flexible employment practices such as shift work arrangement is more salient in European countries with high power distance cultural value while part-time work is more salient with those in low power distance value-oriented European countries.

Power Distance and Supervisor-Subordinate Communication

Power distance culture appears to has some influences on employee voice behaviors (Botero and Van Dyne, 2009; Brockner et al., 2001; Poelmans and Sahibzada, 2004; Ji, Zhou, Li, and Yan, 2015). Low power distance cultural orientation is more salient for encouraging communication between supervisors and subordinates than high power distance cultural orientation is. Communication breakdown between supervisors and their subordinates exists in high power distance culture oriented countries or strong belief of high power distance oriented organizational culture. According to Khatri (2009), top-down communication occurs and horizontal communication seldom takes place in high power distance culture. Employees are found posses unquestioning attitude and hard to voice their views as supervisors or managers have unlimited power and control. Lack of information sharing may leads to poor quality of decision. This may implies that the work-family policy that is initially incorporated to enable employees to juggle their work and family become a written rather than pragmatic policy as the policy is decided, formed and granted by the top management which may not fit to the preference of employees due to employees' voice are not being heard especially with high power distance cultural belief and value held in the organization.

Botero and Van Dyne's (2009) study reported that subordinates are willing to communicate with supervisors their ideas, information, and opinions for changes under low power distance cultural orientation. Low power distance was found interact significantly with high leader-member exchange (LMX) to encourage the subordinates to communicate with supervisors while high power distance fails to enhance the behaviors even under high LMX condition. Poelmans and Sahibzada (2004) articulate the influence of cultural context on employees' perception of negotiation power needs to be taken into consideration for adopting and designing the work-family policy. Employees from low power distance national culture have been found to react more unfavorably such as lower organizational commitment than employees from high power distance does when less voice they can make during a decision-making process (Brockner et al., 2001). Furthermore, the interaction effect between voice and employees' power distance value and belief has been revealed on the work attitude and job performance of employees. (Brockner et al., 2001).

According to Ji et al.'s (2015) study, low power distance cultural value and belief encourage supervisor-subordinate communication which will help to build good relationship, affective and cognitive-based trust in their supervisor's ability, for instance, helping employees through giving advice, provide instrumental helps such as flexible work arrangements and information to solve problem regards to maintaining the balance between their work and family lives. Such trust and relationship are believed to reduce the fear of disclosing life difficulties in juggling multiple roles and also reduce the risk of perceived incompetent or punishment after seeking help. Thus, low power distance has been found conducive to instrumental and emotional helps seeking by employees from their supervisors in Ji et al.'s (2015) study. Conversely, high power distance culture is more towards task orientation than human orientation, employees are fear of communicating with their supervisors or tend to averse or avoid to communicate with their superiors and often use avoidance messages (Ji et al., 2015; Madlock, 2012) for the matters of work and outside of work such as family life conditions which restrict the relationship and trust development with their supervisor. They may responds passively to their problem of juggling work and family lives such as refuse to ask help from their supervisor.

Family-Supportive Policy, Supervisor Support, Supervisor-Subordinate Communication, Power Distance and Work-Family Balance

The effect of family-supportive policy and supervisor support on work-family balance is inconclusive in prior studies. Family-supportive policy was found effective in mitigating work-family conflict in prior researches conducted by Frye and Breaugh (2004), Kinman and Jones (2008), and Sukal, (2009). All these studies have been conducted in low power distance oriented countries such as U.K, and U.S. Similar study was also conducted by Luk and Shaffer (2005) in high power distance oriented country like Hong Kong but the finding is insignificant influence which differs from the aforementioned studies. O' Driscoll, Poelmans, Spector, Kalliath, Allen, Cooper, and Sanchez's (2003) study on the effect of availability of the policy which is conducted in New Zealand with low power distance oriented national culture is also reported insignificant but the usage of the policy has significant influence. Supervisor support, another antecedent of work-family conflict also has inconsistent effect on work-family conflict. The source of support didn't has effect in prior studies conducted by Warner and Hausdorf (2009) in Canada and Luk and Shaffer (2005) despite significant effect found in studies conducted by Anderson, Coffey and Byerly (2002) in U.S. and Thompson and Cavallaro (2007) in Australia which both countires are from low power distance culture, and Foley and Hang-Yue (2005) in Hong Kong, and Yildirim and Aycan (2008) in Turkey with high power distance value and belief. Stronger effect of supervisor support on work-family conflict mitigation has been found among Taiwanese employees whose national culture is high power distance than British employees from low power distance national culture (Lu et al., 2009).

Odle-Dusseau, Britt, and Bobko's (2012) study reveals that employees will experience less work-family balance (more work-family conflict and interference) when they face family hour and work hour discrepancies which are discrepancy between actual and desired time spent at family and the work hour respectively. According to Carlson and Kacmar (2000), individuals' role value held do make a difference of one experience the balance of work and family lives which may contribute to the aforementioned discrepancies. Odle-Dusseau, Britt, and Bobko's (2012) study may imply that the discrepancies may owe to the lack of fit between the family supportive policy and the individuals' value. Superiors who are lack of understanding the needs of their employees that derived from their role value held and role investment. McNamara, Pitt-Catsouphes, Matz-Costa, Brown, and Valcour's (2013) study indicates that the fit between worker needs and flexible work options available will mitigate the negative effect of long work hours on employees' work-family balance satisfaction. These reasons may explain the above inconsistent influence of family-supportive policy and supervisor support on work-family balance. It invokes the needs of communication between superiors and subordinates.

The communication between supervisors and subordinates is crucial for one achieve better work-family balance. It involves ongoing and flexible negotiations to meet the desired work-family boundary through the construction and maintenance in communication process (Carlson, Grzywacz, and Zivnuska, 2009; Clark, 2000; Kreiner, Hollensbe and Sheep, 2009). Frequent communication between supervisor and subordinate may enhance the supervisors' understanding upon the role values held, and also the work and family lives experienced by their subordinates. The understanding will be the inputs of management to design and implement family-supportive policy effectively by providing employees their desired or preferred family-supportive arrangements according to their needs which is useful for alleviating work-family conflict. Besides, the communication is also allow the employees to negotiate with their supervisors the appropriate choices of family-supportive policy to be accessed and benefited by employees so that the family-supportive policy they access fit to their conditions they faces to successfully juggle their work and family responsibilities and attain balance between their work and family lives.

With low level of power distance value and belief held, employees are more willing to disclose their personal life experiences and difficulties face to their superiors and giving opinions regard to the companies' existing family-supportive policy than those with high level of power distance do which becomes resourceful inputs for the change such as designing new policy or improving the current policy to enable the management to ensure the policy takes effect into practices. Stronger trust and relationships between supervisors and subordinates are built through supervisor-subordinate communication. Supervisors who trust their subordinate may more willing to grant the desired policy according to their subordinates' needs in meeting their multiple work and family role responsibilities. As low level of power distance is expected to be more conducive to the supervisor-subordinate communication than higher level of power distance value and belief held is (Botero and Van Dyne, 2009; Brockner et al., 2001; Ji et al., 2015; Khatri, 2009; Poelmans and Sahibzada, 2004), thus, low level of power distance could alleviate

work-family conflict and enables employees to achieve better work-family balance. Besides, the literature has also provided some evidences pertaining to the background of the studies about the influence of family-supportive policy on work-family conflict that derive from two different level of power distance oriented countries and power distance is expected to account for the inconsistent effect of the policy on work-family conflict. Furthermore, the degree of power distance has related to the communication behaviors, it is believe to make the policy takes effect to reduce the discrepancy between actual and the desired work and family lives rather than just a written policy that couldn't be accessed and benefited or granting the inappropriate options available from the policy to their employees. In addition, despite supervisor support either instrumental and emotional supports exist in the workplace, however, barrier of communication limits the supervisors' knowledge of their subordinates' work and family matters due to the high power distance value and belief held by subordinates which differs from their supervisors who hold equal power distribution oriented value and belief, and vice versa. The aforementioned circumstance occurs in multinational corporations that have expatriates moving across the countries for their international assignments. The barriers restrict supervisors to grant the appropriate options available from the flexible work scheduling and arrangements as the voices of subordinates are not communicated, and supervisors lack of understanding their subordinates' conditions of work and family lives due to the level of power distance. Thus, level of power distance is proposed can make a difference for the effect of family-supportive policy and supervisor support on work-family conflict. Based on the above review, the following two propositions are constructed:

Proposition 2: Power distance moderates the relationship between family-supportive policy and work-family conflict.

Proposition 3: Power distance moderates the relationship between supervisor support and work-family conflict.

DISCUSSION AND FUTURE DIRECTION

This conceptual paper is driven by the purpose of addressing the precautions to be taken by future researchers on the cultural issue to tackle the problem of inconsistency of the effects of supervisor support and family-supportive policy on work-family balance. Future researchers are suggested to further investigate whether the home countries' power distance national culture of the multinational corporations supersede the host countries' national culture where the corporations have their operations abroad which reflects the home countries culture is strongly incorporated in the organization, or independent influence of national culture-based power distance of host countries operation for the process of integrating the work and family lives. The literature has provided some evidences that power distance cultural value and belief may act as moderator for the effect of supervisor support and family-supportive policy on work-family balance. Seeking the aforementioned influence of culture will provide resourceful inputs to Human Resource Managers of multinational corporations to take into consideration the value and belief of power distance employees held in host countries operation to develop and implement the universal family-supportive policy to all the subsidiaries abroad or different sets of policy are structured according to the subculture of subsidiaries. Besides, the knowledge of culture might be useful for the Human Resource Manager and top management to create an organizational culture that motivate communication behaviors between supervisors and employees and favor the use of the policy that most effective for them to fulfill their multiple roles of work and family without any negative career consequences. Better achievement of employees' work-family balance will help multinational corporations to retain their human capital and reduce the cost of turnover (Vanderpool and Way, 2013; Watanabe and Falci, 2014).

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SERVICE QUALITY AND STUDENTS' SATISFACTION IN HIGHER EDUCATIONAL INSTITUTIONS: PERSPECTIVE OF MALAYSIAN STUDENTS

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Abstract

Students' satisfaction with service quality is essential to achieve sustainability in today's competitive academic environment. The purpose of this research is to investigate the key determinants of service quality that influence students' satisfaction in Malaysia Higher Educational Institutions. These key determinants namely, tangibles, reliability, responsiveness, assurance, empathy and academic factors are adapted from both SERVQUAL model and HEdPERF model to examine relationship between six variables and students' satisfaction. This research is a cross-sectional study conducted by employing self-administered survey questionnaires. A total of 600 units of survey are distributed to six universities comprises of three public universities and three private universities. Descriptive and inferential analyses are employed for result analysis. Statistical Analysis Software (SAS) is used to collect and scrutinize data from a variety of sources and to perform statistical analysis. The empirical findings indicate that four out of six determinants of service quality (tangibles, reliability, assurance and academic factors) have significant relationships with students' satisfaction in HEIs of Malaysia, whereas the remaining two factors (responsiveness and empathy factors) have insignificant relationships with students' satisfaction. The results serve as a guideline to enhance service quality of Malaysian HEIs and as a fundamental base for future research.

Keywords: Service Quality, Students' satisfaction, Higher Educational Institutions

CHAPTER 1: INTRODUCTION

According to Quick facts 2014: Malaysia educational statistic (2014), there were 20 Public Higher Education Institutions (Public HEIs) and 500 Private Higher Education Institutions (Private HEIs) in Malaysia. Public HEIs in Malaysia are funded by government and are operated as self-managed educational institutions. These HEIs are governed by Universities and University Colleges Act 1971. Beyond Public HEIs, there are approximately 500 Private HEIs under Private Higher Educational Institutions Act 1996 in year 2013. The act enacted enables HEIs to provide tertiary education and to confer their own degree.

The service quality of higher education in Malaysia is one of the most impactful causative factors contributed to the nation's education system. O'Neill and Palmer (2004) defined service quality in higher education as "the difference between what a student expects to receive and his/her perceptions of actual delivery". The students perceived service quality in higher education as a vital factor for HEIs. Hence, the ways through which students' perceive quality are deemed to be a significant influence on students' post enrolment word-of-mouth communications (Parasuraman, Zeithaml, & Berry, 1988; Cronin & Taylor, 1994; Angela, 2006; Maguad, 2007; Rahman, Khan, &Haque, 2012; Eres&Clothey, 2013).

Therefore, it is of paramount importance to consistently measure the performance of service quality from students' perspectives because they are the subjects who directly involve in education process. They can be seen and acted as a consumer and also as a product of educational institutions. As such, students' opinions on all aspects of their higher education experiences are crucial to monitor the quality of education (Hill, Lomas, & Macgregor, 2003). In short, students' satisfaction with the services is

crucial to achieve sustainability in this competitive academic environment (DeShields, Kara,&Kaynak, 2005).

CHAPTER 2: LITERATURE REVIEW

2.1 SERVQUAL Model

Table 2.1: SERVQUAL Model Theory

	SERVQUAL Theory
Definition	SERVQUAL model was developed by Parasuraman et al. (1988) to identify the gaps between perceptions and expectation that determined the service quality level (Krsmanovic, Horvat, &Ruso, 2014). Parasuraman et al. (1985) suggested that SERVQUAL is an instrument to measure the service quality (Kayastha, 2011). According to Parasuraman et al. (as cited in Shauchenka&Buslowska, 2010), SERVQUAL is defined as a widespread method that can be applied to any service organizations to assess service quality. According to Ribeiro (1993), SERVQUAL is defined as "a multiple item-scale that designed to measure the service quality expectations and perceptions".
Originator	a) Parasuraman b)Zeithaml c) Berry
Year	1985
Changes Evaluation	Minor changes were made on SERVQUAL model. Initially, the model was made up of ten dimensions of service quality namely tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding the customer, and access (Daniel &Berinyuy, 2010). Subsequently, these dimensions were reduced from ten to five namely, tangibility, reliability, responsiveness, assurance and empathy due to overlapping (Daniel &Berinyuy, 2010). SERVQUAL model is widely used in other research areas such as air traffic control (Dey, 2012) and healthcare sector (Evans, 2008). Furthermore, according to Buttle (as cited in Daniel &Berinyuy, 2010), SERVQUAL model is selected in many other areas which included retailing, restaurants, banking, telecommunication industry, airline catering, local government, hotels and hospitals.

Source: Developed for the research

2.2 HEdPERF Model

Table 2.2:HEdPERF Model Theory

	HEdPERF Theory	
Originator	Firdaus Abdullah	
Year	2004-2006	
Definition	HEdPERF (Higher Education PERFormance-only model) is a new performance-based measuring scale that attempts to identify the determinants of service quality within higher education sector (Abdullah, 2006).	
Changes	He originally categorized the key determinants of service quality within the higher education sector into six as:	

	6 Determinants of Service Quality	Definition
1.	Non-academic factors	Include items that enabling students to fulfil their study obligations, and concern to duties carried out by non-academic staff (Abdullah, 2006).
2.	Academic factors	Involve items describing the responsibilities of academics (Abdullah, 2006).
3.	Reputation	Consist of items essential for HEIs in developing a professional image (Abdullah, 2006).
4.	Access	Include issues such as approachability, availability and ease of contact of academic and non-academic staff (Abdullah, 2006).
5.	Program issues	Include items related to program flexibility, programs specialization, and quality of the program (Abdullah, 2006).
6.	Understanding	Refer to the awareness and attention of students' specific need regarding to counselling services (Abdullah, 2006).

Firdaus Abdullah has omitted "Understanding" due to low Cronbach's alpha value found in his research. Therefore, only five determinants of service quality with 41 measurement items as shown in Figure 2.3. It consists of 13 items adapted from SERVPERF developed by Cronin and Taylor (1992), and 28 items generated from literature review and various qualitative research inputs (Abdullah, 2005).

Source: Developed for the research

2.3 Review of Relevant Theoretical Models

2.3.1 Relationship between Tangibles and Students' Satisfaction

According to Parasuraman et al. (1985), tangibles is defined as the appearance of physical facilities, equipment, personnel, and communication materials.

Ahmed and Masud (2014) investigated a quantitative survey based on service quality performance on students' perception of HEIs in Graduate School of Management (GSM), Malaysia. They have tested seven dimensions, including tangibles to measure relationship between the variables with students' satisfaction of GSM. The data was collected from self-administered questionnaires which were distributed to 300 GSM students and were answered by 257 students. 221 out of 257 complete questionnaires were applicable for analysis. Based on structural equation modelling (SEM) analysis, tangibles were strongly and directly affecting the students' satisfaction(β=0.262, p-value=0.000 < 0.05).

Ali and Mohamed (2014) examined relationship between service quality dimensions (including tangibles) and students' satisfaction in HEIs of Somalia. Data was collected by employing both purposive and stratified sampling methods through distribution of questionnaires to 120 undergraduate students in three universities in Mogadishu (SIMAD, MUQDISHO and BANADIR), and 92 of them had responded. Based on Pearson correlation analysis, the results showed that there was a significant relationship between tangibles and students' satisfaction perceptions (r=0.503, p-value=0.00).

Nevertheless, according to Khan, Ahmed, and Nawaz (2011), they studied the impact of five service quality dimensions (including tangibles) on students' satisfaction level and willingness to put in more efforts. 600 students from a public sector university were elicited by using simple random sampling technique. Data was collected from self-administrated questionnaires and 495 complete questionnaires were applicable for data analysis. Regression result displayed that there was an insignificant relationship between tangibles and students' satisfaction due to p-value= 0.129 > 0.05.

2.3.2 Relationship between Reliability and Students' Satisfaction

Shaari (2014) defined reliability as an ability to perform the promised service dependably and accurately.

Malik, Danish, and Usman (2010) studied the effect of different service quality dimensions (including reliability) on students' satisfaction in HEIs of Punjab, including public and private sector institutes. Data was collected by using convenience sampling technique from 240 students of business course either in master program or graduation program in chartered universities of the Gujranwala region. Based on Pearson Correlation, the results showed that the reliability had a strong and significant impact on the students' satisfaction from an institution (r=0.853, p <0.01).

Arokiasamy and Abdullah (2012) analyzed the level of students' satisfaction with current services offered by Malaysian university colleges. Data was collected by employing survey data from 245 students (Malaysian students and International students) who studied in a well-established university college in Selangor. Based on Pearson correlation coefficients and multiple regression analysis, the results showed that there was a strong and positive relationship between reliability and Malaysian students' satisfaction (R Square=0.561, p<0.05), while the relationship between international students' satisfaction towards reliability was moderate and depicted a positive relationship (R Square=0.439, p<0.05).

In contrast, Mansori, Vaz, and Ismail (2014) examined the relationship among SERVQUAL service quality dimensions, including reliability and level of students' satisfaction among undergraduate students from private universities and colleges in Malaysia. 460 self-administered questionnaires were distributed to students from different faculties in three different private universities and colleges based on convenience sampling. Only 431 sets were applicable for data analysis. Based on regression result, there was a negative and insignificant relationship between reliability and students' satisfaction (β= -0.035, p-value=0.451 > 0.05).

2.3.3 Relationship between Responsiveness and Students' Satisfaction

Responsiveness is defined as the willingness to assist customers and provide prompt service, and it also explains responsiveness of system towards service quality provided (Parasuraman et al., 1985; Malik et al., 2010; Shaari, 2014).

Saepudin and Marlina (2013) investigated the influence of service quality (including responsiveness) of institution on the level of students' satisfactionin SMPN 3 Cibadak, Sukabumi.

Descriptive quantitative method was employed in this research by using path analysis. 986 data were collected from students by using various techniques, including questionnaires, interviews, observation and documentation, and only 278 of them were fit to be used for this research. Based on Pearson Correlation, the result displayed that there was a significant relationship between responsiveness and students' satisfaction (p= 0.00, r=0.6).

Ali and Mohamed (2014) examined the relationship between service quality dimensions (including responsiveness) and students' satisfaction in Somalia HEIs. The researchers have employed both purposive and stratified sampling methods by distributing questionnaires to 120 undergraduate students in three universities in Mogadishu (SIMAD, MUQDISHO and BANADIR), and only 92 of them had responded. Based on correlation analysis, the results depicted that responsiveness had a positive significant relationship with students' satisfaction based on students' perception of service quality provided by the faculty (r=0.567, p=0.00).

On the contrary, according to Abdullah (2006), the researcher studied the relationship of three measuring instruments of service quality (including HEdPERF, SERVPERF and HEdPERF-SERVPERF) within a higher education setting. The data was collected from self-administered questionnaires, of which 560 questionnaires were distributed to six HEIs (two public HEIs, one private HEI, and three private colleges) in Malaysia, and only 390 had responded and applicable for data analysis. Based on regression result, there was negative and insignificant relationship between responsiveness and students' satisfaction (β = -0.06, p-value = 0.27 >0.05).

2.3.4 Relationship between Assurance and Students' Satisfaction

According to Parasuraman et al. (1985), assurance is defined as knowledge and courtesy of employees and their ability to inspire trust and confidence.

According to Khan et al. (2011), 600 students were drawn out by employing simple random sampling technique to participate in the study from a public sector university. Responses from these students were elicited though personally administrated questionnaires. 105 questionnaires were not fit to be used and thus, only 495 complete questionnaires were applicable for data analysis. Regression result displayed that there was a positive and significant relationship between assurance from dimension of service quality and students' satisfaction due to p =0005 <0.05.

Arokiasamy and Abdullah (2012) examined the level of students' satisfaction with current services offered by Malaysian university colleges. Data was collected by using survey data collected from 245 students (Malaysian students and International students) who studied in a well-established university college in Selangor. Based on Pearson correlation coefficients and multiple regression analysis, the results displayed that there was a moderate and positive relationship between assurance and Malaysian students' satisfaction (R Square=0.256, p<0.05), on the other hand, the relationship between international students' satisfaction towards assurance was strong and depicted a positive relationship (R Square=0.463, p<0.05).

Nevertheless, Mansori et al. (2014) investigated the relationship between SERVQUAL service quality dimensions, including assurance and level of students' satisfaction among undergraduate students from private universities and colleges in Malaysia. 460 questionnaires were distributed to students from different faculties in three different private universities based on convenience sampling, and data was collected from self-administrated questionnaires, only 431 were applicable for data analysis. Based on regression result, there was an insignificant relationship between assurance and students' satisfaction (β= 0.011, p-value=0.813 > 0.05).

2.3.5 Relationship between Empathy and Students' Satisfaction

Empathy is defined as caring and individualized attention that the firm provides to its customers (Parasuraman et al., 1985; Shaari, 2014).

Hanaysha, Abdullah, and Warokka (2011) examined the relationship between service quality dimensions (including empathy) and students' satisfaction in Malaysia. Data was collected by employing survey method and respondents were identified through random sampling approach. A total of 320

students had responded to the self-administered questionnaires distributed. Based on the findings from Pearson Correlation and Regression Analyses, the relationship between Malaysian students' satisfaction towards empathy was moderate and positive (p < 0.01).

Saepudin and Marlina (2013) investigated the influence of service quality (including empathy) of institution on satisfaction level of students in SMPN 3 Cibadak, Sukabumi. Descriptive quantitative method was employed in this research by using path analysis. 986 data were collected from students by employing various techniques, including questionnaires, interviews, observation and documentation, and only 278 of them were used for this research. Based on Pearson Correlation, the result showed that there was a positive and significant relationship between empathy and students' satisfaction (p= 0.00, r=0.433).

According to the research by Agbor (2011), the research approach employed was a deductive approach to analyze the relationship between customer satisfaction comprises of educational industry and service quality dimensions (including empathy). Data was collected through convenience sampling then distribution of self-administered questionnaire to international students of Umeå University. 100 questionnaires were completed whereas 7 were uncompleted from international students of Umeå University. Result displayed from Chi-square test depicted empathy variable had obtained a p-value of 0.199 which is more than 0.05, thus proven there was an insignificant relationship between students' satisfaction and empathy.

2.3.6 Relationship between Academic Factors and Students' Satisfaction

According to Abdullah (2006), academic factors comprises of positive attitudes, good communication skills, sufficient consultation, regular feedback to students, and outsourcing ability of teaching staff which are related to the responsibilities of academics.

Jalali et al. (2011) investigated students' satisfaction in a HEIs in Malaysia based on their demographic factors and academic factors. Data for this study was collected from a HEI through questionnaires. Survey questionnaires were distributed by using random sampling method to the undergraduate and postgraduate students. The statements and questions were closed-ended, whereby the choice was limited to fixed response on specific points based on a Likert-type and nominal scales. A total of 190 questionnaires were distributed, 165 were returned with only 150 applicable data of which 15 were uncompleted. Based on ANOVA, the study showed that the academic-related activities weighed more than non-academic-related factors such as the availability of financial advice and the level of decoration. Ho was not rejected with P-value not less than 0.005, indicated that there was an insignificant relationship between students' satisfaction with non-academic related activities.

Kayastha (2011) examined relationship between service quality variables of HEdPERF (including academic factors) and students' satisfaction of graduate students in universities in Thailand. Data was collected through questionnaire survey by distributing hard copy questionnaires and soft copy questionnaire. The soft copy questionnaire refers to the online questionnaire through the email and Facebook. The method employed was convenience sampling method whereas target population was graduate students from various universities which were in or near Bangkok with final sample size of 303 respondents. Result acquired from the findings depicted that the relationship between academic factors and overall students' satisfaction from universities in Thailand was highly significant (p- value=0.000 <0.05).

Mang'unyi and Govender (2014) studied the perceived service quality (including academic factors) and customers' satisfaction on students' perceptions in private HEIs of Kenya. Data was collected through simple random sampling of which 850 units of self-administered questionnaires were distributed to students from four universities (CUEA, SU, USIA and MKU) and only 533 had responded. The result from the findings displayed that academic factors was statistically significant with the student's satisfaction (p- value<0.0001).

CONCEPTUAL FRAMEWORK

Figure 2.3: Six Service Quality Dimensions Affecting Students' Satisfaction

Adapted from: Parasuraman, A., Zeithaml, A. V., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*, 41-50. and Abdullah, F. (2006). Measuring service quality in higher education: three instruments compared. *International Journal of Research & Method in Education*, *29* (1), 71-89.
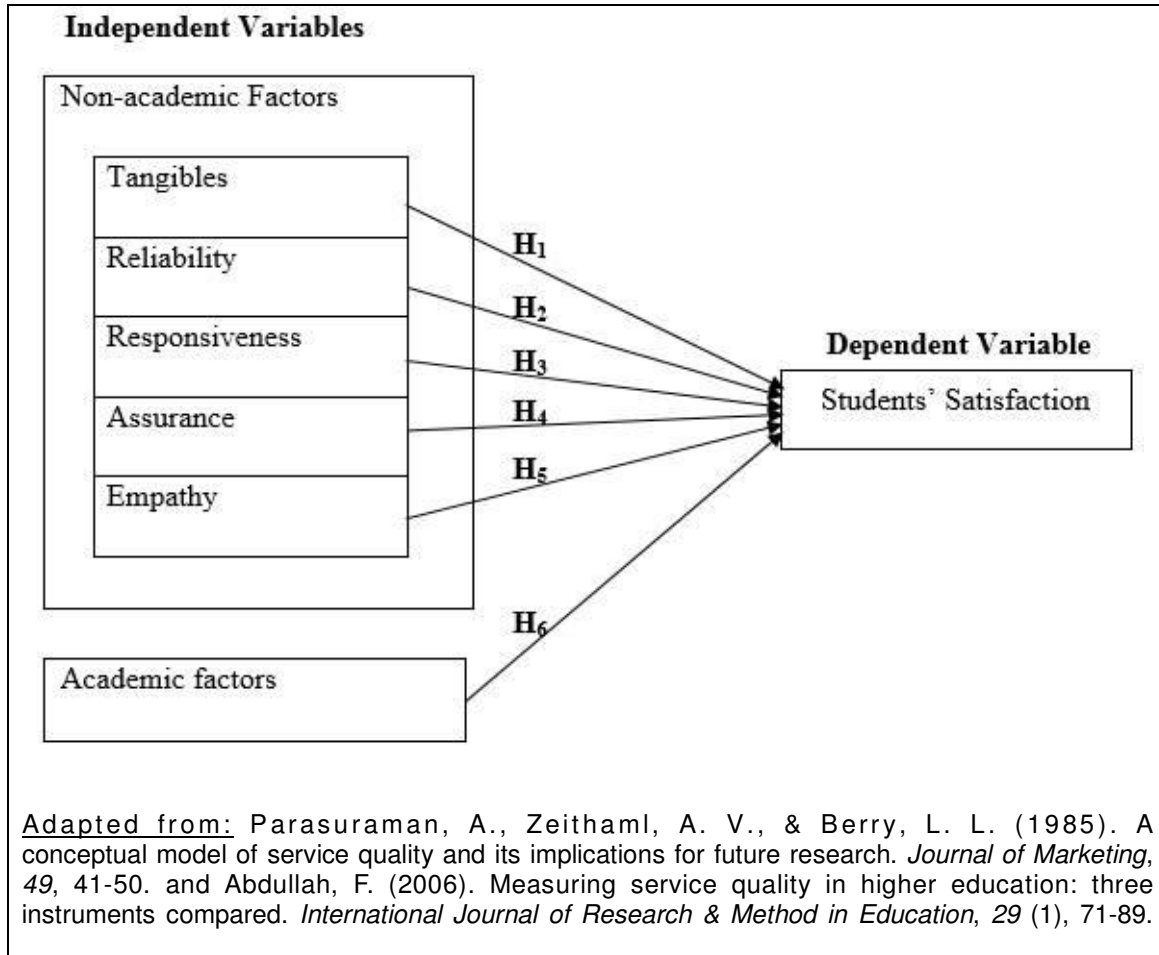
CHAPTER 3: RESEARCH METHODOLOGY

3.0 Sampling Design

3.1 Target Population

According to National education statistic: higher education sector (2014), there were a total of 1,045,322 students attending in HEIs of Malaysia in 2013 as shown in Table 3.1.

Table 3.1: Number of Students Enrolled in Malaysia HEIs in year 2013

Institutions of Higher Education	Enrolment
Public Higher Education Institutions	560,359
Private Higher Education Institutions	484,963
Total	**1,045,322**

Source: *National education statistic: higher education sector 2013*. (2014).

3.1.2 Sampling Elements

Target population comprises of students from three Public HEIs and three Private HEIs. According to QS World University Rankings 2014/2015 (2015)., the top three Public HEIs were Universiti Malaya (UM), Universiti Teknologi Malaysia (UTM) and Universiti Kebangsaan Malaysia (UKM) whereas the top three Private HEIs were Multimedia University (MMU), Universiti Teknologi Petronas (UTP) and Limkokwing University of Creative Technology. This study will focus on final year students because they are more familiar with the service quality of their universities, thus capable to evaluate service quality more accurately compared to their juniors.

3.1.3. Sampling Technique

Quota sampling is adopted to carry out since the sampling frame is unknown. According to Gschwend (2005), quota sampling is a cheap and convenient method to generate a sample efficiently due to easy management and needless of a sampling frame. Initially, quota sampling is conducted by dividing the population into two groups, students from Public HEIs and Private HEIs. After that, calculation of quota for each group is performed, with 100 units of survey forms to be distributed to each of the six universities composed of three Public HEIs and three Private HEIs, henceforth making a total of 600 units of survey.

3.1.4 Sampling Size

In general rule, the minimum sample size is to have five times as many observations as there are variables to be analyzed (Hair, Anderson, Tatham, & Black, 1998). The desired level is between 15 and 20 observations for each independent variable, while 120 is considered optimal (Hair et al., 1998). Besides, Krejcie and Morgan's (1973) table (as cited by Sekaran & Bougie, 2010) suggested that when there is a population of 1 million and above, the minimum sample sizes required are 384. The Research Advisors (2006) also stated that when the population is 250,000 and above, the sample sizes required are 384. Nevertheless, final sample size for this study will be 480 students from the selected HEIs： Universiti Malaya (UM), Universiti Teknologi Malaysia (UTM), Universiti Kebangsaan Malaysia (UKM), Multimedia University (MMU), Universiti Teknologi Petronas (UTP) and Limkokwing University of Creative Technology to represent the entire targeted population in order to achieve an average sample size of 100 from each of the six universities. 100 units of survey forms will be distributed to students, contributing to a total of 600 units of survey forms.

3.2 Data Analysis

3.2.1 Quantitative Data Analysis

Quantitative is method research to collect and analyze numerical data using mathematically based methods (Muijs, 2010). In this study, Statistical Analysis Software (SAS) will be employed to collect and scrutinize data from a variety of sources and perform statistical analysis.

3.2.2 Descriptive Analysis

The collection of data will be evaluated and explained through Statistical Analysis Software (SAS). Descriptive statistics will be employed to compute means and standard deviations of the items as well as target respondents' demographic information.

3.3 Scale Measurement

3.3.1 Normality Test

Normality test is conducted to determine if the collected data is normally distributed (Nordstokke & Zumbo, 2010). In this study, Skewness and Kurtosis will be carried out to test the normality of data collected. For Skewness test, the result should not exceed 3 and it can either be positive or negative whereas for Kurtosis test, the result acquired should be within the range of ±10 (Kline, 1998; Meintanis, Ngatchou-Wandji, & Taufer, 2015).

3.3.2 Reliability Test

Cronbach's Alpha will be employed to test the internal consistency reliability of every item for each variable stated in the survey questionnaire. Reliability test is acceptable if the Cronbach's Alpha exceeds 0.60 (Fornell & Larcker, 1981; Hair et al., 1998; Meintanis et al., 2015).

3.4 Inferential Analysis

3.4.1 Pearson's Correlation Analysis

Pearson's Correlation will be conducted to identify multicollinearity problem in which independent variables are enormously connected. According to Cooper and Schindler (2008), multicollinearity problem can cause a negative outcome on multiple regression. The criterion is that correlations which are 0.9 or more should be addressed (Dereny & Rashwan, 2011).

3.4.2 Multiple Linear Regressions (MLR) Analysis

Multiple Linear Regressions analysis will be employed to test the hypotheses in order to investigate relationship between dependent variable and six independent variables, of which both are parametric data. The regression equation for this research is:

Students' satisfaction = α + β1 Tangibles + β2 Reliability + β3 Responsiveness + β4 Assurance + β5 Empathy + β6 Academic Factors

CHAPTER 4: DATA ANALYSIS

4.0 Inferential Analysis

4.1 Pearson's Correlation Analysis

Pearson's Correlation is conducted to identify multicollinearity problem in which independent variables are enormously connected. The criterion requires correlations which are 0.9 or more should be addressed (Dereny&Rashwan, 2011).

Table 4.1: Pearson Coefficient Correlation

	T	R	RP	A	E	AP	SS
T PC P-value	1						
R PC P-value	0.53185 <0.001	1					
RP PC P-value	0.43169 <0.001	0.68152 <0.001	1				
A PC P-value	0.47233 <0.001	0.69067 <0.001	0.70624 <0.001	1			
E PC P-value	0.48282 <0.001	0.65117 <0.001	0.64056 <0.001	0.69552 <0.001	1		

AF PC P-value	0.47710 <0.001	0.34114 <0.001	0.37594 <0.001	0.41678 <0.001	0.36483 <0.001	1	
SS PC P-value	0.57646 <0.001	0.55255 <0.001	0.43976 <0.001	0.54689 <0.001	0.48587 <0.001	0.50706 <0.001	1

Source: Developed for the research

Whereby,
PC : Pearson Correlations

According to Table 4.1, the correlation falls between the ranges of 0.34114 to 0.70624 which are within 0.90. Responsiveness and Assurance have the highest value of the correlation (0.70624) whereas Reliability and Academic Factors have the lowest value of the correlation (0.34114). Correlation coefficients are statistically significant as p-value is less than 0.005. Therefore, it can be concluded that there is no existence of multicollinearity problem for this study.

4.2 Multiple Linear Regressions (MLR) Analysis

Table 4.2: Analysis of Variance

R^2	Adjusted R^2	F-value	Pr> F
0.4891	0.4826	75.47	<0.0001

Source: Developed for the research

According to Table 4.2, R-square is 0.4891 which indicated that 48.91% of variation in students' satisfaction can be explained by the six independent variables namely, Tangibles, Reliability, Responsiveness, Assurance, Empathy and Academic Factors. According to Kinnear and Gray (2006), if the coefficient of determination (R^2) is more than 10%, the effect size is considered large. Therefore, the effect size for this study is acceptable.

Pr> F value (<0.0001) which is less than the required p-value (<0.0500) is further strengthened by the F-value (75.47), which suggested that the model as a whole was fit. The function of F value is to detect the overall statistical significance of the regression model where large F value indicates the model is well fit and good.

Table 4.3: Parameter Estimates

Variables	Parameter Estimates	t-value	Pr>|t|	Tolerance	Variance Inflation Factor (VIF)
Intercept	0.08241	0.44	0.6615	-	0
T	0.30393	6.32	<0.0001	0.60349	1.65702
R	0.22098	4.24	<0.0001	0.39280	2.54585
RP	-0.07991	-1.60	0.1105	0.40999	2.43909
A	0.20412	3.61	0.0003	0.35914	2.78446
E	0.03852	0.80	0.4216	0.43306	2.30912
AF	0.30866	6.11	<0.0001	0.71706	1.39458

Source: Developed for the research

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According to Table 4.3, Tolerance for the six independent variables ranged from 0.35914 to 0.717061 has exceeded 0.1. VIF for all the independent variables ranged from 1.39458 to 2.78446 was less than 10. Since the correlation matrix (0.34114 to 0.70624) obtained from Table 4.1 is less than 0.9000, further strengthened by Tolerance and VIF results, it can be concluded that there is no multicollinearity problem in this research (Hair et al., 2006).

For hypotheses testing, Tangibles (<0.0001), Reliability (<0.0001), Assurance (<0.0001) and Academic Factors (<0.0001) are less than p-value 0.0500, indicated a significant relationship with students' satisfaction. Nevertheless, Responsiveness (0.1105) and Empathy (0.4216) have an insignificant relationship with students' satisfaction on service quality of Malaysian HEIs. In conclusion, the outcome of the correlation equation is stated as below:

Students' Satisfaction= α + 0.30393T + 0.22098R – 0.07991RP + 0.20412A + 0.03852E + 0.30866AF

> **Whereby,**
> **α   : Intercept**
> **T   : Tangibles**
> **R   : Reliability**
> **RP :Responsiveness**
> **A   : Assurance**
> **E   : Empathy**
> **AF : Academic Factors**

Table 4.4: Summary of Hypotheses and Pearson Correlation

Hypotheses	Multiple LinearRegressions R² = 0.4891		
	Beta	**P-value**	**RESULT**
H1: There is a significant relationship between tangibles and students' satisfaction on service quality of Malaysian higher education institutions (HEIs).	0.30393	<0.0001	Accepted
H2: There is a significant relationship between reliability and students' satisfaction on service quality of Malaysian higher education institutions (HEIs).	0.22098	<0.0001	Accepted
H3: There is a significant relationship between responsiveness and students' satisfaction on service quality of Malaysian higher education institutions (HEIs).	-0.07991	0.1105	Do Not Accept
H4: There is a significant relationship between assurance and students' satisfaction on service quality of Malaysian higher education institutions (HEIs).	0.20412	<0.0001	Accepted
H5: There is a significant relationship between empathy and students' satisfaction on service quality of	0.03852	0.4216	Do Not Accept

Malaysian higher education institutions (HEIs).			
H6: There is a significant relationship between academic factors and students' satisfaction on service quality of Malaysian higher education institutions (HEIs).	0.30866	<0.0001	Accepted

Source: Developed for the research

CHAPTER 5: CONCLUSION AND DISCUSSION

5.0 Discussion of Major Findings

5.1 Tangibles (T)

Based on Multiple Linear Regression (MLR) results, tangibles depict a significant relationship with students' satisfaction (SS) in Malaysia HEIs with p-value of less than 0.0001 which is less than 0.05. Therefore, the hypothesis (H1) for this research is accepted, stating that there is a positive relationship between tangibles and students' satisfaction.

Our result contradicted with prior researchers who realized that tangibles had insignificant influence on students' satisfaction level (Khan et al, 2011). Students perceived that physical appearance of an educational institution is a less concerned factor. Therefore, students rated their universities based on the grounds of quality of education, instead of on the basis of buildings, facilities and presentation of university's staff.

Nevertheless, our result is consistent and supported by prior researchers who realized that tangibles had strong and direct influences on students' satisfaction (Ahmed & Masud, 2014). The provision of equipment, personnel, teaching and communication materials by university staff, had increased students' satisfaction level, thus displayed a significant relationship between tangibles and students' satisfaction (Ali & Mohamed, 2014).

Tangibles present a positive influence on students' satisfaction because having up-to-date physical facilities in universities enables students to study in a conducive learning environment. The university has provided well-equipped facilities to satisfy students' needs and wants as well as to ease their learning processes. Besides, universities with appealing and eye-catching decorations or designs, collaborated with staff who are well-dressed and appear neat will directly increase students' satisfaction.

5.2 Reliability (R)

The MLR's result in this research shows a positive relationship between reliability and students' satisfaction with p-value of less than 0.0001, which is less than 0.05. In other words, H2 is accepted and there is a positive and significant relationship between reliability and students' satisfaction.

This result was in conflict with past studies which concluded that reliability had a negative and insignificant relationship towards students' satisfaction (Mansori, Vaz,& Ismail, 2014). The university failed to fulfill their promises to students, and thus caused an increase in students' dissatisfaction level.

Our result, however was in line with past studies by Malik, Danish, and Usman (2010), which proved that reliability had positive influence on students' satisfaction, in which the reliability of services can enhance students' trust on their universities as their universities provides quality education and shows continuous effort in academic development. Besides, Arokiasamy and Abdullah (2012) also revealed that the relationship between Malaysian students towards reliability was strong and positive, meanwhile there was a moderate and positive relationship between reliability and students' satisfaction among international students.

Based on the results, positive relationship between reliability and students' satisfaction reflected that when HEIs are more concerned about students' welfare, the students tend to be more satisfied.

Reliability indicates how dependable the university is and the accuracy of university in keeping its students' records. Hence, the students are satisfied when the university has delivered their promises on time, and has shown sympathy towards students who encounter difficulties in university.

5.3 Responsiveness (RP)

There is a negative and insignificant relationship between RP and students' satisfaction with p-value = 0.1105, which is more than 0.05. Therefore, H3 is not accepted, showing that there is an insignificant relationship between RP and students' satisfaction in Malaysian HEIs.

Our result was contradicted with prior researchers who proved that responsiveness had significant relationship towards students' satisfaction (Saepudin &Marlina, 2013). Moreover, Ali and Mohamed (2014) also depicted a significant relationship between responsiveness and students' satisfaction based on students' perception of service quality provided by the faculty. Furthermore, the prior researcher stated that the administrative staff and lecturers were able to respond and answer students' queries promptly.

However, our study was consistent with Abdullah (2006), who concluded that responsiveness had a negative and insignificant relationship towards students' satisfaction in six Malaysia HEIs. University staff were unable to provide immediate responses to students' queries consistently.

The mean value for each item tested for responsiveness is low at an average of 3.456, indicated that the students' rate of responsiveness towards university's staff are ranked low and are dissatisfied with it. The possible reason is that the university's staff fail to respond to students' requests promptly as the staff are from different faculties with each of them handling many tasks. Besides, it can be due to the reason that the university's staff are reluctant to extend their helping hands, or possess less-friendly attitudes and have less communication with students. Thus, the students were dissatisfied.

5.4 Assurance (A)

The MLR's result shows a positive and significant relationship between assurance and students' satisfaction with the p-value of 0.0003, which is less than 0.05. In other words, H4 is supported and there is a positive relationship between assurance and students' satisfaction.

This result was contradicted with past studies which concluded assurance had an insignificant relationship towards students' satisfaction (Mansori et al, 2014). Nevertheless, our result was in line with the past studies by Khan et al. (2011) which showed assurance had direct effect on students' satisfaction. Moreover, Arokiasamy and Abdullah (2012) also proved that there was a moderate and positive relationship between assurance and Malaysian students' satisfaction, and there was a strong and positive relationship between assurance and international students' satisfaction.

Based on the result, assurance has a positive effect on students' satisfaction because students are very satisfied with the university's staff politeness and staff's ability in providing adequate and unconditional support when the students encounter difficulties. As a result, the services provided by university which they have assured the students, particularly pertaining to students' academics are an important factor in determining students' satisfaction level.

5.5 Empathy (E)

The result of p-value for empathy is 0.4216, indicating H5 in this study is not accepted. There is an insignificant relationship between empathy and students' satisfaction in Malaysia HEIs.

Our result was contradicted with prior researchers who realized that empathy had direct effect on students' satisfaction (Hanaysha et al., 2011; Saepudin & Marlina, 2013). Students were satisfied with their universities' operating hours which provide them with appropriate and sufficient timing to settle their affairs such as taking meals in cafeterias, resting and revising in libraries and making payments etc.

However, our result was consistent with Agbor (2011) who concluded that there was an insignificant relationship between students' satisfaction and empathy. The staff do not possess

appropriate and adequate knowledge and skills in handling students' affairs, thus the staff behave skeptically towards students.

This insignificant result is further reinforced by the fact that the mean value for each item tested for empathy is low at an average of 3.3666 out of 5.000. The possible reason is due to the poor individual attention paid to students by university staff when students encounter difficulties in situations such as dealing with their personal issues, academic or extra-curriculum. As such, there is an increase in dissatisfaction among students.

5.6 Academic Factors (AF)

Based on the results drawn from MLR, academic factors have positive and significant influences towards students' satisfaction in Malaysia's HEIs with p-value of less than 0.0001, which is less than 0.05. Therefore, H6 is accepted.

This result was coherent with past empirical studies conducted by Kayastha (2011), who proved that the relationship between academic factors and overall student satisfaction was highly significant. Moreover, Mang'unyi and Govender (2014) showed that the academic factors was statistically significant with student's satisfaction. Our result was supported by past researcher who stated that academic programmes had a direct, positive and significant relationship towards students' satisfaction (Ahmed &Masud, 2014). Furthermore, based on our results, academic factors is the strongest determinant and have significant influence on students in Malaysia's HEIs.

The main reason supporting academic factors is the close and harmonious relationship between students and academic staff. Close relationships, especially during advisory between staff and students is instrumental in connecting students feelings with their institution (Gordon, 2005; Russell & Lehman, 2008). Very often academic staff in higher education are in contact with their students and the duration is long (Teh, 2004). In addition, academic staff are passionate and patient in guiding, teaching and motivating students as well as they are easily available and able to reach out during consultation hours or any suitable time via email or phone calls. On the contrary, there are fairly limited contacts between students and administrative staff. Students can request for services during office hours only. Therefore, academic factors is the most influential factor on students' satisfaction in HEIs.

6.0 Conclusion

The primary objective of this research is to investigate the relationship between six key determinants of service quality (tangibles, reliability, responsiveness, assurance, empathy and academic factors) and students' satisfaction in Malaysia HEIs. The results for this research indicate that four out of six determinants of service quality (tangibles, reliability, assurance and academic factors) and students' satisfaction have significant relationships, while responsiveness and empathy have insignificant relationships with students' satisfaction in Malaysia higher educational institutions.

To sum up, despite possessing several minor limitations, the hybrid of SERVQUAL and HEdPERF models is instrumental, practical and investigative for future research.

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HALAL SUPPLY CHAIN - A CASE STUDY OF NORAINI'S COOKIES

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Abstract

Purpose: This is a case study of an implementation of Halal supply chain management by a biscuit manufacturer in Malaysia. **Design/methodology:** This research applies the case study design to analyse the practices of the manufacturer in order to describe and assess its Halal supply chain management. It comprises two methods which were in-depth interviews and observations in the food manufacturer facilities and their supply chain partners' premises.**Research limitations:** The study is only one example of the players in the global Halal biscuit industry, and as a case study only demonstrates a snapshot of supply chain practices of a Halal biscuit manufacturer in Malaysian market. More of such studies are needed to provide a better picture of halal supply chain for the food industry. **Practical implications:** The study advances knowledge regarding supply chain management of Halal biscuit products through its narrative and analysis.**Originality:** This study explores real life practice of supply chain management in Halal food industry and captures the essence of this emerging industry. It provides a platform for future references for more research in Halal industry especially in Halal food supply chain.

Keywords: halal food, supply chain management, logistic

INTRODUCTION

Although Malaysia's *Halal* logo which is issued by Department of Islamic Development Malaysia (JAKIM) had been fully enforced in Malaysia since 1 January 2012, the current *Halal* standard is still neglecting total assurance for the food to be Halal at the point of consumption. As the Halal food products move along the supply chains, there are possibility for Halal integrity issues to occur. With the rising popularity and demand of the Halal foods industry around the world, it is pertinent that *Halal* supply chain management is able to maintain *'Halalness'* of the food from seeds to forks. This study examines the implementation of Halal supply chain management by Noraini's Cookies Worldwide Sdn Bhd, a Halal biscuit manufacturer in Malaysia. Data was gathered through in-depth interviews and observations were conducted in the manufacturer factory based on a Halal supply chain model. The data was then analysed using content analysis. This study contributes to the understanding of success factors, causes of failure and challenges in the implementation of Halal supply chain management in biscuit industry.

LITERATURE REVIEW

Introduction to Halal

Although the perception of *Halal* means anything that is permissible according to Islamic law (Liow, 2012) is correct, it can only be a true manifestation of Islamic principles with combination of the element of 'toyyib' which can be defined as wholesome and beneficial (World Halal Forum, 2009). According to Shariah principles as stated by Talib & Hamid (2014),Manzouri et al. (2013) and Liow (2012), Halal concept will always free from:

a. *Non-Halal* animals, their part or their products.
b. *Halal* animals that are not slaughtered, their parts and their products
c. Unclean ingredient also known as *najis*.
d. Human part or derivate.
e. Direct contact with non-Halal items

Additionally, during the production and preparation of *Halal* items, the equipment used are supposed to be free from any exposure to *najis* (Tieman, 2011). In other words, these principles require the *Halal* products and services to be segregated from any contact with *Haram* throughout the production, preparation, packaging as well as storage and transportation process (Shafie, 2011; Tieman, 2011; World Halal Forum, 2009).

On the other hand, in Islam, *Haram* refers to the unlawful, and doubtful state between *Halal* and *Haram* is called *Syubhah*. According to Al-Qardawi (2007), both *Haram* and *Syubhah* should be avoided by Muslim as there is a saying of Prophet Muhammad (peace be upon Him) which states that:

> *"That which is Halal is clear, and that which is Haram is clear. Between the two there are doubtful matters concerning which people do not know whether they are Halal or Haram. One who avoids them in order to safeguard his religion and his honor is safe."*

As *Halal* is vital in Islam (Quran.com), it is the responsibility of Muslims to ensure that everything that they consume meet HalalanToyyiban criteria (Manzouri et al., 2013).

Halal as a Global Business

The *halal* market has become a global business due to the spread of Islam around the world (Talib & Hamid, 2014; Talib et al., 2014; Talib et al., 2013). As Islam is the fastest growing religion in the universe, (Talib et al., 2013) the potential market share for *halal* products is rocketing as well. Statistically, there were at least 1.57 billion of Muslim worldwide in 2012 (Manzouri et al., 2013) and this number is expected to grow up to 2.2 billion in just another 8-year period (Grim & Karim, 2011). Likewise, Muslim population in Malaysia itself was 17.1 million with the percentage of 61.4 of the total population in the year 2010 and the figure is forecasted to be 64.5 per cent in 2030 (Talib & Hamid, 2014). Since Muslims are only allowed to consume *halal* products and services, the rise in their population positively affects demand of *halal* products and services.

Islamic lifestyle does not limit the halal concept to foodstuffs only but also consists of communication, attitude, dress code as well as social conduct (Al Jallad, 2008). As a consequence, the obligations create demand for Halal products and services by Muslim consumers. Similarly, in the business context, the Ministry of International Trade and Industry (MITI) has identified various industries which can be categorized as food, non-food as well as services in the *halal* market (Talib et al., 2014). Interestingly, all the three halal markets also correlated with each other and form supply chains from the point of origin until the point of consumption. In the biscuit industry, manufacturers use machinery (non-food) to process raw materials (food) for their production that is finance by Islamic banking (services). After the products are ready for distribution, the manufacturers seek help from logistic (services) to transport their product to marketplaces. However, halal market requires all of the supply chain parties to be Halal practitioners in order to enable the end consumers to enjoy the wholesomeness of the products with confidence. This condition is reasonable to increase confidence in the products and services.

Even though the obligation of Halal food is meant for Muslim, it is a fallacy to view it as a limitation in marketing the products. Muslims, who form the majority of consumers of Halal food, are not the only customers in the market. Halal products and services are also well accepted by Non-Muslim worldwide as symbol of quality assurance (Talib et al., 2013; Lada et al., 2009; Liow, 2012). Since the Halalan Toyyiban concept is inclusive instead of exclusive to Muslim consumers, strong demand on Halal food also include great market share of non-Muslim consumers (Talib et al., 2014; Liow, 2012; Aziz & Vui, 2012; Bonne & Verbeke, 2008). Safe and hygienic production methods made Halal food products attractive for non-Muslim consumers who are concerned about their health.

In Malaysia, Muslim and non-Muslim manufacturers and their supply chain parties are highly encouraged to be Halal practitioners (Liow, 2012). Halal stakeholders in Malaysia are very fortunate as they have strong government support. The Malaysian government provides various initiatives to promote and strengthen the industry (Talib & Hamid, 2014). The Ministry of International Trade and Industry (MITI) through Halal Industry Development Corporation (HDC) serves as a one-stop agency regarding Halal matters (Talib & Hamid, 2014).

Halal supply chain management

Supply chain management is the integration of key business process from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders (Drucker, 1998).

Lambert & Cooper (2000) states that elements of supply chain network structure, supply chain business processes and management components are closely interrelated as they are crucial in creating competitive advantages as well as for the sake of profitability. As Halal supply chain management is an extension of the conventional one, the difference between conventional supply chain management and Halal supply chain management is that the latter has an intention to expand the Halal integrity from farm to fork (Tieman et al., 2012). The Halal supply chain management always avoids risk of contamination, making it more robust characteristic compared to the conventional one.

According to Tieman (2011), there are three fundamental of Halal supply chain management in order to maintain Halal integrity of the product along the chain. The first principle is to avoid any direct contact with Haram (prohibited) items. There are two types of Haram items which are clearly stated in Quran such as pork and liquor, while another one is prohibition according interpretation of the different scholars on the area that are not mentioned in the Quran. Cross contamination with non Halal products would affect the Halal status of products, making them unfit to be consumed. The second principle is precaution towards risks that the cross contamination might be happen. Therefore, Halal products segregation is the key in guaranteeing Halal status remain until the products arrives at the end consumers. The last principle is perception of the consumers. Any suspicion regarding Halal status of the product causes it to become forbidden to be consumed although the product is Halal in every aspect.

The degree of risk of contamination depends on the product characteristics for example, the products may be wet or dry, or bulk or unitized products. It is worthy of mention that wet products are more prone to contamination as compared to dry products. Similarly, bulk products have higher vulnerability than unitised products (Tieman et al., 2012; Tieman, 2011). Otherwise, the perception of Muslim consumers differs according to their local religious ruling (Fatwa), Islamic school of thought and local customs (Tieman, 2011).

The implementation of Halal supply chain management by Halal food brand owners is motivated by vulnerability of the Halal supply chain management (Bonne & Verbeke, 2008a; Zailani et al., 2010), the massiveness and high potential of Halal market (Talib et al., 2014; Manzouri et al., 2013; Alam & Sayuti, 2011; Solsis, 2010; Bonne et al., 2007) and more severe Halal regulations standards (Department of Standards Malaysia, 2010a; 2010b; 2010c; IHI Alliance, 2010). As the main goal of Halal food supply chain management is to protect the Halal status of food products until they arrive at the end consumers, and minimization of vulnerability in the supply chain is the key point (Tieman et al., 2012). Manzouri et al. (2013) agreed that contamination from the equipment is not supposed to happen during preparation of the Halal products.

Ideally, the Halal products should be segregated from non Halal items during their supply as a way to reduce the proximity for contamination (Shafie, 2011; Tieman, 2011; World Halal Forum, 2009). Correspondingly, dedicated equipment, facilities and transportation are highly preferred to be used during the food movement throughout the supply chain channel (Talib et al., 2013; Manzouri et al., 2013; Tieman et al., 2012) to avoid any direct contact as well as contamination happening throughout the chains. In short, Halal supply chain management requires more systematic and stringent governance.

The Malaysian government supports the development of the field of halal supply chain in the academic arena, in application as well as research (Talib & Hamid, 2014; Tieman, 2013; Manzouri et al., 2013; Zulfakar et al., 2012) mainly to encourage further understanding of Halal supply chain management (Tieman, 2011) and the betterment of the model (Tieman et al., 2012).

Halal Supply Chain Model
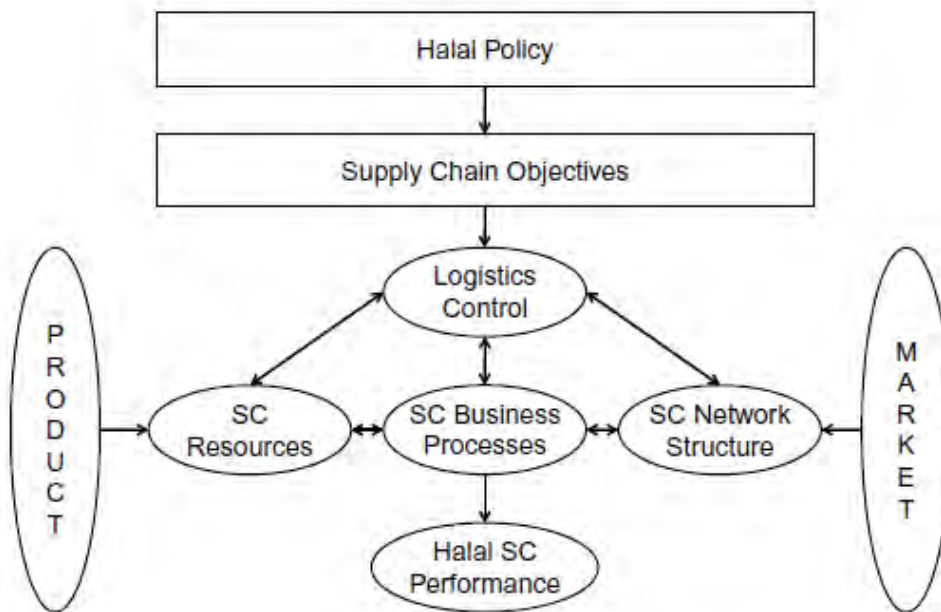
Figure 1: Halal supply chain model developed by (Tieman et al., 2012)

Based on previous studies, a Halal supply chain model as in Figure 1 which was introduced by Tieman et al. (2012) has been proposed as a framework in managing Halal integrity of Halal food products throughout their supply chain channel until they are purchased by the consumers. With some modification, the framework which is adapted from the framework for network development for food supply chain (van der Vorst & Beulens, 2002) which is developed based on Supply Chain Management framework (Cooper et al., 2008). As the core model providing sound basis in supporting the purpose of Halal supply chain management, it has been further improved and proposed as Halal supply chain model.

The Halal supply chain model consist of seven elements which are Halal policy, supply chain objectives, logistics control, supply chain resources, supply chain business process, supply chain network structure and Halal supply chain performances. The model also shows that vulnerability of Halal supply chain which can cause contamination is influenced by the product characteristics and market requirements whereas Halal control activities and assurance activities try to minimize the vulnerability in order to maintain Halal integrity (Tieman et al., 2012). Product characteristics can be divided into bulk versus unitized as well as ambient versus cool chain. In terms of the degree of risk, bulk products and cool chain environment have higher vulnerability as compared to their opposition (Tieman, 2011). At the same time, market requirements are different between Muslim country and non-Muslim countries where vulnerability is higher in the latter.

Although all the elements in the model is well developed in facilitating the Islamic value in Halal supply chain management, further study should be welcome especially for research that specific on combination of product-market of Halal food supply chain as it could assist in testing and refining the model.

RESEARCH METHODOLOGY

Research Design

The methodology employed for this research is case study method. Definition of case study has two parts which are the scope of study and its features. The scope of a case study involves comprehensive examination of a current situation in its real-life context when it is occur in unclear boundaries. On the other hand, the case study features involves in various variables of interest than data points which result in reliance on multiple sources of evidence with intersect data in a triangular manner that also benefits from development of theoretical propositions in guiding data collection and analysis (Yin, 2014).

A qualitative case study could be used to get better understanding on a phenomenon that occur and for theory developing purpose (Sekaran, 2007). There were two designs of case study which are single or multiple case designs (Yin, 2014). The selection of the design depends on the objectives of the research and the scenario that will be study.

As the study requires comprehensive analysis of Halal supply chain management practices, case study research methodology was selected for this research (Sekaran, 2007). By using this research design, the Halal supply chain model was tested on a local Halal biscuit manufacturer that was chosen as a respondent. The company produces Halal biscuit which is a type of dry product. Malaysia was chosen as the Muslim country market. Therefore, the company is a suitable respondent for this case research which aims to assess the impact of the product characteristics and market requirements on the design parameters of the Halal supply chain model. Since a case study involves comprehensive analysis of the situation, it is suitable to acquire the real picture of an application of the Halal supply chain management concept in an industry.

Data Collection Method

Data was gathered through in-Depth interviews and observation in the food manufacturer facilities as well as their logistic services provider.

The in-depth interview had been done directly with the founder of a local Halal food manufacturer who shares her experience on implementing the principles of Halal supply chain management in her company in an effort to acquire new knowledge as well as further refine the existing practices. The interview session aimed to identify strategies and practices in managing supply chain for Halal food and the key performance indicator that the company used in order to ensure the Halal integrity remained throughout the supply chain. The interview was recorded and later transcribed.

Primary data was collected from the some interviews with the Halal biscuits manufacturer and their logistic services provider. In Noraini's Cookies Worldwide Sdn Bhd, the interviews were carried out with their founder and managers at their factory whereas interview with Mentari Logistics Solutions Sdn Bhd took place at their premise with their managing director. The interviews were conducted by the researchers using guided and semi-structured questions. A basic checklist was prepared for the interview sessions. Although the interviews were conducted in an informal manner, the checklist was useful as a guide to ensure coverage of important topics. At the same moment, the informal nature of the session allowed other related information regarding the main topic to be explored by the researchers.

Data was also gathered through observation. It is argued that the by using observation as additional strategy could strengthen validity data collected from the interview session (DeWalt & DeWalt, 2002). The method is beneficial in helping the researchers to understand the subject matter better in term of how they are organized, prioritized, interrelated and what are the cultural parameters in measuring their performances (Schensul et al., 1999). Additionally, the process enabled the researchers to study about

the common practices of the respondent in their usual setting which is also beneficial in developing a holistic understanding of the phenomena under study (DeWalt & DeWalt, 2002).

The observation in the Noraini's Cookies's premise includes observation of the management office, biscuit factory, storage, conference room and the exhibition room. The observation sessions were conducted to observe delegation of the tasks by the management, material handling by the employees and products storage that has been practiced by the company. Data was gathered through observation checklists that were prepared by the researchers. Primary data was categorised into two types which are availability of the checklist items and their conditions.

The observation in the Mentari Logistics' place includes management office, warehouse and their fleets. The researchers checked the products storage to infer the company's commitment towards halal practices. Data was gathered through observation checklists that were prepared by the researchers. Primary data was categorised into two types which are availability of the checklist items and their conditions. Photographs were captured with the permission of the respondent. These facilitated the researchers to carry on the process from one site to another. In fact, it makes it possible to keep record of what happened in the site during the data collection. Thus, the observation process was able to be done effectively.

DATA ANALYSIS

Halal policy and supply chain objectives

One attribute in the Noraini's cookies company's motto is 'Islamic product'. In order to adopt the top management's goal, the company only purchase raw materials that are Halal certified by JAKIM. The procurement of raw material and equipment tools in Noraini's cookies is managed by a Halal executive. Therefore, they could ensure all use in the manufacturing process guaranteed Halal. They also opt for Halal compliant logistic service provider to deliver their products to their customers. Therefore, Halal supply chain management is not only act as the company's aim but it also practical for their business operation.

Likewise, regardless of enforcement for Halal logistic for Halal certified products, involvement of Mentari Logistics Solution Sdn Bhd is the result of their concern for the Islamic obligation. Their policy to only transport Halal certified products was the outcome of their uncertainty about permission for Muslims to participate with distribution of non-Halal items. As a Muslim owned logistic provider, any doubtful matter should be avoided. Therefore, they prefer to avoid any association with non-Halal items either directly or indirectly. Since inception, they have designed their business operation to be halal certified and compliant at all levels. It has always been their business policy to only transport Halal certified products in order to ensure that their operation is Halal compliant. By doing so, they are able omit segregation as their fleets and warehouse are solely dedicated for Halal products.

Logistic control

Logistic control of Noraini's Cookies for local market is stronger as compared to their products that are exported to foreign countries. The company is able to plan and control their product flow from the products' development stage until they reach to the end user. Mentari Logistics as the intermediary in the supply chain of the biscuit products, take on the responsibility for the biscuits between stocks loadings on the truck until the unloading at the retailers' outlets. In other words, Halal integrity of the biscuits are secured during the transportation. However, there is lack of control in the international logistic of the products. Noraini's Cookies responsibility towards the Halal status would be handed over to the next supply chain partners from the import countries which might not be halal compliant.

Product characteristics and market requirement

Products manufactured by Noraini's Cookies are dry ambient type. For such type of Halal products, there is no extra requirement needed to maintain Halal status of the products even when they are exported to non-Muslim country. Simultaneously, Mentari Logistics only cater to dry ambient cargo. Although they consolidate food and non-food cargo in their fleet, the nature of the ambient products which are dry and well packaged has reduced the possibility of contamination to almost zero. Therefore, as the products are not Halal sensitive products, the market requirements are similar for both Muslim and non-Muslim countries.

Supply chain resources

Noraini's cookies emphasizes on hiring the right people in their business. The company employs a Halal executive who manages their procurement and all Halal related matters. Furthermore, the executive also plays a role as a purchaser to ensure all raw material and equipment tools used in the manufacturing process are guaranteed Halal. The company meticulously select suppliers that are Halal certified by JAKIM.

Simultaneously, Noraini's Cookies only employs Muslim employees comprising Malaysians or foreigners. The reason behind this requirement is most of operation line staffs are foreigners. As the company has to provide hostel for workers, employing only Muslim employees could ensure non-Halal food are not brought into the premise if none of the people hired consumes that type of products

Supply chain network structure

Selection of supply chain partners is crucial in maintaining the Halal integrity of their products as the responsibility is passed over to them during the products transfer. Hence, Noraini's Cookies chose a Halal compliance logistic service provider to distribute their products locally. However, there are room for improvement in their supply chain network structure. Although the company communicate their motto attribute as Islamic products to the people within the company, the information still not being well communicated with external parties. Noraini's Cookies has not communicated Halal status of their products via information technology (IT) system. The Halal status is also not stated on their freight label.

Supply chain business process

In Halal supply chain, there are three crucial business processes which are customer order fulfilment, manufacturing flow management and procurement (Tieman et al., 2012). As Noraini's Cookies used dedicated containers and trucks for Halal products in transporting their products, they already validate segregation requirement in their customer order fulfilment. In manufacturing flow management of Noraini's Cookies, halal control activities and assurance activities are formulated during physical handling of their products by a dedicated panel. In term of procurement, raw materials that are used in production process are bought from Halal certified suppliers by JAKIM.

CONCLUSION AND DISCUSSION

Optimization of Halal food supply chain should have certain indicators in evaluating the performance of the chain. There are three aspects should be measured in evaluating Halal supply chain performance namely effectiveness, efficiency and robustness (Tieman et al., 2012). Based on the analysis of the interview and survey of literature, the three Halal parameters have been practiced by the respondent, Noraini's Cookies Worldwide Sdn Bhd in order to maintain Halal integrity of their products throughout the supply chain channel.

Effectiveness of Halal SCM

The first parameter is the effectiveness of the Halal supply chain management which is evaluated according to process quality and waste produced by them. While process quality refer to the strength of the brand, credibility of Halal certification acquire by the company itself and Halal customer service complaint, waste mention about percentage of reject goods, carbon footprint as well as resources used (Tieman et al., 2012).

In Malaysia, Noraini's Cookies are well known as the only Halal premium cookies company that owned by Bumiputra. Although their brand is facing high competition with other well-known brand in the country, their brand is well accepted in other country markets. For the time being, there is an absent of customer complain regarding the Halal status of Noraini's Cookies' products.

At the same time, credibility of Halal certification that authorized by JAKIM strengthened the Halal supply chain performance. All products produced by Noraini's Cookies have Halal logo that is authorized by JAKIM. JAKIM's Halal certification is highly reliable and well recognize worldwide. It is agreed that the strength of Halal practices in Malaysia is the Halal certification (Nik Muhammad, Isa, & Kifli, 2009) as the logo has higher validity than other Halal logo (Bohari et al., 2013). For Noraini's Cookies, they are fully utilizing the certification not only for their brand as marketing strategy but in purchasing raw materials and selecting their suppliers as well. The company employed a Halal executive who also responsible in the company's procurement. Procurement is pivotal in Halal food supply chain (Tieman et al., 2012). They only purchase raw material with JAKIM's Halal logo from suppliers that are certified by the authority. According to those practices, Noraini's Cookies are able to ensure Halal status of their products until the products reach their customers.

Noraini's Cookies was also able to minimize the waste produced along their supply chain as the result of Halal initiatives that they have been implemented. Their percentages of reject goods were reduced with tproper storage and proper maintenance of hygiene warehouse where they store their products. As their logistic service provider offers full-truck load with multiple drop service, Noraini's Cookies is able to minimize carbon footprint produced. Since the company has at least a wholesaler in every state in Malaysia, the products travel with lower food miles and energy consumption before they are purchase by the consumers.

Efficiency of Halal SCM

Efficiency of Halal supply chain management is important as it could influence Halal food prices. Escalation of cost in supply chain would increase the food prices. Hence, Muslim consumers would be affected the most especially those who live in non-Muslim country. However, utilization of Halal storage facilities and Halal containers could improve the efficiency of the supply chain (Tieman et al., 2012).

After Noraini's Cookies opted for single logistic service providers to cater the distribution in West Malaysia, they able to reduce their transportation cost due to strategic partnership between parties as well as the economics of scale from the utilization of containers and transportation. Besides welcoming full truckload shipment, Mentari logistic also provide container sharing service for less-truckload shipment. The logistic company also accept loose carton deliveries even with direct-to-store deliveries to retailers throughout the country (Mentari Logistics.com.my, n.d.). Therefore, utilization of storage facilities and transportation from a Halal compliant logistic service provider are able to minimize the escalation of Noraini's Cookies' products.

Robustness of Halal SCM

Additionally, products of Noraini's Cookies are being stored at dedicated warehouse just for Halal dry ambient products. A robust Halal supply chain should have adequate accessibility to dedicated Halal warehouse (Tieman et al., 2012). After the products packaged and ready for distribution, the products will be stored in the company's warehouse before they are transported to the customers' places. As the

company only manufactured Halal food, the company's warehouse only allocates Halal products. Sometimes, there are chances that the products being stored at distributor's warehouse. Fortunately, the logistic service provider has warehouse for dry ambient cargo. Since company is a Muslim company, they only cater Halal products as well. Therefore, the conditions of the warehouses are favourable for maintaining Halal integrity of the products.

Finally, products from Noraini's Cookies are only transported by Halal transport in Halal container. Dedicated Halal transportation and container are design of robust Halal supply chain (Tieman et al., 2012). The products would be transported to the next supply chain partner either by internal transportation or by external distributor's transport. The dedicated containerization operation offered by the logistic company enables Noraini's Cookies to fully utilize the whole container for their own products. Whenever necessary, the distributor allows co-sharing container based on customer's needs. The services offers not only facilitate the logistics management of Noraini's Cookies, but it is environmental friendly as well. Dedicated transport reduce waste from product defect and fully utilize container could reduce carbon footprint (Abdul-Matin, 2010). This is argued by Tieman et al. (2012) that minimization of Halal reject could be acquired by a robust Halal supply chain management. Hence, Noraini's Cookies is able to enjoy high quality Halal supply chain management practices.

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M-governance acceptance intention in Malaysia: A conceptual framework

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Abstract

With the high level of 146.2 percent mobile penetration rate in the year 2015, Malaysian government   is now moving rapidly into a mobile government (M-government). Malaysian government aims to provide and enhance the efficiency and productivity of public services through the mobile devices with   77 percent of services online to Malaysians at anytime and anywhere. Despite its benefits, the acceptance of m-government services in Malaysia is still not widespread. This study attempts to extend the Unified Theory of Acceptance and Use of Technology (UTAUT) 2 model with the additional construct, perceived risk to explore its impact towards the acceptance intention to use m-government services in Malaysia. This study is expected to fill up the literature gap to understand the determinants that affect Malaysians' acceptance intention to use m-government services. The findings are expected to enlighten the local authorities on the acceptance intention of m-governance by Malaysians and to fill up the literature gap by widening the theoretical grounding to understand the Malaysians' preference to implement a successful m-governance practice in public services.

Keywords: Mobile Government, UTAUT2, Acceptance Intention

Introduction

Nowadays, mobile devices have become a necessity. With high level of 146.2% mobile penetration, each Malaysian has at least one mobile device (Malaysian Communications and Multimedia Commission, 2015). Malaysia's mobile landscape is performing better than other Asian countries. It is moving rapidly into mobile device. The usage of mobile device is not only for communication and entertainment purposes but also for improving the efficiency and transparency of government operation (Abdullah, Mansor, & Hamzah, 2013). In the latest Eleventh Malaysia Plan, the government will embark on efforts to develop the citizen-centric to expand and improve the m-government service acceptance among the rakyat.

M-government in Malaysia

Mobile Government (M-government) is the sub-set of E-government. It focuses on the use of mobile platforms such as mobile phone or personal digital assistance in government operation and services (Al-Hujran, 2012). M-government aims to modernize the government's operation flow to improve the service delivery and quality to citizens at anytime and anywhere, with its unique characteristics: mobility and wireless (Thunibat, Mat Zin, & Sahari, 2010). With the increasing number of mobile users as well as high mobile penetration rate in Malaysia, it is a good opportunity to promote and implement M-government. To date, there are 2036 services provided through the M-Government such as mySMS, myMMS, myAPP,

myUSSD and myPay. There are 27.3 millions of mobile users in 2014, yet only 352,000 logins were recorded (Performance Management & Delivery Unit, 2014).

Despite the benefits and convenience of m-government services to Malaysians, the adoption rate is still far from the massive utilization. The Performance Management and Delivery Unit (2014) urged that the awareness activities remain essential to educate and alert the citizen about the m-government services. The high acceptance of mobile devices for daily activities might not guarantee the acceptance of using this technology for government service (Venkatesh, Chan, & Thong, 2012). Abdullah, Mansor and Hamzah (2013) further commented that the M-government services are underutilized. The success of government initiatives always heavily depend on the end users (Sharma, 2015). Hence, understanding the determinants influencing the Malaysians' acceptance can have a major impact to develop comprehensive and successful m-governance.

The past literatures on m-government services' acceptance mainly focused on Technology Acceptance Model (Belanche, Casalo, & Flavian, 2012; Wang, 2014; Liu, Lim Kostakos, Goncalves, Hosio, & Hu, 2014) and Theory of Planned Behavior (Hung, Chang, & Kuo, 2013). Yet, majority of all the above said models are not specifically designed for m-governance and the past literature often facing difficulty in choosing the best suit model for government services. Moreover, Shafinah, Sahari, Sulaiman, Mohd Yusoff and Mohd Ikram (2013) urged that merely based on sole theory or model, it is incomplete to understand the technology acceptance. To overcome it, Venkatesh, Morris, B. Davis and D. Davis (2003) unified eight popular models namely, Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model, Theory of Planned Behavior (TPB), Combined TAM and TPB, Model of PC Utilization, Innovation Diffusion Theory and Social Cognitive Theory to propose the Unified Theory of Acceptance and Use of Technology (UTAUT) to examine the acceptance based on organizational context. It consists of four main determinants, which are Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition that are able to explain 70 percent of the technology acceptance. UTAUT model was then criticised and extended by Vankatesh, Thong and Xu (2013) to add in 3 constructs, which are Hedonic Motivation, Price Value and Habit to examine the technology acceptance based on the consumer perspective. The extended model (UTAUT2) was able to explain better variances of 74 percent of the behavioural intention. It is a highly validated model, which tailoring on consumers' acceptance of technology. The authors further suggest that further examination of UTAUT2 as well as add in different constructs is needed to apply in other context to enhance the explanatory power of acceptance intention of technology.

Moreover, m-government services, traditional commercial services and e-government services are different (Venkatesh, Chan, & Thong, 2012). Risks are essential problems faced in government services. The sensitive nature of data transmitted such as personal data and government data in the government services lead to high concern among the citizens whereby 97% of Malaysians think that security and privacy risks are the major obstacles for them not to use the m-government services (Thunibat, Mat Zin, & Sahari, 2010). Hence, this study proposed to extend Unified Theory of Acceptance and Use of Technology (UTAUT 2), to evaluate the influence of Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Price Value, Habit, Perceived Risk factors towards the acceptance intention of m-government services.

Literature Review

Unified Theory of Acceptance and Use of Technology (UTAUT)

In the past decade, several theoretical models have been developed to explain the user's acceptance of technology usage. Among the models proposed, UTAUT 2 is the popular model with has most encompassing theory which provided the high explanation power of 74 percent of the acceptance intention of mobile technology adoption. It extended the original model with total 7 variables: performance

expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value and habit to test the acceptance intention among the consumer context.

Acceptance Intention of M-government Services

Acceptance intention is the individual's subjective probability to accept certain action. It refers to the immediate antecedent of behaviour to indicate the individual's readiness to perform the said services (Lin, Tzeng, Chin, & Chang, 2010). In this study, the acceptance intention is used as the proxy to measure the actual behaviour as it is the best indicator for actual user behaviour (Hew, Lee, Ooi, & Wei, 2015).The prior empirical studies related to the influence of 8 variables with acceptance intention are presented in below:

Performance Expectancy and Acceptance Intention

It is defined as one's belief that use of the technology will assist him or her in achieving goal in the job performance. It is closely linked with the perceived usefulness in Technology Acceptance Model and the relative advantages in Innovation Diffusion Theory. When the user perceives that the technology is able to enhance their goal and performance, it will cause a favourable preference towards the acceptance intention (Dwivedi, Shareef, Simintiras, Lal, & Weerakkody, 2015). The performance expectancy has been in the limelight in the past literatures. Among the past studies, it is the strong determinant of acceptance intention in organization context (Tung, Chang, Chou, 2008; Ng & Choy, 2013). Consistently, the following hypothesis was tested:

H1. Performance Expectancy significantly influences the Acceptance Intention to use M-government services.

Effort Expectancy and Acceptance Intention

Effort expectancy is the one's perception of the degree of ease associated with the use of technology (Venkatest et al., 2003). It is a combination of the constructs: ease of use in Innovative Diffusion Theory, perceived ease of use in Technology Acceptance Model and complexity in Model of PC Utilization. The users will intent to use the M-government service if they perceive that the technology is easy to control, operate and understand. However, Chau and Hu (2002) study found inconsistent result. The perceived ease of use brings insignificant influence towards the acceptance intention. This might be due to the study mainly targeted the professional practitioners, who have high learning capability. With the inconsistent result, the following hypothesis is proposed to be retest in the M-government context:

H2. Effort Expectancy significantly influences the Acceptance Intention to use M-government services.

Social Influence and Acceptance Intention

Social Influence is the degree of individual's perception that important thinks that he or she should accept the technology. Yi, Jackson, Park, and Probst (2006) concluded that it is an important indicator for acceptance intention of technology acceptance. One might learns and intends to adopt the technology when he or she observes the other carries the similar behaviour in the social group. According to Singh et al. (2010), individual will intend to adopt the mobile commerce service when they are influenced by friends, family or colleagues. Similar findings were found in the studies of Venkatest et al. (2003), Venkatest, Thong and Xu (2012). In the study of Abdelghaffar and Magdy (2012), it is proved that no matter mandatory or voluntary setting, social influence is the most significant determinant for acceptance intention of technology acceptance. Thus, the hypothesis is proposed as below:

H3. Social Influence significantly influences the Acceptance Intention to use M-government services.

Facilitating Conditions and Acceptance Intention

Facilitating condition is defined as the degree of technical support or training that exists to support the use of technology. In the UTAUT 2 model, facilitating conditions is closely linked with the perceived acceptance control in Theory of Planned Behavior. According to Venkatest, Thong and Xu (2012), facilitating conditions have a significant impact to the acceptance intention as well as the use behavior of technology. For instance, an individual willing to accept the M-government service if there is a favourable set of facilitating conditions such as training, tutorial or vendor support on the m-government services. Aggellidis and Chatzoglous (2009) proved that the sufficient technical support, training and education encourage the user to have better knowledge about the technology usage, thus enhancing the acceptance and usage of technology. Thus, this study proposes the following hypothesis:

H4. Facilitating Conditions significantly influences the Acceptance Intention to use M-government services.

Hedonic Motivation and Acceptance Intention

As proposed in UTAUT 2 model, hedonic motivation is defined as the degree of enjoyment and pleasure derived from the convenient use of technology. Van der Heijden (2004) and Thong, Hong and Tam (2006) concluded that the hedonic, high-speed access and convenient features of the current mobile technology attract the users 'intention to adopt the mobile service. Thus, in the study of Venkatesh, Thong and Xu (2012), hedonic motivation was included to act as the predictor of user's acceptance intention of mobile internet. Hence, the following hypothesis is proposed:

H5. Hedonic Motivation significantly influences the Acceptance Intention to use M-government services.

Price Value and Acceptance Intention

According to Ng and Choy (2013), the cost of the technology is often an important indicator, which influences the acceptance intention of technology. Unlike the mandatory setting, the user of M-government service usually bears the monetary cost. As a result, the cost factor of the mobile technology might have a significant impact on technology acceptance and usage. Cheong and Park (2005) included the perceived cost factor to examine the technology acceptance of M-internet in Korea and results showed that the price value of the technology is an important indicator for technology acceptance which has received less attention in the past studies. In this study, the price value is defined as the individual perception towards cost of investment of the mobile devices. A price value is positive when the individual perceives that benefit of the technology is greater than the cost of investment (Venkatest, Thong, & Xu, 2012). Thus, the following hypothesis is formed for this study:

H6. Price value significantly influences the Acceptance Intention to use M-government services.

Habit and Acceptance Intention

In the UTAUT 2 model, the authors proposed a new construct namely, Habit. It is defined as the perceptual automaticity behavior. Once individual's habit is activated, it will automatically intent to perform the said behavior without any conscious. The findings of Limayen, Hirt, and Cheung (2007) as well as Venkatest, Thong and Xu (2012) provided the empirical support that habit is having both direct influence to the mobile internet's use behavior and indirect influence through acceptance intention in the consumer context. When the users have a greater habit, it leads to higher intention usage of the technology. Against the background study of UTAUT2 in consumer context, this study focuses on the M-government service context, thus the following hypothesis is proposed:

H7. Habit significantly influences the Acceptance Intention to use M-government services.

Perceived Risk and Acceptance Intention

Rotchanakitumnuai (2008) manifested that when citizens perceive a high risk in the particular service, he or she will not use the said service. Perceived risk refers to the uncertainty which affects the users' confidence towards the services in a long term effect (Im, Kim, & Han, 2008). The authors further commented that perceived risk and anxiety are different whereby "anxiety can be mitigated" but perceived risk will remain unchanged for long time. Since this research focuses on the M-government service context, which generally involve several private and confidential information, risk has become an essential determinant which leads to the use intention of the m-government services (Bertot, Jaeger, & Hansen, 2012). As a result, this study aims to extend UTAUT 2 by including perceived risks factors to investigate the user acceptance intention of M-government services in Malaysia. Hence, the following hypothesis is proposed:

H8. Perceived risk significantly influences the Acceptance Intention to use M-government services.

Moderating Effects: Age, Gender, Experience

From the observation of past literature reviews which adopted the UTAUT model, it can be concluded that the past studies have ignored the moderating impact towards the constructs influence (Venkatesh, Thong, & Xu, 2012). To narrow the literature gaps as well as to enrich the extended UTAUT model in m-government context, this study proposes individual differences such as gender, age and experience into m-government services as the moderating variables. Differences of individual characteristics such as age, gender and experience have contradicted opinion in the technology intention (Venkatesh, & Morris, 2000). For example, Yang (2005) discovered that male prefers more towards mobile technology as compared with female. Mature adults will more likely to concern about the risk of adopting the technology as compared with the young users. Young users are tending to be risk takers, who are willing to use the new technology (Lian & Yen, 2014). Venkatesh, Thong & Xu (2012) also further commented that when the users with different mobile device, it leads to different experience level of data transfer and graphic and consequently, it might affect the adoption intention. The authors emphasized that with greater experiences with the said services, it bring greater confidence and trust which lead to the high usage of technology. Hence, with the supportive evidences, the following hypothesis is formed:

H9. Age, Gender and Experiences moderate all relationships among the proposed constructs and acceptance intention of M-government services.

Proposed Conceptual Framework

With the above discussion of prior empirical studies, there are total eight determinants: performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value, habit, and perceived risk to measure the influence towards the behavioural intention of m-government services. To simplify the study, use behaviour was removed in this study. Figure 1.1 below presents the proposed conceptual framework for this study.
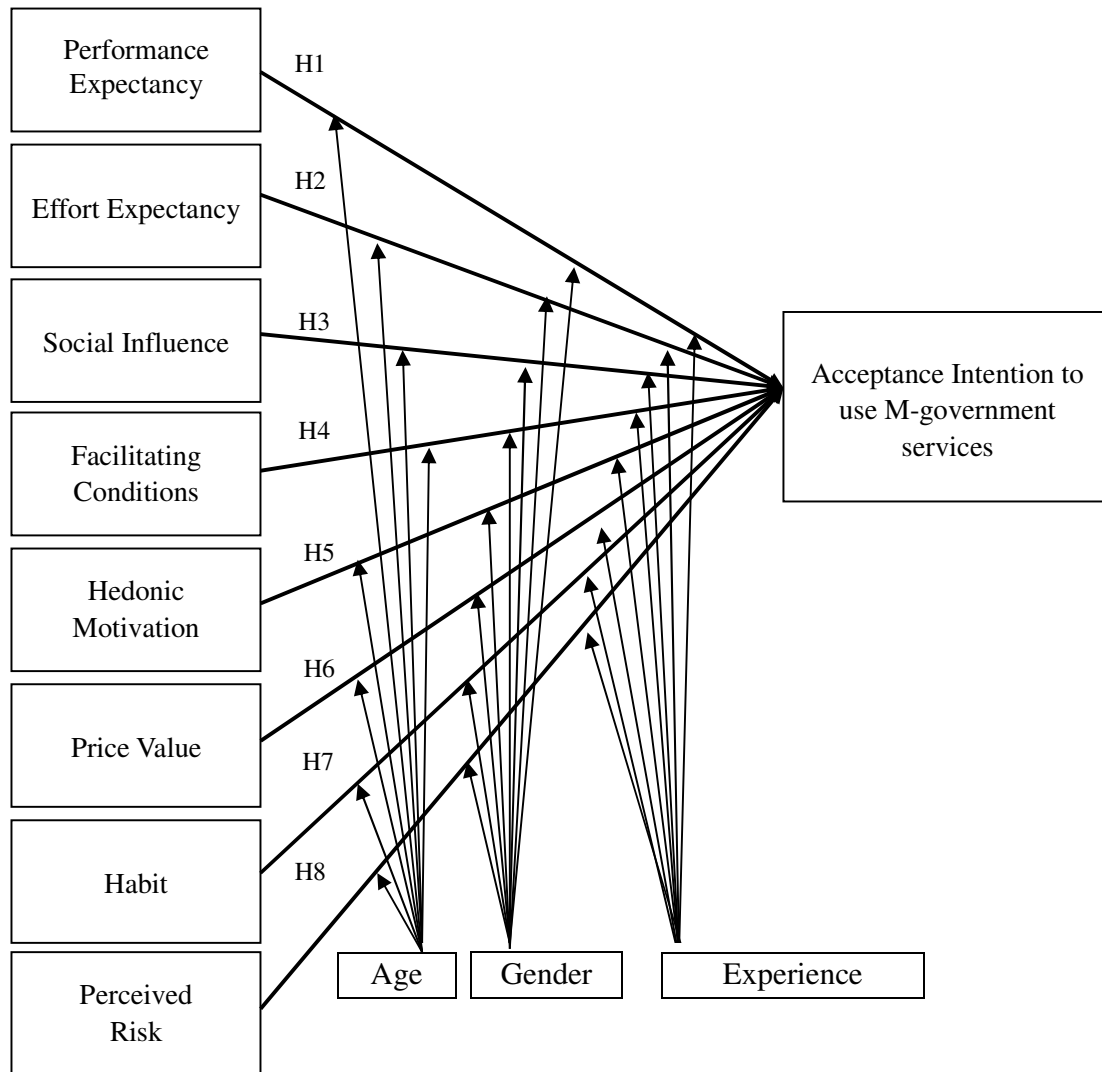
Figure 1.1 Proposed Conceptual Framework

Conclusion and Implications of the Study

With the mobility characteristic of mobile device, m-governance narrows down the digital divide to reach different groups of citizens at anytime and anywhere to provide first hand and personal government services to the users. With the massive benefits of m-governance, m-government services are expected to boom. Yet, adoption rate of m-government services are still far from the massive utilization.

Scholar/ Future Researchers

Shafinah et al. (2013) purported that prevalence of m-government services often denoted by the users' behavioural intention and citizens' demands and needs are vary. However, limited studies adopted the complete constructs as well as the moderating effects proposed by the extended UTAUT model. This study adapted the UTAUT2 to explore the conceptual connection between the proposed variables and the behavioural intention of the m-government services among the citizens. Since they are the potential users of m-government services, understanding their acceptance intention is an essential factor to develop a successful m-government in Malaysia. The findings would serve as a baseline for future researches on the m-governance in Malaysia.

Malaysia Government

With the vision 2020, Malaysia government aims to transform the government to provide a better, effective and quality government services to the rakyat. With the unique characteristic of mobile devices and high level of mobile penetration, there are clear opportunities for the SMART (Social, Mobile, Analytics, Radical Openness and Trust) m-governance in Malaysia. This study aims to identify the key determinants of the m-government services and proposes a comprehensive model of citizen's acceptance intention towards m-government services which serve as an useful framework for government to improve and enhance the m-government services quality. The findings make aware of the citizens' preferences and needs to develop a successful m-governance.

Malaysia Citizen

This study aims to provide a platform for the citizens to voice out their concerns, needs, preferences and expectation of m-government services as well as to create awareness to the public about the benefit of m-government services in order to boost up the prevalence of m-governance in Malaysia.

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Correlating Total Quality Management Practices and their Impact on Operations of Manufacturing and Other Related Companies in the CALABARZON Region, Philippines

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Abstract

Total Quality Management (TQM) implementation in any business organization can bring positive impact particularly on the quality of products and services. This study was conducted to determine if there exists a correlation between TQM practices of companies and the perceived impact of TQM implementation in the operations of the company. A total of 109 respondents participated in the study. TQM practices were measured along with management leadership, resource management, measurement and feedback, continuous improvement, supplier quality management, systems and processes, education and training and work environment and culture. The companies in their practices put premium on work environment and culture, while performing lowest in resource management. TQM implementation has brought positive impact on the operations of the company such as improvement of customer satisfaction, developing a culture that emphasizes quality, improvement of business performance through quality program and diminishing number of complaints. The study further found out that TQM practices are significantly correlated to the perceived impact of TQM implementation on the operations of the company.

Keywords: Total Quality Management practices, impact, operations, manufacturing

INTRODUCTION

Region 4A-CALABARZON is no doubt a rising cosmopolitan and host to a number of manufacturing and other related industries. Located south of Manila, CALABARZON is one of the three largest regions with 12.6 million population, along with National Capital Region (11.8 million) and Central Luzon (10.1 million). As one of the hubs for manufacturing industries in the Philippines, it posted a growth rate of 3%. The World Bank Office Manila reported in its quarterly economic updates released in December 2012 that manufacturing accounts for two-thirds of industrial output. It benefitted from a rebound in exports and grew 5.7% in the third quarter. Performance of these companies are dependent on some factors. This research points to effective and efficient management as probable tools that enable them to achieve this feat. Furthermore, Total Quality Management (TQM) practices could be considered as enabling mechanism that brought about successful business operations of the various companies in this region. BS7850: Part 1 (1992) defines TQM as a "management philosophy." To gather empirical data on this, a correlational study on the TQM practices and their impact on the operations of selected companies in the CALABARZON was conducted.

LITERATURE REVIEW

Total Quality Management Practices

Several studies had been conducted to illuminate concepts and ideas about Total Quality Management. TQM according to BS7850: Part 1 (1992) is a management philosophy and company practices that aim to harness the human material resources from an organization in the most effective way to achieve the objectives of the organization. Likewise, BS4778: Part 2 (1991) considers TQM as a management philosophy embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organization are satisfied in the most efficient and cost effective way by maximizing the potential of all employees in a continuing drive for improvement. TQM had its earlier development with Deming (1986) who postulated a major philosophy in quality improvement through statistical control and reduction of variability. Juran (1988) shared his definition of quality as "fitness for use" which attained widespread although not universal acceptance. He further theorized on the quality trilogy: quality planning, quality control and quality improvement. In 1980, Crosby conceptualized zero defects. This is the attitude of defect prevention and involves doing the "right job right the first time." Quality according to Crosby (1980) is free, but it is not a gift. Feigenbaum (1991) empahsizes total quality control. According to him, a company must set quality standards, appraise conformance to standards, act when conditions are not met and plan to make improvements. Finally, Ishikawa (1995) advocated the use of statistical techniques to improve quality in Japanese industry and his greatest achievement was the successful introduction of Quality Control Circles in Japan.

Impact of TQM on Business Operations

The impact of TQM in the operations of businesses or companies was mentioned in several literature and studies. According to Dale, Lascelles and Plunkett (1990), TQM can take the quality strategy to the highest level and ensure quality products and services. Large companies, similar to small companies require TQM to remain competitive (Dale, Prapopouloulus, 1995). Oluwatoyin and Oluseru (2008) opined that TQM is applicable to any organization irrespective of size, and motives, even the public sector organizations are fast adopting the ideology in order to make them effective in meeting public demands. Other studies reported that the benefits of TQM enjoyed by large companies can similarly be enjoyed by SMEs (O'Neil and Duker, 1986). Finally, Oakland as cited by Lan (2008) stated that TQM helps companies in various ways. First, it enables the company to focus clearly on needs of the market. Second, to achieve top quality performance in all areas, not just in product or service quality. Third, operate the simple procedures necessary for the achievement of top quality performance. It also enables the company to critically and continually examine all processes to remove non-productive activities and waste. The companies are able to see the improvements required and develop measures of performance. Through TQM, the companies are able to understand fully and in detail the competition and develop an effective competitive strategy. They are also able to develop a team approach to problem solving. Likewise, they are able to develop good procedures for communication and acknowledgement of hard work. Finally, through TQM implementation, companies are able to review continually the process to develop the strategy of never-ending improvement.

The CALABARZON Region in the Philippines

CALABARZON is one of the regions of the Philippines. It is designated as Region IV-A and its regional center is Calamba City in Laguna. The region is composed of five provinces, namely: **Ca**vite, **La**guna, **Ba**tangas, **R**izal, and Que**zon**; whose names form the acronym CALABARZON. The region is also more formally known as Southern Tagalog Mainland. The region is in southwestern Luzon, just south and east of Metro Manila and is the second most densely populated region. CALABARZON and MIMAROPA were previously together known as Southern Tagalog, until they were separated in 2002 by virtue of Executive Order No. 103. Executive Order No. 246, dated October 28, 2003, designated Calamba City as the regional center of CALABARZON. The largest city of the CALABARZON Region and the second most highly urbanized city is Antipolo City, with Lucena City being the first. CALABARZON is the most

populated region in the Philippines, with a population of 12,609,803 inhabitants. CALABARZON is the second largest contributor to the national GDP, accounting for 17% of the gross domestic product. The region boasts a 2.1% inflation rate, lower than the national average of 3%. The region has a 9.2% unemployment rate which is higher than the national average of 7%. CALABARZON, much like the rest of the country, is caught in the middle of being an industrial and an agricultural economy. Due to CALABARZON's proximity to Metro Manila, a large amount of urbanization has taken place over the years. Cavite and Laguna in particular are sites of manufacturing and high-tech industries, with companies like Intel and Panasonic setting up plants in the region. Santa Rosa, Laguna, is home to a host of semi-conductor and automotive companies such as Amkor and Toyota, while Gen. Trias is home to Cavite's largest economic development zone, the PEC Industrial Park.

CALABARZON still has a large agricultural base. As of 2002, the region had 282,700 farms, covering 588,500 hectares, or 36.3% of the region's total land area. Cavite alone has almost 70,500 hectares of agricultural land. Laguna is home to the International Rice Research Institute, which can be found within the University of the Philippines Los Baños, whose main goal is find sustainable ways to help rice farmers. Batangas, meanwhile, is home to a large pineapple and coconut industry, which is used to make Barong Tagalogs and native liquors such as lambanog and tuba in Tayabas City. Quezon is the country's leader in coconut products such as coconut oil and copra. Rizal is known for its piggeries. Region IV-A's agricultural base, however, is slowly decreasing. Due to their proximity to large bodies of water, Laguna and Batangas also have sizable fishing industries. Taal Lake is a large source of fresh water fishes for the country.

CONCEPTUAL FRAMEWORK

Figure 1. Proposed Conceptual Framework
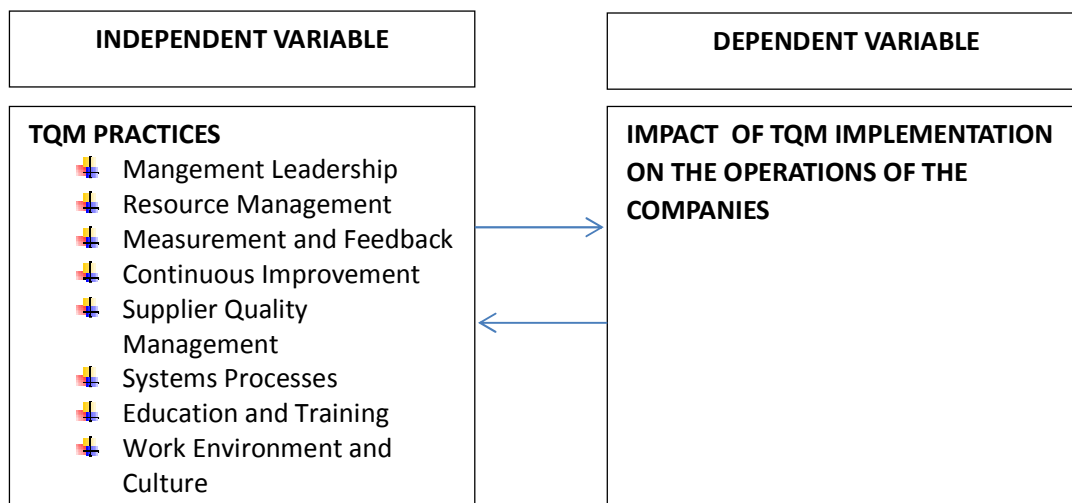
The conceptual framework shows the relationship between dependent and independent variables of the study. The relational diagram implies that the perceived impact of TQM implementation could be significantly correlated with TQM practices. T-test will be used to determine if there exists significant relationship between the two variables previously mentioned.

RESEARCH METHODOLOGY

Sampling Design

A total of 109 randomly selected respondents participated in the study. Majority of them are from manufacturing companies accounting to around 67.05%. Other respondents were drawn from related industry or sectors like services.

Research Procedure

The World Bank Office Manila reported in its quarterly economic updates, released in December 2012 that manufacturing accounts for two-thirds of industrial output. It benefitted from a rebound in exports and grew 5.7% in the third quarter. Knowing that the CALABARZON region is a host to a number of manufacturing companies located in various industrial parks of the region, the researcher taught of conducting a study on operations of these companies. The researcher decided to correlate Total Quality Management practices of the companies with their perceived impact on their operations. A questionnaire was designed based on the instrument used in the study entitled "Survey on the Implementation of Total Quality Management in Malaysian Automotive Suppliers" conducted by Univirsiti Teknologi Malaysia. After the modification of the aforementioned instrument, the modified questionnaires were then distributed to targeted respondents. Aftwerwhich, the said instruments were retrieved. Responses were tallied using MS Excel and corresponding statistical tools were applied such as frequency and percentage, weighted means and correlation analysis.

DATA ANALYSIS

Question 1. What is the profile of the respondents?

This part shows the description of the respondents of the study. A total of 109 respondents participated in this study. The following tables show their characteristics.

Table 1

Nature of the Business Affiliation of the Respondents

Nature of the Company	Frequency (F)	Percentage (%)
Manufacturing	74	67.05
Service	21	19.86
Design	3	2.50
Assembling	2	1.59
Powerplant	1	1.00
Education	1	1.00
Agriculture	1	1.00
Remanufacturing	1	1.00
Warehousing	1	1.00
Refurbishing	1	1.00
BPO	1	1.00
Real Estate	1	1.00
Construction	1	1.00
TOTAL	**109**	**100.00**

Table 1 shows the distribution of the respondents by type of business or company. Majority of them are from manufacturing companies accounting to seventy-four or 67.05%. A total of twenty-one or 19.86% represented the service sector. The other respondents are from design, assembling, powerplant, education and other sectors. Manufacturing companies outnumbered the other respondents which

means that the data generated in the study would particularly show relationship of TQM practices in the context of manufacturing businesses.

Table 2

Quality Initiatives Implementated by the Companies in CALABARZON

Quality Initiatives	Frequency (F)	Percentage (%)
Customer satisfaction initiatives	60	15.11
Developing strategies for total quality	54	13.60
Employee involvement to improve quality	54	13.60
Development of a quality system	41	10.33
Setting up a quality department	38	9.57
Applying Statistical Process Control	37	9.32
Establishing measures of quality progress	37	9.32
Business process improvement	30	7.56
Supplier involvement program	27	6.80
Cultural change program	19	4.79
TOTAL	**397**	**100.00**

*Multiple Response

Table 2 shows the quality initiatives implemented in the companies of the respondents. Customer satisfaction was reported as the number one initiative promulgated by their company as shown in the total frequency of sixty or 15.11%. This is being followed by employee involvement to improve quality and developing strategies for total quality with a frequency of 54 or 13.60%. Development of quality system comes next with a frequency of 41 or 10.33%. Other initiatives include setting up of quality department, applying Statistical Process Control, establishing measures of quality progress, business process improvement and supplier involvement program. As reported, the companies did not give much focus on initiating cultural change program as reflected in the frequency of 19 or 4.79%.

Table 3

Quality Certification Attained by the Companies

Certification	Frequency (F)	Percentage (%)
ISO 14001	50	34.25
ISO 9001-2000	41	28.08
ISO 9002-2000	18	12.33
QS 9000	17	11.64
TSI 16949	11	7.53
ISO 9001-2008	4	2.12
ISO 14969	3	2.05
OHSAS 18001	1	1.00
Halal Certification	1	1.00
TOTAL	**146**	**100.00**

*Multiple Response

Table 3 shows the quality certifications achieved by the companies in the CALABARZON Region. A total of fifty or 34.25% reported to have achieved ISO 14001 certification. This was followed by those who have achieved ISO 9001-2000 certifcation. A total of 18 or 12.33% have reported that they gained ISO 9002-2000. Other certifications received include QS 9000, TSI 16949, ISO 9001-2008, ISO 14969, OHSAS 18001 and Halal Certification.

Table 4

Quality Awards Received by the Companies

Quality Awards	Frequency (F)	Percentage (%)
Quality Management Excellence Award	46	36.80
Industry Excellence Award	44	35.20
None	25	20.00
State Quality Award	2	1.00
Safety	2	1.00
PEZA Outstanding	1	1.00
2013 PMAP	1	1.00
Award from Ford	1	1.00
Yearly Top Sales	1	1.00
MERALCO Energy Conservation Award	1	1.00
Golden Dove Award	1	1.00
TOTAL	**125**	**100.00**

*Multiple Response

Table 4 shows the quality awards received by the Companies in the CALABARZON Region. On top of the list is Quality Management Excellence Award as reported by forty-six or 36.80% of the respondents. Forty-four or 35.20% have reported to receive Industry Excellence Award. Twenty-five or 20% have reported to have received none. Other awards received include state quality award, safety, PEZA outstanding, 2013 PMAP, Award from Ford, Yearly Top Sales, MERALCO Energy Conservation Award and Golden Dove Award.

Question 2. How do the respondents rate their Total Quality Management practices?

Table 5

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Management Leadership

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Top management ensures that every employee knows the company's mission and business objectives.	4.26	Very Good	1
2	Communication links are established between employees and top management.	4.23	Very Good	2
3	Company fulfills its social responsibilities (such as environment friendly operation, charity to school, etc.).	4.19	Very Good	3
4	Top management strongly	4.18	Very Good	4

NO.		WEIGHTED MEAN	VERBAL INTERPRETATION	
	promotes staff involvement in quality management and improvement activities.			
5	Managers and supervisors empower employees.	4.08	Very Good	5
6	Top management takes care of employees well being (e.g. welfare, health, and safety provision, etc.)	4.05	Very Good	6
	GENERAL WEIGHTED MEAN	**4.16**	**Very Good**	

Table 5 shows the assessment of the respondents on their TQM practices along with management leadership. A general weighted mean of 4.16 was given by the respondents as rating which means that along leadership management, their TQM practices is very good. Of the six indicators used, the top two raters are the statements "top management ensures that every employee knows the company's mission and business objectives" and "communication links are established between employees and top management." In the bottom of the list is the indicator saying that top management takes care of employees well being (e.g. welfare, health, and safety provision, etc.).

Table 6

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Resource Management

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Human resource ability considered in improvement activities.	3.90	Very Good	1
2	Employees are given information and training they need to do the job effectively.	3.87	Very Good	2.5
3	Employees are given tools to do the job effectively.	3.87	Very Good	2.5
4	Company manages its material resources effectively.	3.85	Very Good	4
5	Sufficient financial resources provided support improvement activities.	3.73	Very Good	5
	GENERAL WEIGHTED MEAN	**3.84**	**Very Good**	

Table 6 shows the ratings given by the respondents on their TQM practices along with resource management. The general weighted mean of 3.84 signifies that their TQM practices concerning resource management is very good. The top rater among the five indicators shows that the companies considered human resource ability in improvement activities. The lowest rating was given to the indicator saying that sufficient financial resources provided support improvement activities.

Table 7

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Measurement and Feedback

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Information on quality and customers are collected and analyzed.	4.05	Very Good	1
2	Employees' views are listened to and acted upon.	4.01	Very Good	2
3	Employee performance are measured and recognized.	4.00	Very Good	3
4	Information on operational and financial performances are collected and analyzed.	3.98	Very Good	4
5	Customer satisfaction level are measured and monitored.	3.82	Very Good	5
	GENERAL WEIGHTED MEAN	**3.97**	**Very Good**	

Table 7 shows the assessment of the respondents on their TQM practices along with measurement and feedback. The general weighted mean of 3.97 signifies that their practices in relation to measurement and feedback is very good. Of the five indicators, the top rater is the statement saying that information on quality and customers are collected and analyzed.

Table 8

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Continuous Improvement

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	The company practices continuous improvement of all its products, services, and processes.	4.16	Very Good	1
2	Quality Improvement tools and techniques are widely used.	4.11	Very Good	2
3	There is a quality improvement coordinating body (e.g. quality steering committee).	4.08	Very Good	3
4	Improvement teams are active in all departments.	4.01	Very Good	4
	GENERAL WEIGHTED MEAN	**4.09**	**Very Good**	

Table 8 shows the weighted means of the TQM practices along with continuous improvement. Their practices along this area is very good as articulated in the weighted mean of 4.09. They reported that their strength is their companies' practices continuous improvement of all its products, services, and processes. Their lowest rating on the other hand is on the indicator saying that improvement teams are active in all departments.

Table 9

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Supplier Quality Management

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	The company ensures that suppliers can maintain high technical standards and meeting quality specifications.	4.28	Very Good	1
2	The company works closely with suppliers toward long term partnership and improvement.	4.22	Very Good	2
3	Suppliers provide relevant quality records and data.	4.10	Very Good	3
4	Suppliers are selected on the basis of quality aspects.	4.03	Very Good	4.5
5	The company regularly conducts suppliers' quality audits.	4.03	Very Good	4.5
	GENERAL WEIGHTED MEAN	**4.13**	**Very Good**	

Table 9 shows the weighted means of TQM practices along with supplier quality management. The general weighted mean of 4.13 signifies that their practice is very good in as much as supplier quality management is concerned. They did this by ensuring that the suppliers can maintain high technical standards and meeting quality specifications. Selection of suppliers on the basis of quality aspects and regular conduct of suppliers' quality audit are the indicators which got the lowest score.

Table 10

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Systems and Processes

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Systems and procedures for quality assurances are implemented.	4.20	Very Good	1
2	Internal data collection system is established.	4.16	Very Good	2
3	Market information and feedback system is established.	4.08	Very Good	3
4	The employees involved in different processes know how to evaluate them.	4.05	Very Good	4
	GENERAL WEIGHTED MEAN	**4.12**	**Very Good**	

Table 10 reports the weighted means of the TQM practices in terms of system processes. The general weighted mean of 4.12 is indicative of a very good practice in terms of systems and processes. Based on the weighted means, they are very good in implementing systems and procedures for quality assurances. On ensuring that employees involved in different processes know how to evaluate them got the lowest score from the four indicators.

Table 11

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Education and Training

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Employees are trained for job related skills.	4.19	Very Good	1
2	Continuous learning is provided through education and training.	4.14	Very Good	2
3	Top management always updates their knowledge.	4.13	Very Good	3
4	Employees are trained on total quality concepts.	4.12	Very Good	4
	GENERAL WEIGHTED MEAN	**4.15**	**Very Good**	

Table 11 shows the TQM practices of the companies along with education and training. The general rating of 4.15 shows that they have a very good practice on education and training. They demonstrated this by ensuring that employees are trained for related skills. Training the employees on quality concepts is in the bottom of the list.

Table 12

Weighted Means of the Total Quality Management Practices of the Selected Companies in CALABARZON Region in terms of Work Environment and Culture

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	A pleasant environment exists in all working areas.	4.30	Very Good	1
2	Positive values such as trust, honesty, hardworking are fostered by management.	4.28	Very Good	2.5
3	Teamwork and involvement are normal practices in the company.	4.28	Very Good	2.5
4	The company adopts "Employee Satisfaction" initiatives (such as suggestion schemes, profit sharing, etc.).	4.15	Very Good	4
	GENERAL WEIGHTED MEAN	**4.25**	**Very Good**	

Table 12 shows the weighted means of the TQM practices in terms of work environment and culture. A general weighted mean of 4.25 was computed which means that TQM practices along with environment and culture is very good. The highest rating was given to the indicator stating that a pleasant environment exists in all working areas. On the other hand, the lowest rating was given to the indicator stating that the company adopts employee satisfaction.

Question 3. How evident is the impact of the TQM implementation in the operations of the companies in the CALABARZON Region?

Table 13

Weighted Means of the Impact of Total Quality Management in the Operations of the Companies

NO.	INDICATORS	WEIGHTED MEAN	VERBAL INTERPRETATION	RANK
1	Customer satisfaction has shown improvement.	4.29	Evident	1
2	Our company has developed a culture that emphasizes quality.	4.28	Evident	2
3	Our financial results have been improving.	4.21	Evident	3
4	Our quality program has improved our business performance in general.	4.20	Evident	4
5	The number of customer complaints has decreased.	4.13	Evident	5
6	The number of employees participating on quality teams has increased.	4.12	Evident	6
7	The numbers of products/service defects, errors, or failures found by the customer have decreased.	4.09	Evident	7.5
8	Employee satisfaction has increased.	4.09	Evident	7.5
9	Partnership with suppliers has improved quality of purchased parts.	4.06	Evident	9
10	Employee turnover has decreased.	4.03	Evident	10
	GENERAL WEIGHTED MEAN	**4.15**	**Evident**	

Table 13 shows the impact of TQM implementation on the operations of the companies in the CALABARZON region. The respondents reported that the impact of TQM on their operations is evident as represented by the weighted mean of 4.15. The top five impacts include, an improved customer satisfaction, developing a culture that emphasized quality, improving financial results, improved business performance in general and decrease in customer complaints. On the bottom however, is the indicator saying that turnover of employees has decreased.

Question 4. Is there any significant relationship between TQM practices and impact of TQM implementation on business operations?

Table 14

t-Test Results to Determine if there is a Significant Relationship Between TQM Practices and Impact of TQM on Operations of the Companies

TQM PRACTICES CORRELATED WITH IMPACT OF TQM ON OPERATIONS	t-STATISTIC	DECISION
Management Leadership	28.53	Significantly correlated
Resource Management	31.16	Significantly correlated
Measurement and Feedback	34.45	Significantly correlated
Continuous Improvement	38.17	Significantly correlated
Supplier Quality Management	32.76	Significantly correlated
Systems and Processes	37.34	Significantly correlated

Education and Training	37.30	Significantly correlated
Work Environment and Culture	36.85	Significantly correlated

***t-critical: 1.98 @ 0.05 level of significance**

Table 14 shows the correlation analysis to determine if there is a significant relationship between TQM practices and their perceived impact on operations of the companies. The t-statistics are larger than the t-critical value of 1.98. The results confirmed that management leadership, resource management, measurement and feedback, continuous improvement, supplier quality management, systems and processes, and work environment and culture as part of the TQM practices are significantly correlated with the perceived impact of TQM on the operations of the companies.

CONCLUSION AND DISCUSSION

The study concludes that the companies surveyed through their employees are implementing Total Quality Management and that they have very good practices along with work environment and culture, management leadership, education and training, supplier quality management, and systems and processes. When these practices were correlated with the perceived impact of TQM implementation on the operations of the company, it was found out that there exists a significant relationship between them. The study further noted that among the impact of TQM implementation of the company on their operations would include significant improvement in customer satisfaction, developing a culture that emphasizes quality, improved business perfromance and diminished number of complaints. Findings of this study are profoundly related to the study of Fenning, Amaria, Frempong (2013) which showed significant positive effect of the seven Total Quality Management (TQM) elements on organizational perfromance. Furthermore, this study pointed out that Ghanian and foreign owned manufaturing companies believed that total quality management is a key contributing factor to a firm survival. In addition to this, findings of Hansson (2003) indicated that organizations that have successfully implemented TQM perform better than the general mass of organizations during a period following the award acknowledgement. Furthermore, the analysis of organizations indicates that some of the core values of TQM, which are often described as the basis of the concept, are more adequate than others when initiating the quality development work. These core values were leadership, everybody's commitment and customer focus. In closing, this present study recommends that in the continuing TQM implementation of the companies in the CALABARZON, they need to further strengthen their practices on the areas of continuous improvement, measurement and feedback and resource management.

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EMPLOYEE VOLUNTARY TURNOVER INTENTION: IS GENDER DIFERRENCES INFLUENCING ON DETERMINANTS FROM GEN-Y ACCOUNTING EMPLOYEE PERSPECTIVE?

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Abstract

High staff turnover is a contemporary issue in organizations. . Yet, there is a no exactly solution is provided on employees voluntary turnover intention. Since there are limited sources on investigate employees' turnover intention by using gender as moderator. This study is to investigate the factors affecting Gen-Y accounting employee voluntary turnover intention moderated by gender. The independent variables are organizational trust, organizational fit, organizational link, and organizational sacrificed. Our target respondent is Gen-Y accounting employee. Besides that, we are using cross-sectional technique and self-distribution method to collect our data. We expect that there are negative relationships between the factor and turnover intention which moderate by gender. This study will help organizations to understand that influence Gen-Y accounting employee voluntary turnover intention on gender difference perspective. Besides that, this study also showed that JE theory is also valid in accounting field.

Keywords: Job Embeddedness, Accounting Field, Turnover, Gender

1.0   INTRODUCTION

Turnover issues can drive a company to higher costs such as training and recruitment cost. It disrupts company's normal flow of activities (Becker, 1978), cause losses of costly knowledge that leads to rearrangement of business plans (Johari, Yean, Adnan, Yahya, & Admad, 2012). When a new employee gets hired, company has to retrain them, costing time and money (Kokemuller, 2015). Besides, long tenured employees possess institutional knowledge which new employees will only build it up over time with co-worker assistance. It will cause lower productivity in short run (Zheng, 2015).

Researchers use traditional turnover models to reason why employees leaving an organization. Yet, traditional turnover models only involve job satisfaction, organisation commitment and individual's perception of job alternative (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Thus, in this research uses Job Embeddedness (JE) model consisting of three different dimensions to examine turnover intention. JE model is going to provide a new perspective on turnover intention as it focus on how to retain employees in an organization. When company fails to retain their employees, it will influence employees' turnover intention (Holtom & Neil, 2013).

Turnover rate increased in Malaysia in early 1991 due to high demand of employees and opportunities that exist in the market (Rahman, 2012). Sujansky and Ferri-Reed (2009) stated that Generation Y (Gen-Y) employees have the highest turnover rate. According to Raman, Ramendren, Beleya, Aroklasamy, and Nadesan (2011), they believe that mobility of work is a current trend

characteristic among Gen-Y employees in Malaysia. Gen-Y employees prefer freedom, flexibility and less interested in the lifelong concept of work (Hassan & Jailani, 2012). Since more Baby Boomers will be retiring, organizations must try to retain Gen-Y employees. A survey conducted by ACCA and AOB (Audit Oversight Board) in 2013 indicated that accounting firms continue reporting high turnover rates (Optimising Talent in Accounting Firms, 2013). Furthermore, PricewaterhouseCoopers did a statistic research that reported every one in four auditors quit their jobs annually that caused to high turnover in accounting firms (Gullapalli, 2005).

According to Takawira, Coetzee and Schreuder (2014), and Reitz (2014) indicated that Job Embeddedness (JE) can affect turnover intention. Although there were many researchers studied JE on turnover intention, only few of them used gender as moderator and targeted on specific generation. Most of them focused in nursing, hotels, education and IT industries. There were lacked of studies that used JE on accounting firm in Malaysia. Furthermore, this study uses organizational trust as an extensive on JE towards turnover intention. Balkan, Serin and Soran (2014) indicated that organizational trust affects turnover intentions. There are still deficiency occur in the past studies that need to take consideration for. Therefore, this study explores the organizational trust and organizational embeddedness on Gen-Y employees' voluntary turnover intention with gender differences in accounting field. Accounting field consists of four major fields, which are public accounting, management accounting, governmental accounting and internal accounting. The careers in accounting included accountants, accounting clerk or assistant, accounting manager, bookkeeping, budget analyst, certified internal auditor, certified financial officer, forensic accounting, government accounting, payroll clerk, staff accountant, and tax accountant (Wiley, 2013).

2.0   LITERATURE REVIEW

2.1   Job Embeddedness (JE)

JE theory was created by Mitchell, Holtom, Lee, Sablynski and Erez in 2001. This theory was developed to improve the prediction of turnover intention (Mitchell et al., 2001). Therefore, JE showed significant incremental differences over the job satisfaction, organizational commitment, job alternatives and job search. (Mitchell et al., 2001). There are two dimensions of JE covered in this theory; organizational embeddedness (OE) and community embeddedness (CE). OE is between the employee and organization, whereas CE is between employee and community. In our research, we will study OE since we are investigating between employees and organization.

2.1.1   Link

Link is defined as identified connection within people and organization (Mitchell et al., 2001).This link is categorized into organizational link and community link. Organizational link reflects compatibility of social relations within the organization. For example, the more links to the organization; in theory, the employee is highly embedded within the organization and it is difficult for the employee to leave jobs.

2.1.2   Fit

Fit is defined as an employee's perceived comfort and compatibility of views, values and goals (Mitchell et al., 2001). This fit is categorized into organizational fit and community link. For example, an employee who has same values with the organization is theoretically embedded with the organization. Hence, it is more difficult for them to leave jobs.

2.1.3   Sacrifice

Sacrifice is defined as perceived cost or psychological benefits that encountered by leaving a job and turnover (Mitchell et al., 2001). This sacrifice is divided into organization sacrifice and community

sacrifice. For example, the more an employee loses as a result of turnover, the more difficult for him/her to make the decision when leaving organizations.

Prior researchers applied JE theory as their fundamental theory and mostly used it to study the relationship of JE and turnover intention in hotel industry (Shahriari, 2011), IT industry (Cho & Son, 2012) and employees in human resource department (Holmes, Baghurst & Chapman, 2013). This study will specifically target on employees in accounting field.Therefore, this study will explore the relationship of organizational embeddedness and organizational trust which is moderate by gender on the voluntary turnover intention. Therefore, we are using organizational embeddedness in this study by adding organizational trust as the other variable. The rationale we are using organizational embeddedness (OF, OL, and OS) is because community embeddeness is uncontrollable by management due on it involve public and employees. Hence, this study will specifically target on Gen-Y employees who work in accounting field in Malaysia.

2.2 Review of Prior Empirical Study and Proposition Development

2.2.1 Turnover Intention

Turnover is categorized into two types; voluntary and involuntary turnover. Voluntary turnover refers to employees' willingness to end their membership with an organization and shift to another organization such as retirement (Morrell, Loan-Clarke & Wilkinson, 2001). Whereas, involuntary turnover refers to forced to leave their organizations, such as retrenchment and dismissal (Price, 1977). This research focused on employee voluntary turnover intention because employees' perception toward turnover intention is taken into account.

2.2.2 Gender as Moderator

A number of past researches showed that there are gender disparity in examining the relationship between independent variables and turnover intention.

Khalid, Jusoff, Ali, Ismail, Kassim and Rahman (2009) studies showed that female employees have stronger significant and negative relationship between helping behavior and turnover intention compared to male employees. Hoonakker, Carayon, and Korunka (2013) studies indicated that female have higher turnover intention compared to male employees. This is because female have more job dissatisfaction than male. Hundera (2014) studies stated that female employees were significantly influenced by role conflicts whereas male employees were significantly influenced by organizational commitment. However the effect of overall satisfaction on turnover intention is stronger among female compared to male employees. Thus, It show that male and female viewpoint toward a situation is a part of factor that researcher should be concerned.

However, gender is a factor that should be concerned by the organization into the bargain of turnover intention. The rationale behind is gender have different need in their living life. A research showed there are more than 40 percent of women holding the partner or director position in accounting field (Catalyst, 2013). Several study exploit gender as a moderation factor in hotel, IT and nursing industrial. From their result, it showed female more significant toward sacrifice than male; while male are more link compare to female (Ryan & Harden, 2014). Besides that, the others study showed that gender mind set are different; it will affect they decision making. Thus it proved that if organizations tend to retain the talent employees, they need to consider gender as an important effect.

2.2.3   Organizational Trust (OT)

Mayer, Davis, and Schoorman (1995) defined trust as an acceptance action performed by a person to another based on the expectation that another person will perform without instructing and monitoring it. According to Balkan et al. (2014), there was a significant relationship between trust factors and employees TI. Survey was conducted on 200 employees in public sector and used hierarchical regression analysis. In Hemdi, Omar and Azmi (2012) study, the effect of organizational justice and OT on hotel employees' TI were examined. Researchers distributed 630 questionnaires to employees from 22 large hotels in Malaysia and multiple regression analysis was used. As a result, employees' trust in organization reduced the TI when there is a higher perceived fairness among employees on an organization's reward system. Furthermore, Abubakar, Chauhan and Kura (2014) showed that OT and perceived human resource practices were negatively related to turnover intention. They distributed questionnaires to 175 registered nurses in Nigerian public hospitals and multiple regression analysis was used. The result for these 3 studies is significant and negatively correlate between OT and TI.

However, organizational trust is added into our study because it plays an important role in employee perception (Belal Al-Sakarnah and Faleh Abdelgader Alhawary, 2009). It is significantly affect employee turnover intention. According to Blau (1989), trust takes place when there is favourable exchange. However, social relationships are terminated if there is no favourable exchange (Farmer & Fedor, 1999). Therefore, when an employee does not have organizational trust, there is no connection between employees and organization. Thus, organizational trust is added in this study.

> *P1: There is a negative impact between organizational trust and turnover intention is moderated by gender.*

2.2.4   Organizational Fit (OF)

Ryan and Harden (2012) defined OF as an employee who has similar career goals, personal value, knowledge, skills and abilities with the culture of the organization. In Findik, Ogut, and Caligyan (2013) study, an evaluation about OF, job satisfaction and employees' TI was studied in a health institution. Questionnaires were distributed via interview and Mann Whitney U-Test was used. The result indicated that OF is negatively affect TI. Moynihan and Pandey (2008) examined the relationship between social network, OF and TI. Self-administered questionnaires were distributed to private and public organization in north eastern United States and chi-square test, squares regression and logistic regression were used. OF and TI had a significant negative effect relationship. In Jung and Yoon (2013) study, they investigated the correlation among organizational service orientation, OF and TI of employees in Seoul Deluxe hotels. Voluntary survey self- administered questionnaires conducted and only 311 questionnaires were valid. A multiple regression was used and result showed a negative relationship between OF and employees' TI. The result for these 3 studies is significant and negatively correlate between OF and TI.

> *P2: There is a negative impact between organizational fit and turnover intention is moderated by gender.*

2.2.5   Organizational Link (OL)

The definition of OL is formal connections between an individual, people or an organization (Mitchell et al., 2001). Past study by Reitz (2014) used cross sectional correlation mailed survey, Barlett's test and multiple regression to study validity and reliability of JE instrument in predicting turnover intention of nurses in long term care setting. Of 345 surveys out of 552, only 82 were usable. The result showed that OL was negatively related to TI. Tanova and Holtom (2008) used secondary data from European Community Household Panel survey and Cox Proportional Hazard Model to investigate causes of voluntary turnover in Denmark, Italy, Spain and Finland by using JE instrument. The result showed OL had higher scores in variable job status and job tenure which was negatively related to Tiding addition, Ramesh and Gelfand (2010) studied cross-cultural generalizability of the JE model by investigating

turnover in United States and India. Online surveys and interviews with managers were conducted. They used chi-square test, matched cross-cultural and created a new family embeddedness scale. The result indicated that organizational link and community link were negative significant predictors of lower turnover in India whereas link was not significant predictors of turnover in United States. The result for these 3 studies is significant and negatively correlate between OL and TI.

> **P3:** *There is a negative impact between organizational link and turnover intention is moderated by gender.*

2.2.6   Organizational Sacrifice (OS)

OS is a cost of material and psychological benefit forgone if the employee leaves the organization (Mitchell et al., 2001). Cho and Son (2012) result indicated that the higher the work internal sacrifice, the lower the TI. 177 usable data were collected from information technology department in construction companies. Hierarchical regression model was used. Furthermore, Robinson, Kralj, Solnet, Goh and Callan (2014) studied that OS has negative relationship with TI. E-mail and self-delivery method were used to distribute 1400 Australian hotel frontline employees. Six dimension models were used. However, Jiang, Liu, McKay, Lee and Mitchell (2012) result examined that JE had a significant effects on actual turnover after job attitudes and job alternatives being controlled. Secondary data such as conference programs, unpublished research, and article and primary data, 65 sample being used. Meta-analytic calculation was used. The result for these 3 studies is significant and negatively correlate between OS and TI.

P4: *There is a negative impact between organizational sacrifice and turnover intention is moderated by gender.*

A limited study has carried out for the employees in accounting firms. Thus, this research will fill the gap by looking into gender differences perspectives in the relationship between OF, OL, OS, OT and TI in accounting field. It will enable organizations to understand the different gender's perspectives as in fitting themselves in an organization.

2.3 Proposal Research Model

Figure 1: *Conceptual Model*
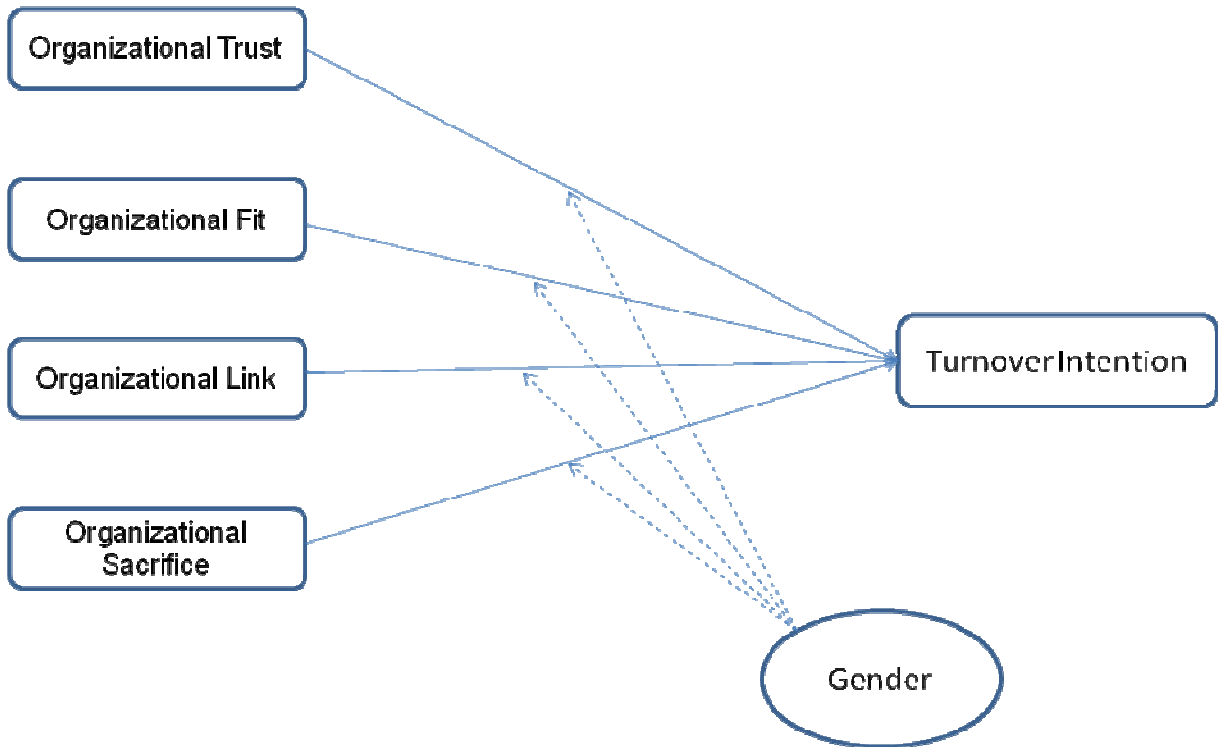
3.0   Research Methodology

3.1   Research Design

According to Kelly, Clark, Brown, and Sitzia (2003), researches produced empirical data which was based on real-world observation. This data assists researchers on planning and delivering end results while setting a fixed time-span. Survey was generalizable to population by having wide coverage of people or events rather than just representative samples. Since this was a quantitative research, quantitative data were collected through surveys (Saunders, Lewis & Thornhill, 2009 p.151). Plus, this was also a cross sectional study because the data collection period in this study was taken at a particular time instead of multiple points of time. Our research focuses on the employees in accounting fields and conducting self-administrated questionnaires. Primary data is used to solve our objective questions. Primary data is information collected by researchers for assignment purposes (Hox & Boeije, 2005).

3.2   Population and Sampling Procedure

The targeted population is Gen-Y employees in the field of accounting. Solnet, Kralj and Kandampully (2012), stated that Gen-Y had higher turnover intention compared to other generations and encouraged management to put in effort to retain Gen-Y employees. Furthermore, employer in public accounting continues to see relatively high rates of employee turnover (MacLean, 2013). Therefore, Gen-Y employees in the accounting field would be our targeted population. In this study, there will be no sampling frame mainly because there are huge numbers of Gen-Y employees in accounting field and we are unable to acquire a physical list of employees in the targeted population. Hence, a non-probability sampling is used because this method enables researchers to choose the sample as a representative of population by inquiry purposively (Kothari, 2004). The targeted sampling of this study is located in Klang Valley (KV). KV is targeted because it is an essential centre for Malaysia's industry and commerce (Er, Rostam, Nor & Dali, 2013). There are 56.95% Malaysia Institute of Accountants (MIA) member firms are situated in Selangor and KL (MIA, 2015). Therefore, KV has been selected as the location for this study (MIA, 2015). Convenient sampling and purposive sampling will be use in this study. we estimate a sample size of 500 in this research is adequate to obtain meaningful and conducive data analysis.

4.0   Conclusion and Discussion

This study framework is seeks to investigate that gender perspective is a moderated effect for the employee turnover intention. It also extensive the pass studies literature for adding gender as a moderating effect. Besides that, it also has an improvement for the future researcher that gender should be consider as a part of moderating effect. At this time, the feedback form will be collected from accounting field employee in Malaysia is being intended, consecutively to verify the proposed framework shown in Figure 1 and its propositions listed above. The results obtained will be reported in a future paper.

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THE IMPACT OF INTERNAL CORPORATE SOCIAL RESPONSIBILITY TOWARD TURNOVER INTENTION WITH MEDIATING AND MODERATING EFFECTS

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Abstract

Corporate Social Responsibility (CSR) has gained its attention and popularity since the last decade. CSR initiated as a topic of charitable giving in the 1980s Thereon, many CSR debates arise which were shaped by trends and fundamental changes of the political, social, and economic spheres of life. Todate, CSR has evolved to a business concept that had been accepted widely. Its development has shifted the approach from focusing on the shareholders to stakeholders due to the acknowledgement of the crucial roles of stakeholders in every organisation. In this regards, the present study aims to examine the relationship between internal CSR practices and employees' turnover intention. This study hypothesised that there are possible mediating and moderating effects of organisational commitment and perceived ease of movement in this relationship. This study took place in the Small Medium-Sized Enterprises (SMEs) as SMEs are regarded as the backbone of Malaysia economy. The results revealed that internal CSR practices has a significant negative effect on turnover intention. Internal CSR practices also found to have a significant positive effect on Organisational commitment. A significant negative relationship was found between Organisational commitment and turnover intention. Organisational commitment mediates the relationship between internal CSR practices and turnover intention. However, the moderating effect of perceived ease of movement is insignificant. The results obtained will provide some pointers to the SMEs owners/ managers to capitalise internal CSR practices to retain their valuable workforce.

Keywords: Internal Corporate Social Responsibility, turnover intention, employees, SMEs

INTRODUCTION

Corporate Social Responsibility (CSR) received substantial attention since 1950s. The development of CSR subsequently gain a foothold in both business and academic arenas. The wide acceptance of CSR is due to its chain benefits towards both shareholders and stakeholder. As the business world evolves with globalisation and advanced technology, CSR has developed into a multi-facet disciplinary subject. Many CSR themes were then started to emerge from its development. According to Perrini (2005), CSR promoting campaign developed at the European level provide a framework that strongly emphasises on stakeholder involvement. There are many themes developed in the human resource with employees being the stakeholder.

Despite research on CSR has spanned across a few decades and in various fields, yet only a handful of academic studies have investigated the relationship between CSR and the employees, being the crucial stakeholder in every organisation. Needless to say, employees are highly influenced by the CSR initiatives carried out by the organisation. On the other note, CSR in the past was widely concerned by multinational organisations has now being extended to small and medium partnerships as well as sole proprietor (Kucukusta, Mak & Chan, 2013). This research paper aims to look into the impact of internal CSR practices among the Small Medium Sized Enterprises (SMEs) in Selangor, Malaysia and its implications towards employees' turnover intention with the mediating effect of organisational commitment and the moderating effect of perceived ease of movement.

LITERATURE REVIEW

Corporate Social Responsibility (CSR) and Internal CSR

CSR is cross-disciplinary nature (Lockett, Moon, Visser, 2006) and it is potential relevance for employee management (Brammer, Millington & Rayton, 2007), organisational behaviour and human resource management. However, researchers often under investigated CSR (Aguilera, Rupp, Williams & Ganapathi, 2007; Rupp, Gananpathy, Aguilera & Williams, 2006) in the aspect of strategic human resource management. Therefore, CSR needs to be adopted in a more holistic way within organisations with the consensus of organisational members, in order for it to contribute to the competitive advantage of businesses (Cohen 2010; Redington, 2005). It was observed that the effect of CSR on employee work motivation which has been surprisingly neglected in previous research, but seems to be one of the focal points in employee-centred CSR discussion (Kim & Schullion, 2012).This finding undercover a new leaf for CSR, instead of reviewing on the financial performance of a corporation, human resource aspect is another arena that gains a foothold. More recently, rising attention is directly to the internal stakeholders, specifically the employees, through the field of organisational behaviour and human resource management (Aguinis & Glavas, 2013). This development brings to focus of CSR and employees. There are different terms used in the past research on employee centred CSR, such as secondary stakeholders (Clarkson, 1995; Freeman, 1999); external and internal stakeholders (Verdeyen & Buggenhout, 2004); contracting and public stakeholders (Charkham, 1994); voluntary and involuntary stakeholders (Clarkson, 1994); internal, external, and societal stakeholders (Werther & Chandler, 2006); primary social, secondary social, primary non-social, and secondary non-social stakeholders (Wheeler & Sillanpaa, 1997). Internal CSR is adopted in present study as it is comparing with the well-established research on external CSR and the counterpart that has been under investigated is the internal aspect. Internal CSR practices refer to CSR practices which are directly related with the physical and psychological working environment of employees (Turker, 2009). It is expressed in concern for the health and well-being of employees, their training and participation in the business, equality of opportunities, work-family relationship (Vives, 2006).

Emerging Interest of Internal CSR in Small Medium Sized Enterprises (SMEs)

There has been an increase interest in studies of Small Medium Sized Enterprises (SMEs) in the academia and research. There main motivation for this emerging interest is due to its significant contribution in national Gross Domestic Product (GDP) and its role in national economic. SMEs make momentous contribution to the economies of both developed and developing nations in terms of employment generation and development impacts. Overall, SMEs are known to constitute more than 90% of business worldwide and account for between 50% and 60% of employment and more than half of gross domestic product (Inyang, Awa, & Enuoh 2013). The similar contribution by SMEs is observed in Malaysia as well. In Malaysia, SME businesses are regarded as legally structured entities registered either under the Registration of Businesses Act 1956 (Act 197) or Companies Act 1965(Act 125). The data compiled by the Department of Statistics, Malaysia showed SMEs substantial growth in the past decade.

In the global arena, the dynamic evolution of CSR has also immersed into the fast paced development of SMEs. The vigorous competitive SMEs business landscape and the development of CSR made it relevant to initiate a study in this area. Besides, SMEs constitute 99.2% of total business establishments in Malaysia or totalling 548,267 enterprises based on the SME Master Plan. It was recognised that there was a need to fully understand the structural characteristics of Malaysia SMEs as the continue effort to materialise SMEs Masterplan (2012-2020). However, on its route to accomplish its objectives, SMEs encountered numerous roadblock. A diagnostic study by the World Bank on SMEs in Malaysia in 2010/2011 through its peers in the region and against more developed nations revealed among others that productivity of SMEs was relatively low; small number of firms accounted for bulk of the increase in GDP and employment. Adding on, research by Huin (2004) pointed out that there was a serious turnover rate in the South East Asia (SEA) region particularly Malaysia and Singapore. It would be of interest to undercover the impacts of internal CSR practices in SMEs towards the employees' turnover

intention. Hence, it is very relevant to start a research agenda on SMEs Malaysia, in view of its ability to strengthen the resilience of the country economy to face a competitive and challenging global

Organisational Commitment

Organisational commitment is the psychological attachment individuals feel for the organisation (O'Reilly & Chatman, 1986). Studies have also shown that the CSR practices of an organisation would have a significant positive influence on its employees' organisational commitment (Brammer, Millington, & Rayton, 2007, p. 1715). Whitener (2001) added on with his conception of the effect of 'high commitment' human resource practices on organisational commitment. As the present research relates internal CSR practice of SMEs, i.e., aspects pertaining to the psychology and physiology of employee, organisational commitment is a relevant construct to be adopted. Allen and Meyer (1996) defined organisational commitment as a psychological link between the employee and his or her organisation that makes it less likely that the employee will voluntarily leave the organisation. Affective commitment is emotional commitment, i.e., employees stay at their job because they want to stay. Employees with strong affective commitment remain because they want to, and those with strong continuance commitment because they need to, and those with strong normative commitment because they feel they ought to do so. Accordingly, employees with high level of affective commitment will stay because of strong emotional attachment to the organisation. The present research adopts Allen and Meyer (1990)'s model on organisational commitment, employing only one dimension, i.e., affective commitment, as it matches with the research objective, to gain insight of internal CSR practices in SMEs on employees' turnover intention. Affective commitment measures employees' identification with the organisation and continuity to stay in the organisation which facilitates their intention to stay or leave the organisation. Affective commitment is more appropriate in present study as compared to normative commitment and continuance commitment to gauge the effect of an employee's level of organisational commitment through internal CSR practices. Indeed, organisational variables, rather than employee characteristics, would be better predictor of organisational commitment, and it is the 'employee-focused' organisational factors that fulfil the objective of present study.

Turnover Intention

Generally, there are two major types of turnover; voluntary and involuntary (Price & Mueller, 1986). Voluntary turnover occurs when the employee quits; and involuntary turnover occurs when the employee is forced to leave. Voluntary turnover is usually the most common, most costly and harmful to an organisation, and most avoidable (Price, 1977). Turnover intention usually occurs prior to voluntary turnover.Turnover intention is the cognitive process of thinking of quitting, planning on leaving, and the desire to leave the job; it is the strongest predictor of voluntary turnover (Mobley, Griffeth, Hand, & Meglino, 1979; Kiyak, Namazi, & Kahana, 1997; Mor Barak, Nissly, & Levin, 2001). With these, it is natural to bring in the discussion of turnover intention into present study in the investigation of internal CSR practices.

Perceived Ease of Movement

There is little doubt that labour market conditions affect turnover, but it may be more of a direct effect. That is, rather than labour market acting directly through a psychological process as anticipated; it may act directly on the behaviour itself. If an employee intends to leave a job, he or she most likely would quit when another job became available. The availability of another job controls the behaviour in concert with intention, but not through intention. A person might well intend to leave as soon as another job has been offered, rather than when he or she believed one could be found. It is clear that when the economy condition is optimistic when the job market is good, opportunities to find alternative employment are plentiful and turnover is more likely. Similarly, Muchinsky and Morrow (1980, p. 276) argued that when there are alternative means of employment are readily available, the relation between individual factors and turnover will be stronger than other wise. In fact, many turnover theorists have pointed out that the perception that alternative jobs exist is an important precursor of turnover (e.g., Hulin, Roznowski, & Hachiya, 1985; Mobley, 1977). Evidence suggests a main effect for general labour market conditions in

both the economic and psychological literatures. The hypothesized interaction between individual factors such as organisational commitment and general labour market conditions in the psychological literature has also received tentative empirical support. However, the evidence on the role of perceived ease of movement maybe ambiguous as no study has included measures of both general labour market conditions and perceived ease of movement despite that there is interaction between general labour market conditions and intention in influencing turnover. Mobley's theory has contributed by the addition of perceived ease of movement and intention to leave variables (withdrawal intention) preceding to turnover in the past research. Therefore, Mobley's (1982) approach of perceived ease of movement is employed for the consistency of with his turnover intention model adopted in this study.

RESEARCH OBJECTIVES, RESEARCH MODEL AND HYPOTHESE

The discussion above legitimises a research agenda on investigating the practice of internal CSR in SMEs on employees' turnover intention. The present study has three main objectives: Firstly, to uncover the positive effect of the implementation of internal CSR practices in order to sustain employees, Secondly, to look into the direct effect of Internal CSR practices on Organisational commitment and Organisational commitment on Turnover intention, Thirdly to investigate the possible mediating effect of organisational commitment between internal CSR practices and turnover intention, and Lastly, the examine the possible moderating effect of perceived ease of movement between internal CSR practices and turnover intention. The research model for current study is shown in Figure 1.

Figure 1: Research Model
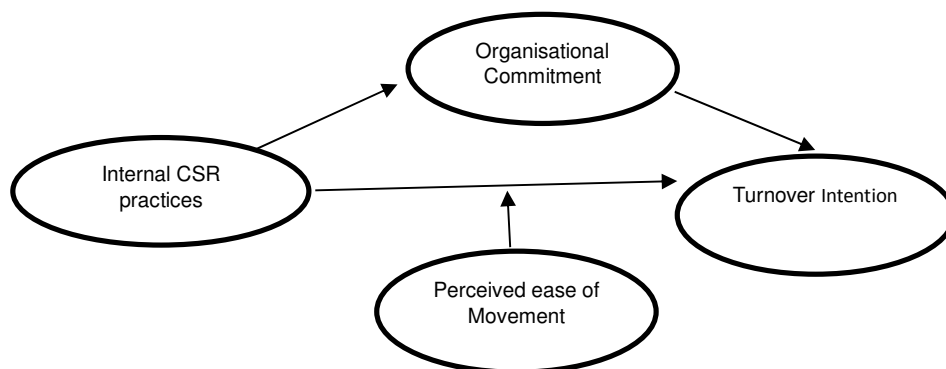
The research model in Figure 1 shows that Internal CSR practices is the exogenous variable having a direct effect on Turnover intention being the endogenous variable. Internal CSR practices is also the exogenous variable for Organisational commitment. Organisational commitment is the exogenous variable for Turnover intention being the endogenous variable. There are two indirect effects posited in Fugure 1, namely mediating effect from Organisational commitment and moderating effect from Perceived ease of movement. Based on the above discussed literatures and research model, the following hypotheses are formulated to carry out the present research:
H1 : Internal CSR practices has a negative effect on Turnover intention
H2: Internal CSR practices has a positive effect on Organisational commitment.
H3: Organisational commitment has a negative effect on Turnover intention.
H4: Organisational commitment mediates the relationship between Internal CSR practices and Turnover intention.
H5: Perceived ease of movement moderates the relationship between Internal CSR practices and Turnover intention.

RESEARCH METHODOLOGY

Sampling Design

Present study employed multistage sampling. Multistage sampling refers to sampling plans where the sampling is carried out in stages using smaller and smaller sampling units at each stage. Multistage sampling is used when an exhaustive listing of target population cannot be compiled. In present study, the first stage involves locating the highest number of SMEs establishment in Malaysia, and followed by the second stage of selecting the sample. According to the Department of Statistics, Malaysia, the highest numbers of SMEs is found in the state of Selangor with 125,904 establishments offering 2,762,400 employment as at 2012. Hence, the present research frame is set in Selangor and followed by convenience sampling randomly selected the SME directory in Selangor. According to Bryman (2012), convenience samples are very common and more prominent in the field of organisation studies. It was also mentioned that social research is frequently based on convenience sampling. Convenience sampling method is used in current research because its virtue of accessibility to the SMEs in Selangor. Besides, convenience sampling is suitable in the present study as it provide a springboard for further research and allows possible links to be forged with existing findings in the area of internal CSR practices in Selangor.

Research Procedure

Quantitative approach using structured self-administered questionnaire was adopted in this research. The research respondents are the full time employees who are employed in SMEs located in the state of Selangor. Questionnaire is used as a survey tool to collect data based on the present research objectives. Sekaran (2000) mentioned that quantitative method is a method of measurement where data in terms of frequencies, or mean and standard deviations, becomes essential for descriptive studies. Creswell (2002) added that quantitative method is appropriate to measures attitudes and behaviour. Creswell (2002) explained that the advantage of quantitative method is that it allow measurement of perceptions, reactions and attitudes of a sample through a set of structured questions. This main advantage enables comparisons and statistical aggregation of data (Sekaran, 2000). Besides, analysis obtained from quantitative method help to increase objectivity in interpreting data, measures of validity and reliability, which could be easily communicable to others (Byrne, 2002).

Data collected is analysed by using Partial Least Square (PLS) method. The rational for employing this technique is its ability to handle theory confirmation and theory development as pointed out by Chin (1998). The nature of present research is to confirm the impact of internal CSR practices among the employees and to develop the possible theory to relate the implementation of internal CSR practices on employees. Besides, PLS places minimal restrictions on distributional characteristics and sample size which suit the nature of the present research data distribution. The present research followed Anderson and Gerbing (1998) approach in using the Smart PLS M2 Version that employed two-steps analysis approach. With reference to some studies (Chin, 1998; Gil-Garcia, 2008), bootstrapping method (500 resample) was also carried out to determine the significance levels for the loadings, weights and path coefficients.

DATA ANALYSIS

A total of 600 questionnaires were sent out to the SMEs located in Selangor based on SMEs directory between the months of November 2014 to March 2015. A total of 385 responses were received at the end of the data collection process, which constitute to 64.2% of response rate. To ensure that there is no common method bias in the questionnaire survey, Harman's single factor test was performed and the result revealed that the first factor accounted for 32.5% of the variance which is less than the threshold level of 50% of total variance explained (Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006).

The results reveal that majority of the respondents are below the age of 30 and 53.8% of them are male. It was also observed that most the respondents are Chinese, i.e., 62.3 of them, followed by Malays which is 22.3% while Indian only contribute to 14.0%. Majority of the respondents, i.e., 49.4% hold

a degree, followed by 21.6% have diploma qualification. 18.0% of the respondents are SPM holders and 6.8% of the respondents are postgraduates. More than 50% of the SMEs employees participated in the study are holding managerial position who involves in decision making in their daily tasks.

Table 1: Respondent's Profile

Profile	Description	No. of Respondents	Percentage (%)
Age	<30	251	65.2
	30-39	90	23.4
	40-49	32	8.3
	50-59	10	2.6
	59 above	2	0.5
Gender	Male	207	53.8
	Female	178	26.2
Ethnicity	Malays	86	22.3
	Chinese	240	62.3
	Indian	54	14.0
	Others	5	1.3
Education	SPM	70	18.0
	Diploma	83	21.6
	Degree	190	49.4
	Postgraduate	26	6.8
	Others	16	4.2
Position	Managerial Level	249	64.7
	Non-Managerial Level	136	35.3

Source: Developed for present research

Measurement Model

The measurement model was undergo a convergent validity test whereby convergent validity is the degree to which the multiple items that are used to measure the same concept are in agreement. According to Hair, Black, Babin and Anderson (2010), factor loadings, composite reliability and average variance extracted are the key indicators to assess convergent validity. Chin, Gopal and Salisbury (1997) recommended that the loadings of all items shall exceed the value of 0.6. Therefore, loadings below the value of 0.6 were removed during the scale refinement process. The results shown in Table 2 reveal that the degree to which the construct indicators indicate the latent constructs are ranging between 0.605 to 0.953, which are exceeded the recommended value of 0.6. The average variance extracted (AVE) which reflects the overall amount of variance in the indicators accounted for by the latent constructs, are ranging between 0.503 to 0.832, which exceeded the recommended value of 0.5 (Hair, et. al, 2010). Hence, the results of convergent validity for present study as shown in Table 2.

Table 2: The Results of Measurement Model

Variable	Items	Factor Loading	AVE	CR	Cronbachs Alpha
Internal CSR			0.628	0.909	0.880
	InCSRq1	0.654			
	InCSRq2	0.835			
	InCSRq3	0.900			
	InCSRq4	0.837			
	InCSRq5	0.764			
	InCSRq6	0.740			
Organisational Commitment			0.503	0.889	0.857

OCq1	0.814			
OCq2	0.765			
OCq3	0.753			
OCq4	0.605			
OCq7	0.774			
Perceived Ease of Movement		0.832	0.937	0.916
PEMq1	0.953			
PEMq2	0.875			
PEMq3	0.908			
Turnover Intention		0.585	0.796	0.720
TIq1	0.925			
TIq2	0.886			
TI4	0.830			

Source: Developed for present research

Discriminant validity is the extent to which the measures do not reflect other variables and it is indicated by low correlations between the measure of interest and the measures of other construct. Fornell and Lacker (1981) pointed out that discriminant validity is examined by comparing the squared correlations between the constructs and the variance extracted for a construct. Table 3 reveals that the squares correlation for each constructs is less than the square root of the average variance extracted by the indicators that measured the construct, demonstrating adequate discriminant validity. In total, the measurement model demonstrated adequate convergent and discriminant validity.

Table 3: The Results of Discriminant Analysis

	Internal CSR	OC	PEM	TI
Internal CSR	*0.792*			
OC	0.547	*0.709*		
PEM	0.171	0.156	*0.912*	
TI	-0.252	-0.461	0.056	*0.765*

Note : Diagonal elements are the square root of the AVE of the reflective scales while off diagonals are the squared correlations between constructs.
Source: Developed for present research

Table 4: The results of descriptive analysis

	No. of item	Mean	Std Deviation
Internal CSR	6	4.086	1.137
OC	5	3.975	1.267
PEM	3	3.259	1.154
TI	3	2.884	1.334

Source: Developed for present research

Structural Model

A structural model depicts the causal relationship among the constructs in a research model (Sang, Lee & Lee, 2010), that includes the estimates of the path coefficients (beta values) and the R^2 value, which determine the predictive power of the said model. Both R^2 and path coefficients represented by loadings and significance indicate how well the data support the hypotheses posited (Chin, 1998; Sang, e. al, 2010). Table 5 display the results of the structural model from PLS output. The results of current study shows that the R2 value for Turnover intention is 0.169 suggesting that 16.9% of the variance is Turnover intention can be explained by Internal CSR practices and Organisational commitment. The path coefficient of the structural model have been measured and bootstrap analysis by resampling 500 samples was performed to assess the statistical significance of the path coefficients.

The results revealed that implementation of internal CSR practices and organisational commitment have negative relationship Turnover intention with β = -0.258, $p < 0.05$ and β = -0.316, $p < 0.05$ respectively. On the other hand, Internal CSR practices has a positive relationship with Organisational commitment with β = 0.558, $p < 0.05$. Thus, H1, H2 and H3 are supported as shown in Table 5.

In regards of the mediation, Organisational commitment mediates the relationship between Internal CSR practices and Turnover intention (β = 0.288, $p < 0.05$) which H4 is supported. The mediation effect was further confirmed through bootstrapping analysis with result illustrated in Table 6. The result reveals that Organisational commitment shows that the indirect effect was significant at a t-value of 8.413. According to Preacher and Hayes (2008) that the indirect effect of 0.288, 95% Boot CI: [LL= 0.285, UL = 0.431] which does not straddle a zero in between indicating that Organisational commitment mediates the relationship between internal CSR practices and Turnover intention. This study hypothesized that perceived ease of movement moderates the relationship between internal CSR practices and turnover intention. However, the results revealed an insignificant relationship of perceived ease of movement as the t-value if the relationship was less than the minimum cut-off value of 1.64.

Table 5: The results of Structural Model

Hypothesis	Description	Path Coefficient	SE	t value	Results
H1	Internal CSR practices has a negative effect on Turnover Intention.	-0.258	0.093	2.291*	supported
H2	Internal CSR practices has a positive effect on Organisational commitment.	0.558	0.093	5.998*	supported
H3	Organisational commitment has a negative effect on Turnover intention.	-0.316	0.123	2.566*	supported
H4	Organisational Commitment mediates the relationship between Internal CSR practices and Turnover Intention.	0.288	0.050	5.711*	supported
H5	Perceived ease of move moderates the relationship between Internal CSR practices and Turnover Intention.	0.134	0.153	0.880	Not supported

*$p < 0.05$
Source: Developed for present research

Table 6 : Indirect effect of Organisational Commitment

Relationship	Standard Beta	Standard error	t-value	P value	CIBC 2.5%	CIBC 97.5%
Organisational commitment mediates the relationship between Internal CSR practices and Turnover intention	0.312	0.328	8.413	0.000	0.285	0.431

CIBC = Confidence intervals bias corrected
Source: Developed for present research

Predictive sample reuse technique which is also popularly known as the Stone-Geisser's Q^2, can be applied as a criterion for predictive relevance besides looking at the magnitude of the R^2. Henseler et al. (2009) also utilized this measure to assess the research model's capability to predict. Based on the blindfolding procedure, Q^2 evaluates the predictive validity of a model via PLS. Q^2 values larger than zero indicates that the exogenous constructs have predictive relevance for the endogenous construct (Hair, et al., 2011). The Q^2 of Turnover intention (CV Red = 0.114) signifies that the research model has good predictive relevance.

CONCLUSION AND DISCUSSION

Present research suggests that internal CSR practices has a role to play in reducing employees' turnover intention. The findings of this study show that all dimensions of internal CSR practices are significant and negatively related to employees' turnover intention. Internal CSR practices that included in present study consist of employees' voluntarily activities, career opportunities, employees' well-being, family friendly policy, Organisational justice and future education are categorized as higher-order needs of esteem and self actualisation. The findings suggest that the presence of internal CSR practices in the enterprises will reduce the employees' turnover intention. This indicates that employees not only looking for financial reward, but also higher-order needs as offered under internal CSR practices. This is particular true for generation Y employees who are born between the 1980's and the year 2000. Kim, Knight, and Crutsinger (2009) pointed out that Gen Y employees comprise a substantial portion of workforce in near future. These group of employees proactively manage their careers and control their professional development by seeking jobs that meet specific criteria important to them (Hall, 2002). Internal CSR practices may suggest as a mean to attract and retain them as Strong competition demand a new breed of talented workforce.

The findings of this study also show that internal CSR practices are significantly and positively related to organisational commitment or rather affective commitment. The possible explanation for these results is that employee come to work in an organisation with some needs, skills and expectations. They look forward to work in an environment where they can utilise their abilities, further enhance their knowledge and skills, and satisfy their needs. If the organization offers these opportunities to its employees, the level of organizational commitment can be increased. This is also consistent with Social Exchange Theory. In past research (Wayne, Shore, & Liden, 1997, Hutchison & Garstka, 1996; Settoon, Bennett, & Liden, 1996) shown that employees' commitment to the organisation derives from their perceptions of the employers' commitment to and support of them. The reciprocity of organisation and employees are confirmed in present study and it affects the organisation sustainability by retaining the employees. The facet is illustrated in the mediation effect of Organisational commitment between internal CSR practices and Turnover intention.

However, the study does not find significant moderating effect of Perceived ease of movement. It was hypothesised that the current economy situation will affect the employees' Turnover intention whereby when the Perceived ease of movement is high, i.e., plenty of job opportunities, the Turnover intention is high and vice-versa. The possible explanation of the results could be due to the economy status of the point where data is collected. Presently, Malaysia has started to implement Goods and Services Tax (GST) with effective on 1st April 2015, which a consumption tax. As the data was collected during the pre- and post-GST implementation period, many businesses especially the SMEs are still speculating its effects and rising costs of productions. Businesses encountered immediate challenge in integrating GST into their operations as well as their pricing strategies. In some instances, employees' benefits are also affected. This is specially hold true for employee benefits fall within the scope of GST such as mobile phones, computers, food, drinks etc.) or services provided free to employees which include leave passage, accommodation, transport, meals, bus passes, meal vouchers, retirement gifts, long service gifts, prizes at annual dinners etc. This lead to a chain effect on employment opportunity in the labour market. Consistent with Gerhart (1988) and Muchinsky and Morrow (1980) findings that when the general labour market condition is not favourable, perceived ease of movement is relatively low. However, present study findings uncover an insignificant results of Perceived ease of movement most likely due to the respondents' speculation of weak labour market and they have no intention to leave their current organisations. As a result, they do not consider the ease of movement at the point the data is collected. According to Malaysian Institute of Economic Research (MIER), consumer sentiments index dropped further by 10.4 percentage points to 72.6 in the first quarter of 2015, after declining 15 percentage points to 83 in the fourth quarter of 2014.MIER added that consumers are concerned over their financial and employment outlook as well. Hence, the perceived desirability of movement to influence turnover is not under the respondents' consideration during the study.

Nevertheless, the present study has contributed to the knowledge arena by highlighting the positive effect obtained from the implementation of internal CSR practices. Internal CSR practices is silver lining for employers to attract and retain their employees. This practices seem to be playing a crucial role on the Gen Y employees which dominates the workforce population. Gen Y employees believed to bring many positive skills and traits to the workforce; however, they engage differently as compared to the older generation. Internal CSR practices may be recommended as one of the agenda in SMEs strategic human resource management to create a competitive advantage within the enterprise.

Despite the contributions made, there are several limitations to this research. Firstly, as the unit of analysis is the employee, hence, the sample size should be larger. Secondly, as the present research discuss on the implementation of internal CSR practices in Selangor, instead of whole Malaysia. It will be interesting to make a comparison study between the SMEs among the states in Malaysia. The research can also expand by comparing SMEs with and without internal CSR practices.

In a nutshell, the present research provides insights to the SMEs owners/managers that internal CSR practices could enhance employees' organisational commitment and reduce employees' turnover intention. This findings offer some suggestions to SMEs owners/ managers of the manifestation of internal CSR practices in their organisations which could be a competitive advantage to them to sustain in the present competitive environment.

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THE FACTORS AFFECTING PRODUCT INNOVATION OF MANUFACTURING INDUSTRY

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Abstract

Manufacturing industry plays an important role in economic development by contributing to more than one third of Gross Domestic Product in Malaysia. However, companies in the manufacturing industry face stiff competition from local and worldwide rivals due to globalization. There are various strategies implemented by manufacturing companies in getting ahead of the competitive race. Innovation has been identified as one of the viable strategy in achieving competitive advantage for sustainable business. Innovative manufacturing firms often produce unique products that fulfill consumer needs through cutting edge technology and creative business processes. Hence, product innovation is considered as one of the organizational capability that enables a firm to establish competitive advantage and outperform competitors. This paper is aimed to identify and fill the research gap through identifying the organisational factors that influence product innovation of manufacturing firms. This paper will propose a research model through extensive literature review which will elicit future studies into product innovation field. Through reviewing journal articles, theses, research projects, conference papers and books, four organizational factors that have been identified influencing product innovation are organisational capability, knowledge management, perceived organizational support and organizational culture. The study will provide better information to managers of manufacturing firms regarding the impact of factors and how they affect product innovation, in which are related to producing differentiated products welcome by consumers. The researchers also put forth the managerial and theoretical implications as well as the conclusion of this paper.

Keywords: Product, Innovation, Manufacturing, Malaysia

INTRODUCTION

Our research purpose is to identify the organisational factors affecting product innovation of manufacturing industry in Malaysia. The research will mainly concentrate on whether factors such as organisational capability, perceived organisational support, knowledge management and organisational culture has direct effect on the product innovation in manufacturing firm today. Product innovation is defined as "the creation and consecutive introduction of a good or service which is new or improvement on previous goods or services of its type" (Hoang, 2010). It is the principal cause of creation of value in companies and a critical facilitator of achieving competitive advantage. Innovation is essentially an immensely blend of diverse activity that, when it works as a whole, produces a stimulating pressure between, time to market, performance, quality, product value and competing objectives of development cost (Policy Studies Institute, 2010). Every part of the company is vital for product innovation. Functions like finance, purchasing, customer support, operations, sales and strategic planning are utterly as crucial to successful innovation as engineering and research and development.

Malaysia is currently entering upon a new stage of development towards achieving its vision of becoming a developed country by 2020. Initiatives to heighten national resilience and competitiveness will be prioritized despite of the dynamic domestic and global economic landscape. One primary core of the country's Development Plan is to shift the economy up the value chain, and as a result, lead to the need to produce further innovation driven enterprises. Malaysia External Trade Development Corporation or more well known as MATRADE is the country trade advertising agency of Malaysia. It aimed at promoting Malaysia's export that had enabled many local companies to create new frontiers in today's multinational market (MATRADE, 2011). One of MATRADE objective is to advertise Malaysia's innovations internationally.

Even though many efforts have been made to upbringing nation ability to create product innovation, the fall in the Revealed Comparative Advantage (RCA) index in some product units in the overall electronic and electrical production such as office machines and radio broadcast receiver recommend that the growing rivalry as a result of regionalization like AFTA and globalization is destroying Malaysia's strong position international arena (Amir, 2000). Research results of Mahani and Wai (2008) showed that the overall RCA index for machinery category except electrical was little above one and exhibit a slight pattern of declining trend. Another study conducted by Noor, Tan, Mohd Adi and Kamaruddin (2013) stated that there are two major problems associated with product innovations among SMEs manufacturing industry in Malaysia. The lack of essential skills and knowledge among graduates poses a tremendous impact for product innovation in manufacturing industry.

Productivity capacity, new products and technologies breakthrough are deemed to be crucial determinants of a firm's competitive advantage, productivity growth and eventually their survival. Despite its momentous role, the factors that associate to product innovation are still vague among the Malaysian firms in manufacturing industry. The purpose of this research is to find out the relationship between organisational factors and product innovation in Malaysian manufacturing industry. Manufacturing industry has always play a vital role contributing toward Malaysia's overall Gross Domestic Product, and with the help of our research, it will serve and provide guidance, testaments and information to relevant researcher and managers in the nation.

LITERATURE REVIEW

Product Innovation

Innovations is conceptualised as the introduction of new and advancement of goods, new methodology of production and opening of new markets (Schumpeter, 1934). Damapour and Evan (1984) stated that innovation can be referred as new product development (NPD) or services, a novel or unique process technology in production, administrative systems. Moreover, innovation was defined as "the adoption of an internally created or obtaining policy, device, process, product or services that is new to the adopting organization" (Damapour & Evan, 1984). Adoption of innovation is held to include the generation, implementation and development of new behaviours, concept and ideas. Thus, it also represents the method and process of acquiring the resources required to react to environmental transformation and to create a change in an organisation (Chen & Huang, 2012).

Knight (1967), Utterback and Abernathy (1975) claimed that product innovation was the creation of new products or services introduced and presented in order to meet the need of an external user or market. In order to gain competitive advantage position, firms are required to develop new products that will improve the firm performance and enable long term sustainability (Banbury & Mitchell, 1995). In organizations, numerous factors are playing their roles towards enhancing product innovation, for instance organization structure (Tohidi & Jabbari, 2012), culture (Skerlavaj, Song & Lee, 2010), leadership (Samad, 2012), talent management (Chen & Huang, 2009) and open innovation (Xie, 2012).

Thompson (1967) and Child (1972) states that top management of an organisation is responsible for the firm's key strategic decisions. Top management teams (TMT) are responsible and involved directly

in making strategic decisions which will affect innovation performance (Noda & Bower, 1996). Moreover, Yadav (2007) has developed theory and empirically tested a model stressing on the vital role of TMTs in the development, detection and deployment of new product. Furthermore, Ancona and Calwell (1992) expresses that heterogeneity of the top management team may bring the benefits of higher level creativity and product development, as they organised and controlled for functional diversity in a team. On the other hand, vision and leadership are essential in recognising product innovation (De Jong & Vermeule, 2006). Matzler, Schwarz, Deutinger and Harms (2008) conducted a research in Austria by collecting data from 300 small and medium companies (SME), and concluded that leadership style of top management has significantly improved innovation and organisation performance. Besides that, product innovation has been influenced by transformational leadership via creating appropriate value, culture, mission, vision and establishing strategic objectives for the entire organization.

The discovery of novel information and knowledge is an important source of new product development (Maggitti, 2013). Apart from that, Dollinger (1984) found that the intensity of information collecting by managers improves the development of firm performance. Similarly, Cohen (1995) and Greve (2003) found that Research and Development (R&D) intensity has positively related to the firm innovation. Wang and Wang (2012) specify that knowledge sharing culture significantly improved numerous features and quality of innovative products which lead to improve operational performance and financial results. Strategic knowledge management (KM) is found capable to enhance innovation adoption and significantly improve organization performance (Nicolas & Cerdan, 2011). Likewise, Schien (1985) suggested that organizational culture should be integrated into effective knowledge management practices, in order to promote innovation. Organisations which endorse innovative culture upsurge its ability to cultivate more internal talent by increase working knowledge and strengthen workforce satisfaction (Tohidi & Jabbari, 2012). In contrary, subpar management practices and weak culture may delay organization from achieving its strategic objectives, even though most companies recognized that new product introduction is important (Cooper, 1994).

Additionally, Harryson (1997) has explained how Japan culture promotes employees with information, openness, job rotation, collective reward and error sharing after a successful release of an innovative product. On the other hand, Utterback and Suarez (1993) claimed that most of American manufacturing companies are capable to compete and sustain in the dynamic business environment with constant changes, due to their ability to adapt to technological trend, fulfill innovation demand, utilize employee creativity and spend heavily in researches for improvement. Samad (2012) states that there is still lack of precise researches that inspects the key drivers for product innovation especially in Malaysia. Malaysian organisational culture and employee workforce drive innovation in a local organisation, as for that organisational culture is dominated by workforces or organisation employees, and the significance of leadership in order to shape the organisational culture and compete in global markets (Shafie, Siti-Nabiha & Tan, 2014).

Organisational Capability and Product Innovation

Traditionally, organisations have utilised an analysis of their strengths, weaknesses, opportunities and threat (SWOT) as a basic approach to developing and implementing organisational strategies (Leanne, 2006). Organisational capability is the overall firm's ability to gain competitive advantage through managing human resource and other critical resources. According to Day (1994), capabilities are "complex bundles of skill and accumulated knowledge" which exercised through organizational processes for an organisation to coordinate their activities and utilize their assets. Besides that, organisational capability is critical in meeting customer needs by focusing on internal business processes and systems. Hossein, Jens, Staffan and Amir (2013) stated that if an organisation able to fulfill customers' needs better than their competitors by offering high variety of products, this could make the organisation compete effectively.

Akgün, Keskin, Byrne, & Aren (2007) suggested learning capability of employee as part of organizational capability that could affect the innovativeness of the employee in developing a product. Furthermore, Chang, Chang, Chi, Chen & Deng (2012) suggested the organizational capability is the core competencies in company that allow them to gather innovative idea from employee as a key success

factor. They managed to collect data of 112 capabilities and innovation performance which are related to corporations, through a postal questionnaire survey from the top 500 manufacturing firms in Taiwan. The multiple regression results indicated that organizational capabilities have a significant positive relationship with radical innovation performance.

Fabrice (2012) stated that a company will not be able to influence other competencies without a motivated and persistently recruited workforce. Exploration of knowledge from external sources is also a factor influencing a firm's innovation capability. Moreover, there is a positive impact on the existing organizational structure influences process and product and individual creativity and organizational innovation (Hossein, Jens, Staffan & Amir, 2013). Hamel & Prahalad (1990) stated that the core competencies in company are the main factor contributed to capability to produce new or innovative products to the market. Srivastava and Gnyawali (2011) reinforce that the openness firm should able to find more sources to contribute in innovation as more information and knowledge flow in the company. According to Kanter, North, Richardson, Inglos and Zolner (1991), the company should provide better integration capability and autonomy capability to the managers in order to ensure the smooth transition of innovative ideas from research and development department to other business units. The above literature review led us to lay down the following proposition:

P1 : There is a positive association between organisational capability and product innovation.

Knowledge Management and Product Innovation

According to Nazem (2011), knowledge is one of the most important resources for an organization to gain competitive advantage. Camila and Luiz (2013) stated that human capital and tacit knowledge are the critical resources provide competitive advantage to an organization. Tacit knowledge is a knowledge that the person knows he has but he cannot describe in words other than its own performance. In another way, tacit knowledge is a subjective insight that difficult to be share and explain while the thing is we know how to do it (Polanyi, 2002).

Knowledge management is defined as the series of tactics and operations used in an organization to distribute, create, identify, and enable adoption of perceptions and practices (Vatuiu, 2010). It is very important for an organization to use the knowledge to conduct daily operations and implement strategies to solve the problems and compete with the competitors. Knowledge management is a practice that improves the effectiveness of the organization and enhances employee's willingness to share the knowledge within the organization for solving problems (Nazem, 2011). Throughout knowledge management, the organization is able to attain strategic objectives in correlation of performance and enhancing the procedures and methods by connected with the company's capability to use all the existing sources and types of knowledge in the organization to progress precise skills that used to transform into new products and processes (Nonaka & Takeuchi, 1997).

According to Kamran and Sabir (2012), knowledge management is consistent with intellectual capital of the organization that provide guidance towards the competitive advancement through innovate and develop new products to enhance the organization's profits. In order to increase the organization's profit and effectiveness, the organisation have to adapt to the environment and familiar with the latest technology and aware to the current trend. Knowledge management provides support to employees in dealing with the critical issues of organizational adaption, survival and adapt to the rapid changes in the environment (Malhotra, 1964). It is important to adopting and implementing different types of innovations and enhances an organization's ability to effectively attain its goals as well as increasing organization learning (Nonaka & Takeuchi, 1997).

Furthermore, firms can accomplish greater innovative performance via sharing technological knowledge due to knowledge allocation strategies can assist a firm to outline the established environment in favour of its specific technological and scientific design (Jennifer, 2003). Knowledge management is a business process which relates to creating new knowledge and use the knowledge within the organisation when it is necessary (Kor & Maden, 2013). According to an empirical study investigated a sample size of 310 Spanish organizations, results revealed that codification and personalization, two elements of

Knowledge Management strategies directly and indirectly influence innovation and performance of firms (López-Nicolás & Merono-Cerdán, 2011). Likewise, Alegre, Sengupta and Lapiedra (2013) studied the effect of knowledge management (KM) on innovation performance within 132 biotechnology firms. They had provided concrete evidence that KM enhances innovation performance.

In addition, knowledge management provide an efficient way to the organization to organize, govern over the production, sharing and allocating knowledge in a defined direction and exercising the knowledge within the organization. Knowledge management is essential in cultivating product innovation and organizational effectiveness and also delivers direction for supervisors and manager in the decision making process. Therefore, we would like to propose the following proposition:

P2: There is a positive association between knowledge management and product innovation.

Perceived Organisational Support and Product Innovation

Eisenberger (1986) defined perceived organisational support (POS) as worker judgment on organisation cares about their contribution and welfare. Generally, employees think organisational support should include adequate resources, information, reward and assistance from the organisation towards employee (Rhoades and Eisenberger 2002). In order to securing an innovative environment, Amanile, Schatzel and Moneta (2004) proposed that by acquiring support from the organisation such as training, organisational learning, and resources able to critically impact the staff and employees' freedom of creativeness and capable to encourage essential motivation, act as a role which are favourable to an innovativeness culture of an organisation (Knudsen & Levinthal, 2007; Maggitti, 2013) pointed that such support would promote more new information creation and leads to new product development. Meanwhile, Eisenberger, Huntington, Hutchinson and Sowa (1986) explained that employees would more dedicated and capable to form new ideas through critical thinking in meeting when POS exist. Rodriguez (2008) suggested that top management plays a key role in committing employee in developing innovative product. Meanwhile, a supervisor is often perceived as part of top management who provides support to employees in completing innovative tasks (Du Plessis, 2010). Thus, employees will have more courage to involve in innovative process which is precious in an organisation. However, Richtner and Ahlstrom (2010) suggested that the relationship between top management and innovation is not direct. The participation or involvement of management team could affect the follower team responsibilities in developing new product. Next, the organisational support is essential to secure the bonds between people and enhancing the communications among employees which is vital for knowledge sharing purposes (Schepers & Van den Berg, 2007).

An empirical research conducted by Tsai, Horng, Liu and Hu (2015) concluded that organizational support has significant effects on the organizational work environment that furnish creative activities. The findings of the field study of 320 employees in tourism and hospitality organizations indicated that organizational support was significantly related to the four factors of work environment construct positively namely knowledge sharing, motivation, procedural justice, and promotion, which in turn mediated the relationship between organizational support and employee creativity. Furthermore, a research that conducted by Kull, Narasimhan and Schroeder (2012) specifies that when an organisation standards and beliefs are shared, this will allow teamwork to be more effective and organisational competences to be well developed. As a result, an organisation is able to proceed further and acquire capability in developing new products, whenever there is an existence of collaborative cultures. Thus, based on the above discussion, the following proposition is suggested:

P3: There is a positive association between perceived organisational support and product innovation.

Organisational Culture and Product Innovation

Organisational culture is defined as a series of psychological norms such as values and behavioural norms, beliefs, and assumptions which had been developed and adopted by the members of an organisation through their mutual experience (Janicijevic, 1997). Earlier on, Gonzalez (1987) suggested that organizational culture is a bundle of symbols and values which are used for the

organizational in making decisions, creating ideas and dealing with challenges. Later in 1990, Schein (1990) model has segregated organisational culture into three different levels. The top level consists of anecdotes, rituals, stories, heroes, etc. Next the middle level consists of the organisational values, and the level of profound assumptions, which basically caught fewer attentions outside of the firm. Lastly, the bottom level is based on the employee's conviction to motivate others of an organisation to 'think, feel, and act'.

Both researches conducted by Utterback and Suarez (1993) and Skerlavaj, Song, & Lee (2010) reviewed the significance of product innovation as the ability of competing in market and improving customer loyalty, satisfying customer needs and the effects of organisational culture on changing the products accordingly and dynamically. Thus, the company profit is affected from sale of product. By understanding the worthy of product innovation in market, we found that organisational culture plays a key role in affecting the workforce innovativeness (Samad, 2012). To secure the level of innovativeness, a lot of creative ideas and individual contribution which differ from a set of behaviour, norms and value as cultural criteria are required (Ng, Singh, & Jayasingam, 2012).

By relating both product innovation and organisational culure, Luvić, Džamić, Knežević, Alčković, and Bošković (2014) suggested some of the elements which included risk tolerance, communication, and transfer of knowledge, trust and strong teamwork must have in organisation culture to support innovation. Prajogo and McDermott (2011) asserted that a developmental culture enhances the organizational ability to response fast to environment, and also create the awareness to recognize customer needs. Firms would want a culture that is characterized by flexibility consistent with developmental culture characteristics in case they aim to excel at product innovation. Through a study with data collected from 194 Australian managers, the research findings confirmed developmental culture has a positive significant relationship with both product innovation and product quality. Likewise, Denison and Mishra (1995) and Lukić, et al. (2014) also suggested a strong correlation between organisational culture and product innovation. Thus, the following proposition is suggested:

P4: There is a positive association between organisational culture and product innovation.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework
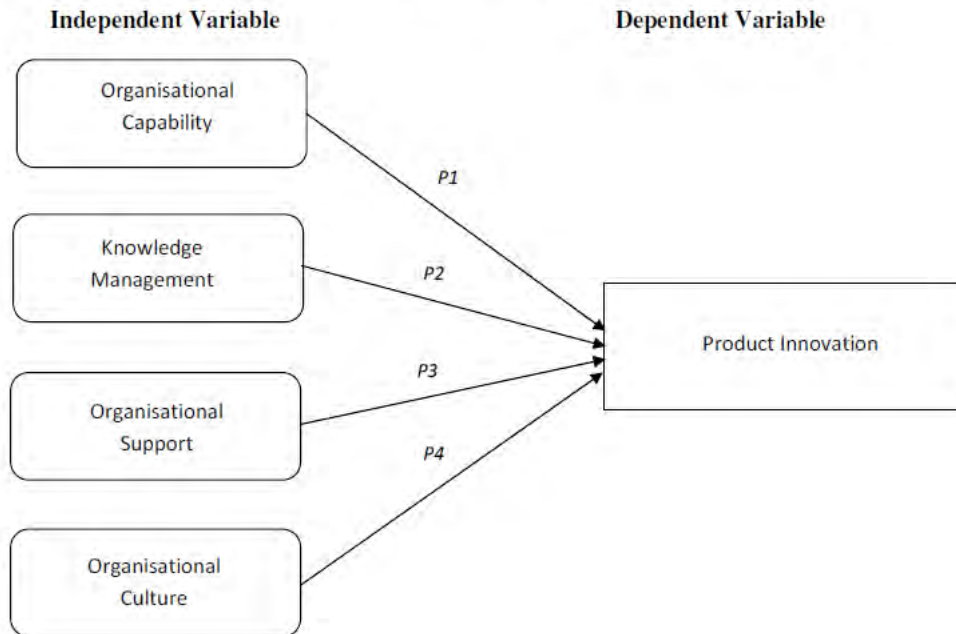
The conceptual schema of present study is to test on the organizational factors affecting product innovation of manufacturing firms. Based on literature review, a conceptual framework has been created and proposed, as figure 1. There are four independent variables has been selected in this model , namely organizational capability, knowledge management, perceived organizational support and organizational culture. The dependent variable is product innovation. The suggested propositions are as followed:

P1: There is a positive association between organisational capability and product innovation.

P2: There is a positive association between knowledge management and product innovation.

P3: There is a positive association between perceived organisational support and product innovation.

P4: There is a positive association between organisational culture and product innovation.

IMPLICATION AND CONCLUSION

Implications of the study

Innovation in many ways has affected how organisation conduct business today, planted deep in the organisational structures, services, products and processes of a firm. Without innovation, organisation will lost its competitive edge and subsequently result in losing customer, market share and profit. The framework proposed in this study provides a link among the relevant organisational factors affecting product innovation. Four propositions are suggested amid the conceptual framework development. This paper analysed the information of past studies and synthesised into a conceptual framework in which future studies can be based on to further investigate product innovation in various industries. The research framework created also enables data collection and analysis to confirm the level of product innovation in Malaysia and the strength of the organisational factors affecting it.

The paper will furnish information on the effect of organisational factors include organisational capability, perceived organisational support, knowledge management and organisational culture on innovation of the Malaysian manufacturing firms. This will assist the managers in manufacturing firms in making decisions that aims to enhance product innovation of a firm by designing and executing the organisational factors with adequate supervision. This effort will turn out to be greatly successful, promotion of teamwork and eventually increase firm performance. The findings from this study is momentous and vital as it provide the whole package as to how firm can increase ones innovation, competency, designing adaptive organisational culture that in turn help them to be proactive and flexible when encounter problem or in making product innovation decisions.

This research will explore the perception of employees in manufacturing firms on factors such as organisational capability, perceived organisational support, knowledge management and organisational culture that could subsequently cultivate innovation along with additional emphasis on the significant level of innovation activities which should be executed accordingly. This study provides relevant information that should be articulated among all employees and allow employees to have the freedom to convey their ideas as well as discomfort towards the innovation programs. Support from the upper management will generally accelerate the progress and setting innovation goals such as make alterations to the product next year will provide directions and strategic orientation to be made. Reward or give recognition to new ideas or new thoughts and subsequently, employees will voluntarily want to be a part of it. Communication barriers such as status differences, gender differences, cultural differences and prejudices should be removed as it encourages team member to share new ideas more often.

Overall, this research provide firm with a better understanding of the context of innovation and in what manner innovation program should be developed and executed, as well as elevating firm ability in aligning innovation program with the interest of the employee that will nourish employee innovativeness and competitiveness. With successful innovation, firms are able to prioritize their market, production and technological approach toward sustainable business development.

Conclusions

Product innovation is considered as one of the innovation strategies in harnessing competitive advantage effectively. Our objective of this study is to identify the factors that affect product innovation in Malaysian manufacturing firm. The independent variables that we primarily focus in this research are organisational capability, perceived organisational support, knowledge management and organisational culture. The researchers have conducted literature review on various research models and past studies. Four factors that are expected to have an impact on product innovation in manufacturing firms are selected eventually. The researchers anticipated that product innovation will continue to receive attention from manufacturing firms in searching of a better competitive position. Advancing product innovation and enhancing competitive edge can be achieved by manufacturing firm managers via paying attention to implement better functional tactics that support the four organizational factors. Consequently, manufacturing industry in Malaysia will certainly benefited from this paper and future researches that sprout from innovation field.

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ONLINE REPURCHASE OF APPAREL – WHAT MAKE IT HAPPENED?

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Abstract

Online retail business has grown rapidly in the past few years. It has becoming a main channel of distribution for consumer to shop, especially on apparel. This study poised to examine the factors that affect consumer's intention to repurchase apparel online. It is based on Technology Acceptance Model and Prospect Theory. To achieve the objective of the study, data would be collected through a questionnaire survey on 400 respondents who have experienced the purchase of apparel online. Factors of product variety, convenient, perceived usefulness, perceived ease of use and trust are the five exogenous constructs in this study whereas repurchase intention serves as the endogenous construct. Perceived risk is the moderator that turns simple relationships between the five exogenous constructs and consumer repurchase intention into more insightful conditional relationships. This study is very important since it contributes to the additional of knowledge on the theory as well as creates ample opportunities for online retailers to generate competitive advantage through various recommendations.

Keywords: Online, Apparel, Repurchase

INTRODUCTION

Retail business is the set of business activities that provide extra value to services or products that sold to the consumers (Berman, Evans, Hiltz, & Mahaffey, 2005). Retailing business is no longer solely based on over the counter sales, the number of online retailing consumers have increased swiftly in the last few years (IMRG, 2012). Online retailing grow rapidly, especially on the younger segment, there are more than 76% of Malaysian teenagers like to shop online (Hamid and Khatibi, 2006). While the number of consumers is improving, the number of competitors is increasing too, to be competitive, online retailers have to improve on many aspects to satisfy the needs and wants of consumers.

Online retailing is a hot topic that being debated around the world. The Internet retailing brought in a lot of benefits and promoted retail industries in terms of increase of sales volume and customer base (Grewal, Iyer, & Levy, 2004). The factors that influenced consumer to choose online purchase have become the concern of everyone. There are a lot of benefits for the companies to conduct business online but still there are a lot of retailers that refuse to do so (Lee, Lee, Kim, Lee, 2003). This problem is due to the risk and limitation that a company will face in taking part in online retailing. The lack of trial before purchase by the consumer is one of the limitations. Internet retailing only use multimedia presentation to show or attract customer. Customer often requires high sensory evaluation and/or trial of products such as clothing and this cannot be presented digitally (Grewal et al., 2004). High shipping and handling cost is part and parcel of Internet retailing. Online retailer need to bear the cost for task that consumer can perform him/herself in traditional stores and also need to bear the costs of warehousing, shelving, bulk

breaking, packaging and shipping. Other than that, the loss of privacy and security is a serious concern by online purchasers since internet transactions are carried out over a public domain. Therefore, issues of encryption, network security, and transactional privacy and security are of great concern. Customer data might be stolen by other company or hackers for their own purpose (Grewal et al., 2004). Even with all the possible problems, many companies still choose to use online rather than offline retailing format. Companies that do not catch up will eventually lost out to those companies that do. Internet increases the competition among sellers, and thus prices of the products that sold online would be lower than those of offline. With this, consumers are more willing to purchase from the online than offline channel due to the price differences and other benefits that derived from online transaction (Lee et al., 2003).

LITERATURE REVIEW

Technology Acceptance model (TAM)

Technology Acceptance Model (TAM) as shown below has been developed to predict consumer's technology acceptance based on their intention norms such as perceived usefulness and perceived ease of use (Davis, Bagozzi, & Warshaw, 1989). They state that perceived ease of use is the degree of a prospective user believes that using a targeted system is free of effort. Perceived ease of use is the most important determinant in determining user intention since everyone prefers the system which is easiest to use. While perceived usefulness is about how the system create value for user by performing specific task (Davis et al., 1989). For instance, information that available in the website, speed of access to the website and the functions of the system are playing important roles in affecting adoption of the system. They are also the key factors in our research that trying to identify the factors that influenced consumer intention in repurchases of apparel online.

Figure 1: Technology Acceptance Model
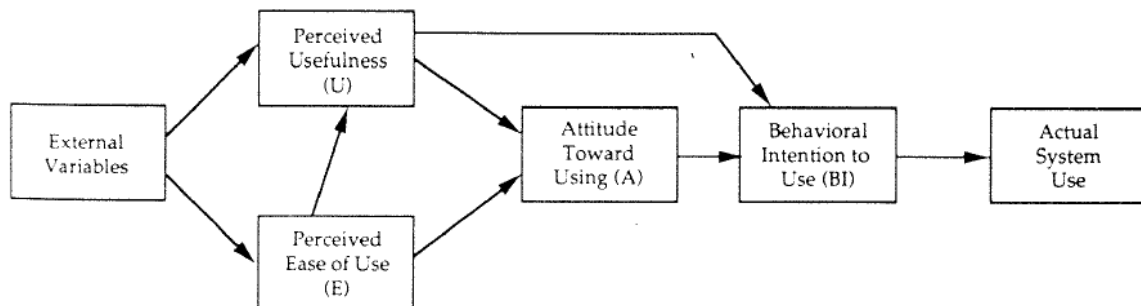
Sources: Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989). User Acceptance Of Computer Technology:A Comparison Of Two Theoretical Models. *Management Science, 35*.

Prospect Theory

Prospect Theory was developed by Kahneman & Tversky (1979) to analyse decision making process under risk. It has been accepted as a normative model of rational choice and applied as a descriptive model of economic behaviour (Kahneman & Tversky,1979). They state that most of the people systematically violate the basic axioms of subjective expected utility theory in their actual decision making behaviour when risk is present. This means that the risk attitude of consumer affects his or her evaluation on the outcome of products and services purchased, thus his/her behaviour.

The value function of Prospect theory coins that consumers will compute the amount of value for each alternative of action and make their decision by choosing the alternative with the highest value. Besides, consumers will choose the alternatives which are merely probable with higher value instead of higher probability with lower value (Shih, 2012). For instance, consumer prefers the alternative with probability of 75% to gain RM2000 instead of probability of 100% to gain RM1600. Risk Aversion has been consider as one of the best-known attitude among people in making risky choice (Kahneman & Tversky,1979). Although consumer will have positive attitude towards risk for a certain extent of risk level, they will be risk averse when the problem is framed as gain and loss instead of opportunity. In short, people prefer to obtain something valuable and avoid risk as much as possible (Shih, 2012).

Most of the previous research that associated with utility theory did not include the risk factor in the studies, this may lead to inaccuracy of customer intention determination. To enhance accuracy of this research project, risk function in the Prospect Theory has been incorporated into the research conceptual framework in identifying the underlying factors that may affect the relationships of exogenous and endogenous constructs.

Figure 2: Prospect Theory
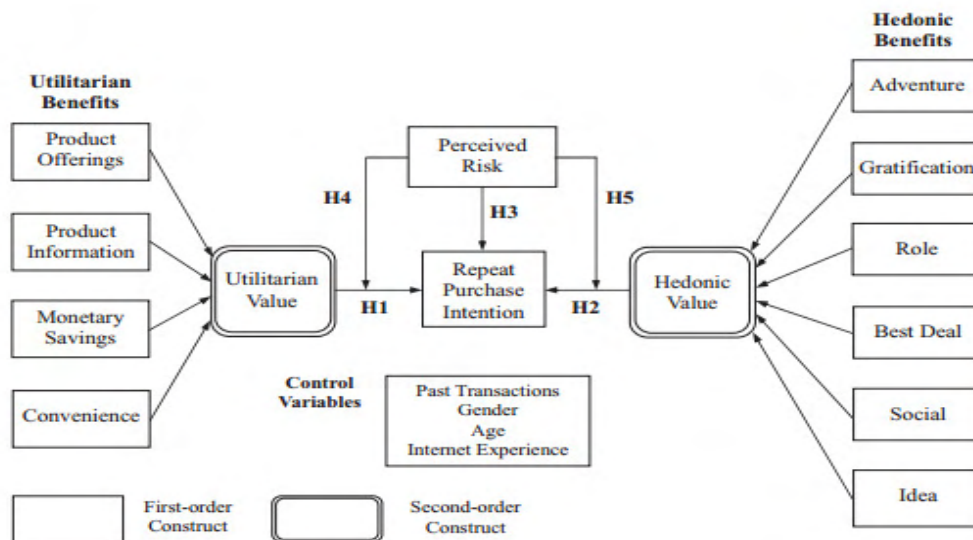
Sources: Chiu, C.-M., Wang, E. T., Fang, Y.-H. & Huang, H.-Y. (2014). Understanding Customers' Repeat Purchase Intentions In B2C E-Commerce: The Roles Of Utilitarian Value, Hedonic Value and Perceived Risks. *Information System Journal*, 85-114.

From the theoretical review, a research conceptual framework has been formulated and it is as shown in figure 3. The exogenous constructs in this study are product variety, convenient, perceived usefulness and perceived ease of use, trust performed as the mediator whereas perceived risk is the moderator in this study. The only endogenous construct in the study is intention to repurchase of apparels online.

Figure 3: Research Conceptual Framework
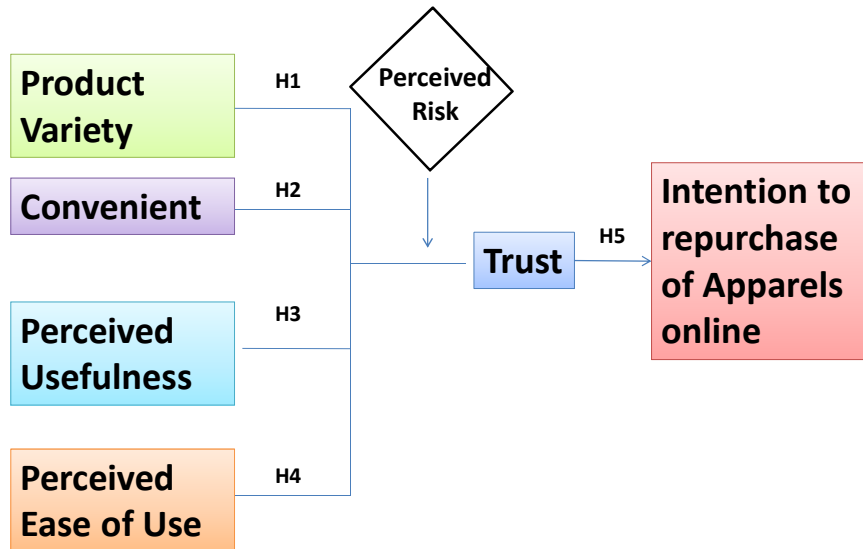
Intention to repurchase apparels online

Repurchase intention through online store is the probability of the consumer to continue making purchase from the same online retailer. Due to the competitiveness of the market, many firms are providing more values to attract new customer, at the same time inducing current customer to adopt the online retailing. Fashions industry is the major player in today online retailing. According to Chris and Parsons (2014), fashion retailer growth significantly since last few years, they forecasted that online apparels market will grow 19% from year 2012 to 2017. One of the main reasons for the increasing intention of consumer to purchase apparels online is the changing of mind set among the consumer (Chris and Parsons, 2014). The wide variety of clothes and services available online as well as simplification of offer also attracted customers attention. The simple order processing system (Perceived ease of use) the increase functionality of retailers' site (perceived usefulness) especially on its ability to provide product information such as clothes' features, prices and design before customer purchases have increased customer intention to purchase apparel online. Besides, online shopping also provides many conveniences to consumer by saving on time and reducing searching effort. Lastly, trust is the most important value for the deal between consumers and online retailers to happen due to consumers are beginning to select retailers based on their ethical credentials (Chris and Parsons, 2014). The privacy and personal information should be always kept confidential as well as unethical business practices such as fraud and bad faith should be kept away to induce the intention of customers to repurchase (Chris and Parsons, 2014).

Product Variety

Customer's perception on the benefits that received from the products or services is the factor that satisfies and fulfills his/her needs and wants (Delafrooz, Palm & Khatibi, 2010). One of the factors that encourages consumer to repurchase apparels online is the wider availability of product choices offered by online retailer (Delafrooz et al., 2010). Compare to traditional fashion store, online retailers are able to provide wider ranges of clothes in catalogue forms since online store are not limited by physical

space on the numbers of displays. Therefore, customers that prefer wider choices may shift to online purchase instead of purchases from physical store (Delafrooz et al., 2010).

Convenient

Convenient is one of the most significant factors that motivate consumers to shop online. The timing, location and purchasing process through online store is more superior than physical store (Delafrooz et al., 2010). The nature of online business such as 7 days 24-hours availability and easy accessibility from anywhere enhance the value of online shopping. Browsing through website is more convenient to consumer and he/she is able to purchase through multi-channels. Besides, value of convenient is becoming more appreciated due to the busy lifestyle. Therefore, browsing through online store has become the best alternative for consumer to shop. In order to keep up with busy consumer, retailer has to make buying process more convenience so that its customer get what he/she need and not miss a beat in the process (Convenience is King in Today's Retail World, 2014).

Perceived Usefulness

According to Davis et al. (1989), Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance. Perceived usefulness always relate to systems quality and information quality (Chou & Wang, 2014). The information usefulness perceived by consumer is price and product attributes. Buying apparels online enable consumer to search for better deals by comparing the apparels' prices. Another value created is speed of use, online clothes shopping takes significantly less time than buying clothes from a physical store. Online cloth shopping also allow consumer to search more quickly and accurately due to fast speed search engines; consumer also get to compare among the shopping websites which enable him/her to locate the best seller (Niranjanamurthy, Kavyashree, Jagannath & Chahar, 2013). Moreover, some of the retailers sites are personalize, they utilize the e-commerce recommender application system to suggest product and provide personalized product information for customer base on their past searching and purchase history (Schafer, Konstan,& Riedl , 1999). This system provides customer an advantage over wading through the different sections of a physical store to find what they want. Therefore perceived usefulness is one of the essential factors that make consumer to purchase apparels online.

Perceived Ease of Use (PEOU)

Perceived ease of use is defined as the degree to which the prospective user expects the target system to be free of effort (Davis et al., 1989). Which means that the extent to which a consumer perceives the ease of interaction with the e-commercial websites, to search for product information, and to pay online, consumer considers online shopping more useful when all the features are available (Wen, Prybutok & Xu, 2011). The measured of perceived ease of use is depends on 5 indicators which are booking, searching, transaction, booking procedure and payment procedure (Renny, Guritno & Siringoringo, 2013). In short, the simplification of order processing will result in the perception of ease of use that make consumer to repurchase.

Trust

Previous research indicate that trust is an important factor in online shopping. Online transaction, either through a debit, credit card or PayPal transfer involve trust factor (Renny et al., 2013). Online consumer trust was defined as the subjective belief by the purchaser on the online sellers to perform the obligations as promised (Renny et al., 2013). Vendors could be the main obstacle for consumer to participate in e-commerce if the consumer does not trust the e-commercial website (Wen et al., 2011). Online shopping trust is measureable by using 6 manifested variables. They are trust towards the site, trust on usefulness, trust on company promise and commitment, trust on company good intention, trust on

company good works, trust on safe transaction, trust on company promise and commitment as well as trust on safe transaction (Renny et al., 2013).

According to Chiu, Wang, Fang & Huang (2014), trust, satisfaction and perceived value are the major determinants of online channel adoption and customer loyalty towards an online retailer. Customer satisfaction on the product and service quality is essential for marketers because a highly satisfied customer always perform favourable behaviour such as repeat purchase, spread positive words-of-mouth and brand loyalty in the long-run (Yeoh and Chan, 2011). Next, trust is a key to positive interpersonal relationships in various settings due to its effect on the relationships between the retailer and customer (Mcknight & Chervany, 1996). Trust between the retailer and customer is able to create positive attitude toward the transactional behaviour. Lack of trustworthiness prevents buyer from involving in online shopping because customer will not carry out transaction with firm which has failed to deliver as promised. Moreover, previous research shows that there is positive relationship between repeat purchase intention and trust (Chiu et al., 2014).

In conclusion, there are a total of 5 determinant factors that may influence the intention of consumer to repurchase apparels online. These factors are product variety, convenient, perceived usefulness, perceived ease of use and trust. Perceived risk is an important moderating variable that turns simple relationships between product variety, convenience, perceived usefulness, perceived ease of use and trust and intention to repurchase apparels online into more insightful conditional relationship.

RESEARCH METHODOLOGY

Research Design

Descriptive research design by using online questionnaire survey would be carried out to collect the data needed for this research. Quantitative research is proposed for this research as it is more logical and data led approach (Malhotra, 2012). Moreover, quantitative research is able to find out the relationships between the exogenous constructs and the endogenous construct.

Sampling Design

Target population is consisting of four groups of online apparel purchasers. The first group is purchasers aged 18 years to 30 years, followed by 31 years to 40 years, 41 years to 50 years and 51 years to 60 years. Sample size of this research consists of 100 respondents from each age group. In total there will be 400 responses. Quota sampling method will be used in this research since it can ensure that subjects are equally or proportionally selected on the basis of the quota (Explorable.com, 2009). In addition, quota sampling allows researcher to sample a subgroup with great interest towards the study.

Research Procedure

A pilot study would be carried out to detect the weaknesses and errors in the questionnaire to enhancement the quality of this research. Researcher will distribute 10 questionnaires to each age group through website to test on the quality of the questions and make rectification if there is any. There are two sections in the questionnaire. Section A consists of 5 questions and Section B consists 17 questions. Nominal scale will be used to collect demographic data and general information from the respondents in section A. Likert five scale will be used in Section B to investigate the agreement and disagreement from respondents toward the factor that influencing consumers' repurchase intention of apparels online.

CONCLUSION AND DISCUSSION

This research is important for the online retailers as this research help them to determine the factors that affect consumer repurchase intention of apparels online. This research also help online retailers to understand more on consumer behaviour so that they can provide better quality of products or services to their customers. Major issue concerned by consumer such as perceived risk will be investigated too. Result from this research will share light to businesses that intend to expand their business to online retailing, the result could help them to understand more on the factors that induce purchases of apparels online. This can help them to generate a long term relationship with their customers. Besides, future researchers who are interested on this topic can conduct an in-depth research based on the findings in this research.

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ATTRIBUTES OF STORE ENVIRONMENT THAT AFFECT THE PURCHASE INTENTION OF GENERATION Y

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ABSTRACT

Purchase intention is the possibility that a customer will purchase a product or service in the future. Purchase intention in a retail store can be stimulated by various factors such as perceived risk, personal emotion or store environment. Retailing industry in Malaysia has been growing to date and its competition's intensity is also mounting simultaneously. Store environment takes place in enhancing a retailer's ability to attract customers and encourage them to spend in the retail store. Retailers have to recognize the attributes of store environment that may trigger a customer's purchase intention. Hence, this research intends to explore the attributes of store environment that affect customer's purchase intention especially among Generation Y, who are possessing a large portion of total spending in the world. This research adopted Multiple Linear Regression Analysis to identify the significance and strength of each attribute towards purchase intention The findings of this research showed that all of the attributes have significant relationship with Generation Y's purchase intention except the ambient factor.

Key words: store environment, purchase intention, generation Y, perceived risk, personal emotion.

INTRODUCTION

Retailing industry is evolving with contemporary technology to improve the ability to meet customer demand as undeniably, the role of technology is increasingly important as an agent of change (Fernie, Fernie, & Moore, 2013).

Since 1993, the retail industry in Malaysia has modernized tremendously (Shivee, Rokiah, Kalthom & Zakaullah, 2008). As the Malaysian economy develops and consumer preference becomes more uncertain, large department stores have sprung up replacing the smaller firms offering a broader range and variety of merchandise and services to consumers, hence, the retailing industry has evolved and become more efficient and effective (Hassan & Rahman, 2012). Retailing supports major investment by the private and public sector in the renewal of urban areas by adding attractiveness and vitality to inner areas of towns and cities and by providing shopping complex to citizens which is also very important in the context of tourism sector (Hogan & Sullivan, 2012). According to Hassan and Rahman (2012), retailing industry in Malaysia has been evolving into a competitive industry and large department stores have noticed the threat of the new entrants of small retailers. Besides, Global Retailers (2013) also indicated the continuous growth of retail industry in Malaysia and its intense competition in this sector.

According to Kotler (1992), store environment is a powerful sales tool to help retailers to attract and maintain their customers. Retailers have been facing intense competition in the marketplace thus, weakening their bargaining power with customers. To mitigate this, retailers can offer a unique store environment that may positively influence the consumer's purchase intention. According to stimulus–organic–response theory (Mehrabian & Russell 1974), store environment can stimulate customers' response in order to create impulsive purchases. According to Kotler (1992), store environment is a powerful tool used to enhance retailers' ability to maintain and reinforce their competence in the market. Mowen and Minor (2001) stated that consumer's behavior will be affected by store environment cues which can be ambient factors such as music, scent or lighting. Several researchers have justified the significant impact of internal and external store environment towards purchase intention (Astrid, Agus &

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Pribadi, 2011; Liao, Huang, Huang & Deeseentham, 2012; Astrid & Mustika, 2013). However, these researches were conducted in foreign countries such as Indonesia, Taiwan and United States of America.

Majority of past studies suggested that Generation Y includes those who born between year 1980 and 2000 (Weingarten, 2009; Cennam & Gardner, 2008; Sayers, 2007 (as cited by Varsha & Saumya, 2012; Ketaki, Varsha & Subhadip, 2013). Some studies also indicated that Generation Y comprises people who were born between the mid-1970s and mid 1990s (Peggy & James, 2013) They are also known as "E-Generation" or "Internet Generation" as they were born in the age of information system and were so intimate with computers and the Internet from an early age (Lachman & Deborah, 2013) As these groups of population are more socialized, the most influential factor on their purchase behavior is their parents, peers and friends (Judith, 2012) as well as strangers (Nelson, 2012). Furthermore, they are also more educated and associated with social media which will create a challenge to the retailers to communicate with them (Greg, 2013).

In Malaysia, many researches were carried out to investigate the factors that affect customer purchase intention from different aspects (Karen, Han & Benjamin, 2013; Fatemeh, Zuraini & Bharani, 2013). These researches vary in terms of targeted audience, independent variables, adopted model and also research method. However, there are insufficient researches in Malaysia that study the purchase intention of Generation Y from the aspect of store environmental attributes.

Purchase intention is the possibility of a consumer purchasing a product or service in the future. It has widely been used in past studies as an indicator or a measure to examine consumer behavior where a higher purchase intention indicates the higher possibility of making an actual purchase (Schiffman & Kanuk, 2007). In 2000, Schiffman and Kanuk justified the positive relationship between purchase intention and customer's willingness to purchase. Customers with purchase intention will follow their knowledge, preference and surrounding factors to collect and evaluate the information they gathered before making a purchase decision (Zeithaml, 1988; Schiffman & Kanuk, 2000).

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Therefore, purchase intention is a key indicator in predicting consumer's behavior (Keller, 2001). Besides that, Blackwell, Miniard and Engel (2006) defined purchase intention as the product that a consumer would likely or want to purchase. In a nutshell, purchase intention is a popular indicator or measurement which researchers use to predict consumer behavior in different dimensions.

Purchase intention has been investigated through different aspects, sectors of business and products or services. In the field of E-commerce, Samadi and Yaghoob (2009) investigated consumer's purchase intention through E-shopping affected by perceived risk and suggested several strategies to reduce their perceived risks. Besides that, Tibert and Willemijn (2008) denied the significant direct effect of online store service on online purchase intention; whereas offline store image has a direct significant effect on online purchase intention. Therefore, marketers are suggested to adopt multi-channel retailing to create a positive determinant on consumer's online purchase intention as well as store image (Tibert & Willemijn, 2008).

On the other hand, Joao, Valeria, Rosires, Carlos, Joel and Fabiana (2005), product labeling and brand image have significant impact on consumer's purchase intention. In addition, Inci, Ebru, Alev and Bülent (2011) have also investigated the relationship between consumer's purchase intention and store brand image which has resulted in a significant effect.

Store image is the way in which the store is pictured in consumer's mind or memory, synthesized by its functional qualities and psychological attributes (Hemraj, 2012; Kim, Jeon, Jung, Wei & Joseph 2012; Veronica, Pia & Allard, 2009). Similarly, Lin and Liao (2012) defined store image as an aggregate of consumer's message and emotion to a store nature, and other feeling for a long time whereas Eagly and Chaiken (1993) (as cited by Christophe, 2014) proposed that store image is psychological tendency that is represented by evaluating a particular substance with certain level of favor or disfavor and is focused

on one specific action. In other words, store image consists of consumer's perception as well as general attitude towards store's property (Muller, 2008; Paul, Gary & Hsiao, 2011). Various studies (Keaveney & Hunt, 1992 (as cited by Ngobo & Jean, 2012; Christophe, 2014); Jolanta, n.d.) proposed that perception includes both tangible and intangible elements. Thus, store image serves as a noticeable attribute of a store that differentiates itself from other competitors (Imran, Usman & Rehman, n.d.; Hart, Andrew, Grazyna, Gary & John 2007).

Accessibility of store is often linked with the store location or can be referred as the easement and logistic elements of store site (Cathy, Andrew, Grazyna, Gary & John, 2006). Accessibility can be measured through network measure, gravity measure and contour measure (Grace, Cecilia, Robinson, Goulias, Richard, Doina, John & Han, 2014). Besides, Tiapana (2009) mentioned that to identify whether the store location is highly accessible to target consumers, the efforts of consumers put to visit the store can be examined. Higher accessibility of a store's location will create higher customer's purchase intention. Although the advanced technology eases customers' purchase through internet, the study of Cho (2010) indicated that geographical accessibility is still needed by consumer to reduce perceived risk in the buying process.

Astrid, Agus and Pribadi (2011) has defined exterior attributes of store environment with building architecture, store front, entrances, display windows, marquee and surrounding areas which have justified the significance of store exterior designs impact on human behavior. Besides, Francesco and Giovanni (2006) has described store external environment as it concerns all environmental features that are all on the exterior of the store where the attributes can be surrounding stores, signs, window displays and so on. Turley and Milliman (2000) explained that the exteriors of the retail store represent the first set of cues that interacts with the consumer and will have a significant impact on the retail store. The attributes of exteriors can be prototypical of store design, exterior window displays and so on.

Window displays represents a medium of advertising that influence, stimulate and please the customer's behavior through representation and display setting Window displays also influences customer's patronage and purchasing behavior, enhance store image resulting in more attracted customers and also enhanced attraction towards merchandise in the store (Abidin & Aziz, 2012). Windows displays are visual stimulus that gives customers communication of information by allowing them to visualize themselves in the displayed product by mannequins (Sen, Block & Chandran 2002; Berman & Joel, 1995).

According to Hyunnjoo and Jenny (2012), storefront design is significant in affecting consumers' impression towards the retail store and triggering their purchase intention. Because most humans make instant judgment unconsciously and react to spatial configurations, degree of openness and complexity level (Wimelius, 2004), and visual images stimulate human senses consciously and unconsciously (Rose, 2001). Visual images presented by storefront design represent a critical stimulus that influence customer's intention to purchase.

Interior design is referring to product display, layout, and signage that facilitate and influence the customer behavior on shopping experience in order to increase customer purchase intention (Turley & Milliman, 2000). Product displays include shelf space, prices card, and wall decoration. Product display is an important attribute of retail environment; retailers have to allocate a reasonable capital to product displays in order to attract more consumers (Tiapana, 2009). Product displays in a store attracts the attention of customer towards the store promotion. It will stimulate customers' impulsive buying behavior instead of planned purchase (Inman, Winer & Ferraro 2009). Other than that, product display designed by retailers can change the time and effort that consumers willing to spend in the shop (Tiapana, 2009). The greater the no. of product flavor and brands will lead to greater tendency of customer purchase intention (Inman, 2001).

Store layout is defined as convenient movement and relaxing space that allows customers to move easily or refer to the traffic flow of the retail shop (Baker, Parasuraman, Grewal & Voss 2002; Levy & Weitz, 2009). Store layout is a very important factor that could affect consumer's behavior and a critical factor in the creation of store image (Tiapana, 2009). Good layouts provide a great viewing assortment of the product category and also the availability of different product categories. Besides, good layout can also make the consumers have no difficulties in finding what their need in the store (Rahma & Purwanegara, 2013). It gives a greater impression of the merchandise to the customer and easier customer to find out

their needs and wants in order to enhance their purchase intention (Morales, Kahn, Alister & Broniarczk 2005). Signage is defined as a graphic that used to connect the merchandise with the customer. For example, when the customer can find the merchandise easily, they will high possibility to purchase on the merchandise (Bitner, 1992).

Ambient factor is referring to the background of the store environment, which is typically not noticed by the customer, unless it is too over (Ullakonoja, 2011; Baker, Levy & Grewal, 1992). These factors include music, temperature, scent, lighting and noise of the retail shop. Customer's psychological and emotional feelings can be affected by store atmosphere. Ambient factor such as music, temperature can help consumers to calm down and release their stress (Singh, 2008).

Music can be considered as an atmospheric variable that can influence evaluation, mood, willingness to buy and consumer behavior. According to Jaatmaa (2007), the ambient music has been implied into many environments, such as supermarket, malls, and several of specialty store. Music performed in the store can increase the time that consumers are willing to spend in the store (Liao, Huang, Huang & Deeseentham, 2012). There are several past studies suggesting that the slow tempo of the music makes people stay longer in a store and stimulate their purchase intention (Jaatmaa, 2007). Impulse of purchase can be triggered by music. Some of the past studies mentioned that the volume of the music will affect the customer's time spent in the store. If the music volume is higher, the time spent in the store is shorter (Smith & Curnow, 1966). There is another researcher who mentioned that music volume does not have an effect on the customer's time spent in store (Herrington & Capella, 1996). Besides that, music can also increase the expenditure on impulsive buyers.

Social factor refers to the existence of the salesperson, crowdedness of the environment, and the interaction between the customer and the salesperson (Baker, 1986; Bitner, 1992,). Social factor entail how the salesperson communicates with customer during the service process and how the appearance of the salesperson would affect the customer's perception on the quality of the shop (Turley & Milliman, 2000; Heide & Gronhaug, 2006; Lin & Chiang, 2009). If the customer perceives that the social interaction is higher, the customer purchase intention would be higher (Liao, Huang, Huang & Deeseentham, 2009).

The number of salespersons is an important factor that could influence the customer's buying emotion and satisfaction (Grewal & Sharma, 1991) as customers can spend less time and energy to search for the item or information needed when there is a sufficient number of salesperson serving them. The salesperson's appearance is playing an important role to evoke a better impression of the salesperson. According to Kumar and Kim (2014), the number of personnel, attire and friendliness are significant to the customer satisfaction. The salesperson's attitude will affect the customer behavior during the service period; once the customer is satisfied with the service of the salesperson, it will evoke the purchase intention of the customer (Liao, Huang, Huang & Deeseentham, 2009). Customer's perceived quality on the product is related to the presentation of the salesperson's attire and service quality (Singh, 2006; Kumar & Kim, 2014).

Crowdedness has been treated as a factor of consumer experience. Crowding can be divided into human crowding and spatial crowding (Eroglu, Machleit & Barr, 2005). When there is a high human density condition in the store, customer will perceive the longer the wait expectation. The social crowding will associate with the customer negative shopping outcome and lead to the dissatisfaction and also avoidance shopping behavior (Eroglu et al., 2005).

METHODOLOGY

This study has employed quantitative approach where questionnaire was distributed in person to the respondents. The target population of this research is Generation Y in Malaysia comprising people who are between 15 to 34 years of age which selected using judgmental sampling technique. As mentioned earlier, this group of people have higher purchasing power as compared to the other generation, thus, understanding of their purchase intention has become very significant. A pilot test has been carried out among 30 respondents in Kampar. Pilot test has been conducted to gather useful feedbacks from the respondents and to improve the overall quality of the questionnaire before commencement of the actual data collection. Overall, the Cronbach's Alpha value is 0.7 and above, therefore, all the measuring

variables are reliable and the questions used to measure the variables are consistent. Meanwhile, 384 completed questionnaires were tested for the accuracy of their measurement.

DATA ANALYSIS AND DISCUSSION

Multiple Regression analysis (Table 1) was employed in order to examine the strength of the relationship between the attributes of the store environment such as store image, store accessibility, exterior design, interior design ambient factor and social factor towards purchase intention among Generation Y.

On the whole, F=121.8 and p=<0.0001 show that the examined impact is significant where about 65.43% of variance in Generation Y purchase intention is explained by store image, store accessibility, exterior design, interior design ambient factor and social factor.

The standard estimate value shows the contribution of individual store environment attributes towards the Generation Y purchase intention. Store Image (<0.0001), Store Accessibility (0.034), Exterior Design (<0.0001), Interior Design (0.0022), and Social Factor (0.0001) have significant relationships with the Generation Y purchase intention justified by the p-values of less than $0.05(\alpha)$. However, it should be noted that Ambient Factor (0.0904) has no significant relationship with the Generation Y purchase intention justified by the p-value of more than $0.05(\alpha)$. This is because the other store environment attribute such as store image, store accessibility, exterior design, interior design, and social factor are significantly affecting purchase intention of Generation Y as compared to the ambient factors of store environment. According to Shahrulizza, Musa and Ali (2014), ambient factor has no significant impact on purchase intention and this factor may not be a concern of the attributes that affect customer purchase intention because it has less influence towards consumer purchase intention.

Table 1: Multiple Regression Analysis

Benefits	ANOVA		Adjusted R^2	Parameter Estimate	Std Estimate	t	P value
	F	P*					
(Constant)				0.16914	0	0.88	0.3781
Store Image				0.57332	0.48426	12.63	< .0001
Store Accessibility	121.8	<0.0001	0.6543	-0.07473	-0.07807	-2.13	0.034
Exterior Design				0.37572	0.30535	6.79	< .0001
Interior Design				0.13085	0.12496	3.08	0.0022
Ambient Factor				0.09662	0.08745	1.7	0.0904
Social Factor				-0.16679	-0.16141	-3.85	0.0001

Conclusion

Essentially the finding of this study intends to ascertain that store image as the key influencing attributes of Generation Y's purchase intention. These findings are also consistent with past studies which claimed that store image attributes such as reputation and product quality key determinants of store environment attributes which influencing the Generation Y's purchase intention. Lin and Liao (2012) also found that store image has significant impact on consumer purchase intention.

This study also expected to deliver valuable recommendation to both academics and practitioners in retailing industry for further enhancement of their business strategy. This study also believed to enrich the database of existing studies pertaining to store environment attributes that affect the purchase intention of Generation Y. Past studies has been concentrating on overall consumer preferences which stimulate their purchase intention. Whereas, this study is emphasizing on the Generation Y purchase intention which influence by the store environment attributes. Hence, it is important for retailers to develop relevant approach in order to attract these groups of target market as they tend to be the key contributor for the retailing industry.

Future researchers should focus more on the other factors such as country of origin apart from the factors discussed in order to enhance the current findings. Furthermore, future researchers should explore further the ambient factor as one of the insignificance attributes of store environment that affect the purchase intention of Generation Y.

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THE IMPLEMENTATION OF BUYER DECISION PROCESS IN AIRLINE INDUSTRIY. A REVIEW IN MALAYSIAN PERSPECTIVE.

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Abstract

Buyer decision is a process to produce a series of outputs in the form of purchase decisions or buyer response about a product or service and delivering information to people. The buyer response leads to purchase a product or service that impact on the organization profit maximization and sustainability. Organization emphasize to build strong relationship with buyers has become a marketing priority for current marketing environment. In terms of airline perspective, airline industries are the major contributor for nation and global economy. Subsequently, airline industries are facing high competitive market. Therefore, airline industries need to redesign their strategies that lead buyer to choose their airline. Thus, this paper focuses on how buyer decision process will apply airlines and how it will impact on buyer response. This paper will provide overview for airline industries to open-up platform for new marketing strategies to attract more passengers. In addition, after acquire the useful knowledge in understanding their passengers, organizations able to gain competitive advantage to compete with their competitive environment. Thus, this paper also helps for airline industry to build customer relationship in a long term perspective and maintain customer loyalty. Furthermore, it will help to improve their profitability and contribution on nation economy growth.

KEY WORDS: Buyer decision process, Buyer response, Customer loyalty, Airline industry.

INTRODUCTION

Service sector is one of the major contributors on economy, as it contributes over 70 per cent of gross domestic product (GDP) mentioned by Salunke (2013). Hoseiniet (2009) explained on the status of a country's transportation industry reflects the country's economy and industrial progress. Airline industry is one of the major service contributors in domestic and global GDP growth. Oxford dictionary defined airline industry is a system or organization that provides scheduled flights for passengers or cargo which used for carrying passengers and goods to different places.in addition, International air transport association (IATA) report (2013) explained on annual review about Airline Industry is a system of transportation part of Airlines industry moving people and goods using the airways one of the only true global businesses. Clemes (2008) cited it plays a dynamic role in moving people or products from one place to another, either being domestic or international. Currently, anyone can access the airline service from their respective air terminals.

In a highly competitive environment the provision of high quality services to passengers is the core competitive advantage for an airline's success and its sustained growth.

The air travel industry is part of a steadily growing service sector cited by Lovelock, Patterson, and Walker (2004). Ostrowski, OBrien, and Gordon (1993) suggest that the growth of the service sector not only offers business opportunities but also poses competitive threats for many service marketers, and this is particularly the case for the air travel industry. Traditionally, the airline industry was heavily regulated by governments on where and how airlines could operate Piercy(2001) . David and Mc.A.Baker (2013) and Tiernan (2008) mentioned the airline industry has been known as one of the most intangible service industries plays an important role in the international economy. R.Archana and Dr.M.V.Subha (2012) explained the airline segment has become the most important sector on the economic development of a country. Furthermore, Hardy (2009) discussed, air travel remains a large growing industry and it facilitates economic growth, world trade, international investment and tourism.

Thus, airlines should be considered as one of the important indicator of country development. By understanding the consumer's decision making towards airline services will make changes in airline industry. In addition to the increased competition between airline companies make the study of passengers' decision making for airline choice and the prediction of air travel demands valuable. In order to maintain their competitiveness, airline companies should be aware of the priorities and key factors by which the passengers make their choice among different Airlines. Naser Hamidi and Frouzan Rezaii (2013) mentioned about the buyer choice of a particular air flight is composed of two choice decisions in a multi airport region. The customer chooses the airline and the airport that best meets their needs. In order to become successful in the market, airline companies should be familiar with service marketing principles, use marketing techniques to expand their services, and have a deep understanding of customer's needs, expectations, and preferences. Durmaz (2011) discussed factors affecting the buyer decision.

In addition, Mahour Mellat Parast (2010) explained as competition intensifies due to changes in the industry structure and the emergence of new technologies, organizations are determined to reduce their operational cost while enhance their profitability. P.Satyanarayana (2012) explained on his research, In the Service Industry, It is important to recognize that what the buyers are demanding exclude products or features but the benefits offered by the service companies/providers. Producing added benefits thus helps the marketer to distinguish one product from another. Good design or style of service can form the basis of differentiation. This enables the company to create a personality for its service. Airline companies, particularly conventional airlines are experiencing aggressive competition due to the emergence of low cost carriers. In their struggle to attract and retain more customers, these airlines employ a wide array of strategies. Although price is the primary weapon of choice, airlines realise that competing solely on price is a no-win proposition Tseng and Chiu (2008). The service industry, including airlines, has been forced to find out new ways of generating competitive advantage. Therefore, airline industries get more exposure on buyer decision process and how it leads buyer response to choose their favourite airlines.

Type of Airline Providers

The new competitive environment between industries always result in some adjustment of the own business model to that of their competitor. Airline providers classified into three categories. According to Naganathan Venkatesh (2013) Full-Service Carriers (FSC), Low-cost carrier (LCC), Charter carrier (CC).these three type of provider providing their services domestic and global. Full Service carrier (FSC) A.Cento (2009) described, an airline company developed from the former state owned flag carrier, through the market deregulation process. Airline Company core business is focused on passenger, cargo and maintenance. It also has a global and domestic player, international and intercontinental markets are covered with short, medium and long haul flights from the hubs to almost every continent. Low-cost carrier (LCC) is also known as a low fare or no-frills airline. Nyshadham (2000), Jarach (2002), A.Cento (2009) explained on their research as an airline company designed to have a competitive advantage in terms of costs over an FSC. Charter Carrier (CC). A.Cento (2009) defined, as an airline company that operates flights outside normal schedules, by a hiring arrangement with a particular customer. A.Cento and (2009) mentioned Charter flights have acquired the more specific meaning of a flight whose only function is to transport holidaymakers to tourist destinations.

Challenges on Airline Industries in Malaysia.

Airline companies, particularly conventional airlines are experiencing aggressive competition due to the emergence of low cost carriers. In their struggle to attract and retain more customers, these airlines employ a wide array of strategies. Although price is the primary weapon of choice, airlines realize that competing solely on price is a no win proposition by Tseng and Chiu (2008). According to Agustin and Singh (2005) point of view contemporary marketing thought acknowledges that gaining and sustaining customer loyalty as the ultimate goal may be more important than achieving customer satisfaction .In addition, creating and maintaining brand loyalty with existing customers is critical for the survival of a company in a competitive environment cited by Heskett (2002), McMullan and Gilmore (2008) .In the airline industry context the problem is whether management can perceive correctly what passengers want and expect.

Moreover, expectations serve as standards or reference points for customers. The service industry, including airlines, has been forced to find out new ways of generating a competitive advantage current atmosphere of increased global competition, there is a continuous increase in customers' expectations and subsequent demands for improved service. In addition, Eleftherios, D.Katarelos and Iason Koufodontis (2012) explained, the deregulation act 1975 open up platform for low cost carrier development. It leads price war between airline providers. The airline market has changed radically in the last two decades. The renegotiation of previous bilateral agreements has placed the previously protected national carriers into a competitive and turbulent deregulated market. At the same time new strong competitors are appearing, pressuring airports for even more operational freedom cited by Delfmann (2005). Increased levels of competition have led to very low airfares especially for destinations that are simultaneously served by LCCs and traditional carriers. Jayaraman, Munusamy, Shankar, Chelliah and Sivamurugan Pandian (2011) explained, more cost effective to retain customers than to win new customers. New communication technology tools (social media) challenge industries in terms of customer loyalty and buyer response. Asif Zamri Zainol (2007) mentioned in his research there are a lot more areas to be explored and discovered to further understand on airline field with regards to Malaysia perspective. Thus, this paper focuses on implementing buyer decision process on airline industries in Malaysia and the industries get better buyer response.

LITERATURE REVIEW

Buyer decision process

According to Kotler (2004) buyers are individuals and households that buy the firms product for personal consumption). It often used to describe two different kinds of consuming entities. The personal buyer and the organizational buyer cited by Krishna (2010). The activities these buyers undertake when obtaining, consuming, and disposing of products and a service is known as consumer behaviour. Consumer behaviour involves studying how people buy, what they buy, when they buy and why they buy. When a consumer wanted to make the purchase decision, they will pass through the process .The five-stage buying decision process model is a widely used tool for marketers to gain a better understanding about their customers and their behaviour. The idea of the model is that when a customer purchases an item, the purchase event is a forward-moving process, which begins long before the actual purchase and continues even after the purchase is made. As the name implies, there are five different stages in the process, which are need recognition, information search, and evaluation of alternatives, purchase decision, and post purchase behaviour by Blackwell, Miniard, and Engel (2006). At last, the consumer will choose a product or brand to consume from various choices in the market. However, these factors affecting the buying behaviour of buyer vary due to diverse environmental and individual determinants by Mesay Sata (2013).Thus, airline industries also implement buyer decision process in order to know about each stages and how it will help for buyer response to choose their preferred airlines . Apart from that this also create new way to identify their target audience and maintain airlines market sustainability in short and long term perspective. The below diagram explain the buyer decision process.
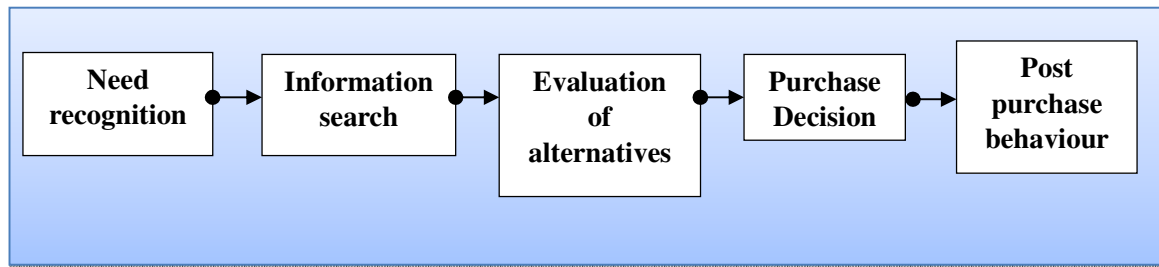
Figure 2.1. Buyer decision process adopted Kotler (2004)

a) Need recognition

Fatimah Furaiji (2012) explained, the buying process begins with need recognition (sometimes referred to as problem recognition), where the buyer senses a difference between their actual desires and a state they preference. This need can be caused by either an internal or external stimuli. The process begins with the stimulation of a need where the consumer is faced with an imbalance between the actual and desired states of a need, which may be large to stimulate search. Beside that, other factors also lead in the buyer's actual and desired state influence need recognition as well. One of the straight noticeable influences is demographic factors, including age, sex, income, race, education, household size, and marital status. There are also inferred influences which affect need recognition. Kotler (2006) cited Psychological factors also play a major role in these inferred influences. These psychological factors can be motivation is the basis of all consumer behaviour. The best way to classify consumer needs as far as motivation drives. Apart from that, Perception also reflects how the buyers see themselves and their environments, which can turn affects not only the need recognition phase, but the other phase as well. Furthermore, Fatimah Furaiji (2012) cited depending on the buyer's needs and perceptions, need recognition may take different forms. In addition to purchasing something totally new or substituting an item may substitute a product that fills their needs completely with another. This characteristic called as variety seeking. The higher purchase frequencies stimulate repeat purchasing rather than variety-seeking behaviour. In terms of airline industries their buyers seeking in low price with other services. The industries provide services can able to fulfil their buyer needs and expectations. Therefore airline industries get to explore their service with buyer needs and also make buyers comfortable to consume their service.

3

b) Information search

The next stage in the buying process is information search, where the consumer uses different channels to gather information about available products, which might fulfil the needs discussed above. After identified the need the consumer searches for information about the various alternatives available to satisfy the need. The consumer's information search will eventually generate a set of preferred alternatives. The consumer will use the information stored in memory and those obtained from outside sources to developed set of criteria. It extended the awareness set to involve of three different subsets. They define the evoked set as a set of products of which the consumer has a positive opinion and from which they are likely to make their purchase. Inert set includes products for which the consumer has neither negative nor positive opinion. The consumer may be aware of such products but not have formed an opinion, possibly due to lack of knowledge. The final set is called the inept set, which includes the products for which the consumer has formed a negative opinion, and therefore these products will not to be purchased.

Kotler (2006) defines two levels of arousal during the information search phase. In the milder state, heightened attention, the consumer just becomes more familiar with the different products that might be suitable for them. In this state, the consumer only pays attention to advertisements and conversations about the subject. In the next state, active information search, the consumer actively engages these conversations and searches for information about different brands, models, etc. Fatimah

Furaiji (2012) defines four methods by which buyer receive product/service information. Personal sources include family and friends. Commercial sources include advertising and salespersons. Public sources include mass media and consumer-rating organizations. Experimental sources include examining and using the product itself. Most of the information comes from the commercial sources. Kotler (2006) of all the possible products and brands that might satisfy a customer's needs, only a handful will be brought to the consumer's attention. As more information about the products of the consideration set is gathered and evaluated, the final purchase decision will be made from the choice set. Information search (including price and product information) usually incurs search effort. When purchasing a product from a brick-and-mortar store, a consumer has to spend time browsing the walkways. If the consumer cannot find a suitable product it does effort on additional searches. Online search engines provide the information about particular product/service details information.it made buyers can compare the product details in different brand to choose the best.

Therefore airline industries also provide information along with proper customer service management to engage most buyer response on it. Furthermore airline industries also consider on their communication tools and how it deliver the right message to the target people. The right message reach on time engage buyers to select the service. Therefore this stage is one of the important stages for airline industry to understand buyer's needs and providing clear information about their current service package.

c) Evaluation of alternatives

A.Abdul Brosekhan and Dr.C.Muthu Velayutham (2013), Shahrzad Jeddi, Zeinab Atefi (2013) and Urban (1996) cited, as buyer reduce their alternatives to the choice set, they have first acquired information about the products and then compared and evaluated them .Buyer tend to set rules, or attribute cut-offs for the products in their choice set. These are the minimum acceptable levels that an alternative must possess in order to be considered as the final purchase. Huber and Klein (1991) have showed two characteristics to these cut-offs. The first one states that when the reliability of the attribute the customer is considering is high (the information comes from a reliable source, at least in the customer's eyes), the cut-offs on that attribute are more severe than when reliability is low. The second characteristic is that when there is a positive correlation between two attributes, the cut-offs on those attributes are more severe than they would be if the correlation was negative or of equal magnitude.. As no consumer has unlimited resources, propose that buyer allocate their time, psychic and effort. More precisely, buyer try to maximize the value of time spent gaining information about the product. The evaluations can be done from website, Medias, promotion campaign and social media.

Bhatnagar (2004) found that price was not one of the major factors for buyers when they evaluate different alternatives. This may be because buyer might think the the prices are broadly similar and so they do not need to pay much attention to the price tag. Evaluation of product options, which incurs evaluation effort. It involves examining and comparing product attributes such as price, brand, quality, and others. Despite the reduced search costs for price information, Alok Gupta (2004) cited the online medium can facilitate information search and it might impact on evaluation of product options in terms of non-price attributes.

Therefore this paper focus on buyer decision process implementing on airline industries and how it help industries to enhance their strategies on buyer segment in order to get loyalty. Apart from that airline industries can able to redesign their promotion packages and service offers based on other aspect which creates more attention from buyers.

d) Purchase decision

 After the evaluation stage, according to Kotler (2006) the consumer has ranked the items in the choice set in some sort of order but not always will the number one thing be selected. There are two factors that come between the evaluation and purchase decision stages. First there are the attitudes of others, where best friends or community pressure may change a consumer's preference ranking for a

certain brand even if they intended to buy a different one. Secondly there might be some unpredicted situational factors that affect the purchase decision. A.Abdul Brosekhan and Dr.C.Muthu Velayutham (2013), Shahrzad Jeddi and Zeinab Atefi (2013) cited the price of the product may have suddenly increase or some other purchase becomes more crucial.

Fatimah Furaiji (2012) mentioned Even when a consumer has decided the exact product they are going to buy, there are still a few purchase sub-decisions to be made. These sub-decisions include price range, point of sale, time of purchase, volume of purchase, and method of payment. Sojka and Giese (2003) the first of these characteristics are the standards the individual has set for themselves. If buyer has set certain goals and norms and they know exactly what they want, they are less likely to act on impulse. This also reduces the vulnerability to sales personnel and advertisers. The second characteristic is monitoring. People who keep better track on their relevant behaviour are less prone to lose their self-control. Third and most important, is the consumer's capacity to change. Even if the two previous ingredients fail, there must be something inside the consumer that is willing to make the change and purchase the certain item their impulses. Apart from that, industries communication management and social responsibility also impact on purchase decision.

Therefore, airline industries also need to focus on buyers purchasing point of view and encourage passenger to fly more. In addition this is the stage impact on industries financial and market growth whereby if more people purchase tickets airline industry financial and market can provide positive sign. If the buyers purchasing rate decrease or slow it directly impact on airline industry. Hence airline industry able to identify their weak /lack of strategy on purchase decision stage and implement new strategies to get more buyer response.

e) Post-purchase behaviour

According to Kotler (2006) the purchase process remains even after the actual purchase is made. Post-purchase evaluation is carried out with a view to aid future decision-making. Good experience with a brand will provide information that may lead the customer to that brand when a similar product is to be purchased. Dissatisfaction may result in post-purchase dissonance. If marketers and retailers want the customers to return, they must understand their behaviour after the purchase as well. Fatimah Furaiji (2012) cited post purchase behaviour can be divided into two subgroups: post purchase satisfaction and post purchase actions. When it comes to post purchase satisfaction, there is evidence offered by Mittal and Kamakura that buyer with different characteristics have different thresholds when it comes to loyalty towards the store even if they were dissatisfied with their purchase. In Oliver (1999) point of view has further discussed the concepts of loyalty (post purchase action) and (post purchase) satisfaction. In support, Lamb (2004) stated that when buying products, buyer expect certain outcomes or benefits to accrue from the purchase.

How well these expectations are met determines whether the consumer is satisfied or dissatisfied with the purchase. After a consumer makes an important choice decision, he or she experiences an intense need to confirm the wisdom of that decision. The flip side is that he or she wants to avoid the disconfirmation. One of the processes that occur at this stage is cognitive dissonance: post purchases uncertainty the buyer experiences about the wisdom of the choice. Methods of reducing dissonance and confirming the soundness of one's decision are seeking further positive information about Robinson and Etherington (2006).this stage is the most crucial stage for industries because buyer's characteristic and preference not fixed one. It based on stimuli and environmental factors motive to consume that service or product. Present competitive market environment buyer switching behaviour increase and loyalty become decrease. Because industries using strategy to pull buyers from one to another.

Furthermore post purchase stage shows how the buyers loyal to the particular brand by their revisit or repurchase to consume the industry services.it directly or indirectly create strong brand image and position among their competitors. Therefore, airline industries need to be more concern on this stage to maintain the existing buyers and get new buyers.

Buyer response

Abdul Brosekhan (2008) stated in present marketing scenario, the study of buyer behaviour has become essential. Buyers are the kings of markets without them no business organization can run. All the activities of the business concerns end with buyer and consumer satisfaction. Behaviour study is based on consumer buying behaviour, with the customer playing the three distinct roles of user, payer and buyer. Buying behaviour has become an integral part of strategic market planning. Consumer behaviour has been always of great interest to marketers. The knowledge of buying behaviour helps the marketer to understand how buyers think, feel and select from alternatives like products, brands and the like and how the buyer are influenced by their environment, the reference groups, family, and salespersons and so on. Accoring to kotler (2008) and Soloman (2010) stated a consumer's buying behaviour is influenced by cultural, social, personal and psychological factors. Most of these factors are uncontrollable and beyond the hands of marketers but they have to be considered while trying to understand the complex behaviour of the buyer. In the marketing context, the term consumer refers not only to the act of purchase itself, but also to patterns of aggregate buying which include pre-purchase and post-purchase activities. Pre-purchase activity might consist of the growing awareness of a need or want and a search for and evaluation of information about the products and brands that might satisfy it. Post-purchase activities include the evaluation of the purchased item in use and the reduction of any anxiety which accompanies the purchase of expensive and infrequently-bought items. Each of these has implications for purchase and repurchase and they are amenable in differing degrees to marketer influence.

Teng, Laroche and Huihuang (2007) mentioned that buyer response needs assessment of all available Brands. Customers experience diverse assessment criteria when making any purchase decision for example brand, prices, features, quality, performance, user friendliness and convenience by Khan (2012).Muhammad Irfan Tariq (2013) and Baseer Ali Durrani (2015) stated the marketplace of today has undergone a significant change, where we have gone from selling and promoting products and services to selling and enticing customers through experiences. Joy and Sherry(2003) mentioned Buyer are spending more time making decisions about what to consume and the number of products to choose from has increased tremendously, making it harder and more time-consuming to decide what products to buy. According to Ekstrom (2010) and Reimann (2010) states that the consumer's basic needs have started to become content, creating a great need to fully understand what it is that affect customers' throughout the process of purchase .Ajzen(2008) cited It is a well-established thought that consumer behaviour is about the act to buy a specific product, but the researchers of today have an interest that goes beyond that and they want to understand the process of searching and selecting as well as the process of service .

Solomon (2010) mentioned having previously been viewed as the interaction between a producer and its buyer at the time of purchase, the view on consumer behaviour has therefore shifted It is now looked upon as an on-going process and not an isolated event of a consumer handing over money and thereby receiving the selected product.Based on this, it is becoming important to understand what it is that influences the buyer and the choices they make, where knowledge of this can make it easier for companies and marketers to create an experience that provides the customer with satisfaction throughout the selection process by Bettman (2008). Hence needs recognition, information search, evaluation of alternatives, purchase decision and post purchase stage consider on set strategy development and implement the appropriate plans to push their buyers to consume their service. Therefore airline industries should focus on implementing this five stage buyer decision process model to close the gaps. It enhances to get more buyer response towards an airline industry

CONCEPTUAL FRAMEWORK

Figure 1. Proposed Conceptual Frame Work
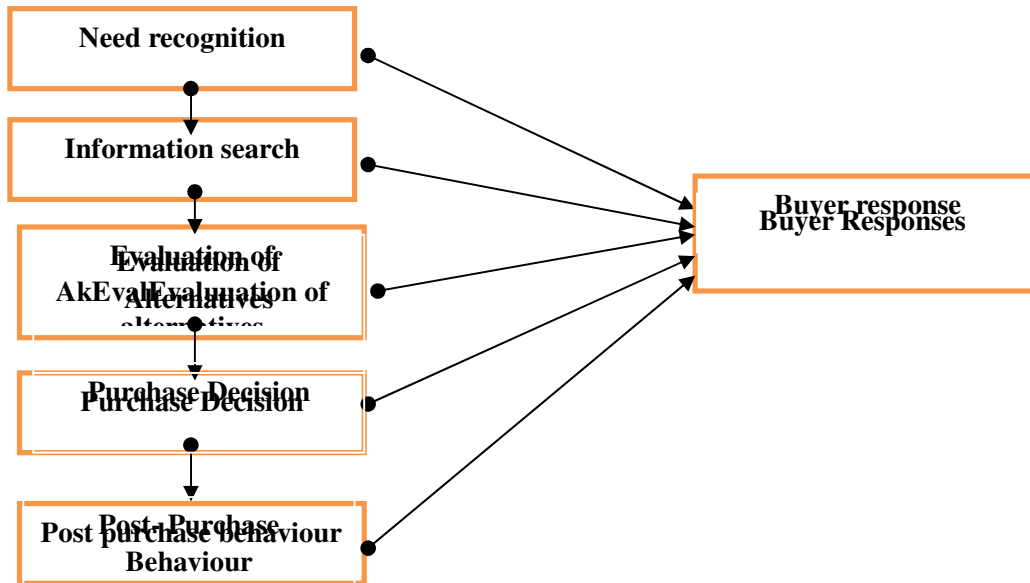
CONCLUSION AND DISCUSSION

According Soloman (2010) consumer research is pertinent so as to enable industries to understand changing consumer needs, wants, and motivations and thereby devise the most appropriate mix for their market. Then, to the marketer the dynamic nature of consumer behaviour implies rapid product development, changing communications, and distribution strategies in order to be more effective. According to Kotler (2006) buying behaviour involves the psychological processes that buyer go through in recognizing their needs, finding ways to solve these needs, making purchase decisions, interpret information, make plans, and implement these plans. In particular the buying process of consumer behaviour is of more importance to marketing practitioners than the consumption process. So it is essential for marketers to understand the consumer behaviour and their decision making process.

Asif Zamri Zainol (2007) stated the very essence of airline survivability is the services and facilities provided. Airline companies, particularly conventional airlines are experiencing aggressive competition due to the emergence of low cost carriers. In their struggle to attract and retain more customers, these airlines employ a wide array of strategies. Although price is the primary weapon of choice, airlines realise that competing solely on price is a no-win proposition by Tseng and Chiu (2008).The service industry, including airlines, has been forced to find out new ways of generating competitive advantage. Attitude can increase business performance cited by Keiningham, Aksoy and Cooil (2008). Consequently, loyal consumers have fewer reasons to engage in an extended information search among alternatives, thus reducing the probability of switching to other brands stated by Gounaris and Stathakopoulos (2004). Loyal customers are highly attractive to businesses because they are less price sensitive and require a lower effort to communicate with other alternatives by Gomez, Arranz and Cillan(2006).Customer loyalty has become a key element in the development and implementation of airlines strategies in the competitive milieu in which they operate stated byy Forgas, Moliner, Sánchez and Palau(2010).

According to Oliver (1999), brand loyalty is a deeply held psychological commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand

or same brand-set purchasing .Nowadays, transportation has become an important part of human's life, especially convenient and rapid land, water, and air transportation. Inevitably, transportation plays a major role in our daily lives. In particular, air transportation has been developed and enhanced to meet consumers' higher demands of communication or transportation in terms of both convenience and speed. Recently, air transportation is indispensable in travelling as it accommodates business and private transactions in terms of convenience and timeliness. Therefore, competition in the airline industry is continually intense   mentioned by Sittichai   Charoensettasilp and Chong Wu(2013).The Airline Deregulation Act 1978 changed the competitive structure of the airline industry Levin(1987) and Bailey, Graham, and Kaplan(1985). Now, airline companies were allowed to set prices as well as enter and exit the industry upon meeting insurance and safety requirements.   This limited revolution in the freedom for airlines to compete led to many new entries to the industry, and some considerable carnage. Therefore this research paper enables to understand the base in consumer buying behaviour, which helps airline industries to implement buyer decision process to get more buyer response. The review of the decision making models undertaken here highlights the complexity of consumer choices and identifies the key processes that lead to behaviour. Moreover, the factors influencing consumer behaviour are economic, technological, cultural, social, personal factors/buyers profile (age & life cycle stage, occupation and income factor, life style, social class, motives and attitude) help for Limited decision making, Extensive decision making it focus on five-stage buying decision process of buyer.

The idea of the model is that when a buyer purchases an item, it is a forward-moving process, which begins long before the actual purchase and continues even after the purchase is made. The five stage process includes, need recognition, information search, evaluation of alternatives, purchase decision, and post purchase behaviour. Hence, this study is a summary of literature, which serves as a base for airline industries to implementing behaviour. The need of recognition mainly focus on the individual actual needs and his/her desires how might influence with demographic profiles, environmental factors and psychological factors. These factors impact on the person choice on product or services. At the same information search stage also impact on buyers response whereby the industry providing information how long can be set into people mind. The information can spread from personal source like friends and family, commercial source like promotion, advertisements and sales persons. Public sources such as social Medias and websites. These sources directly or indirectly influence on buyers to response their choice of services. Evaluation of alternative stage is the stage buyers compare with the competitive environment. In terms of price, promotions, time frame /seasonal, brand image , quality of service and so on .It effect on buyers response to purchase a product r services. The purchase decision stage almost the buyer decide to get a product but some time buyers consider about how much want to buy, flexible payment methods also consider to be a deciding factor on buyer response to wards choice. The final stage is post purchase behaviour .In the related marketing literature, creating and maintaining lasting relations with customers is key to achieving competitive advantages for service companies cited by Velazquez (2011). The significance of post-purchase behavioural intentions has traditionally been highlighted in the literature from a perspective, as they have significant present and future values for company profits and continuity. After purchase buyer revisit might influence with past experience, present environmental and personal situation. Oliver (2010) cited in the long term, industries attract new customers by viral or social media.

Therefore airline industries implement this byer decision process in order to get more response in future. Social media pages update and response on time. This will create positive way with buyers and directly or indirectly motive those to visit the particular industry.In conclude have implementation of buyer decision process in airline industries give an impact by understanding the factors and buyer decision processes that are affecting decision making, Airline industries. It can plan and develop new strategies in order to get more passenger attention. In addition, after acquire the useful knowledge in understanding their passengers, organization are able to gain competitive advantage to compete with their rivalry in the competitive environment. Furthermore, this study may motivate airline industries who provide weak customer relationship service can improve their communication and marketing factors toward passenger preference. In Current position Malaysia airline industries passenger flow decrease compare with previous years. Therefore this implementation helps to develop new sales promotion, promotion campaign in future to attract more buyers. It will help industries to open-up platform for to redesign new

strategies to attract more passengers and maintain short and long-term sustainability with profit maximization.

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PERCEIVED FUNCTIONALITY VS. PERCEIVED CREDIBILITY: AN INVERSTIGATION ON EXPLANATION POWER TOWARDS INTENTION TO ADOPT MOBILE COMMERCE

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Abstract

Our study aims to investigate the explanatory power of perceived functionality (PF) and perceived credibility (PC) so that to understand the impact towards intention to adopt mobile commerce. The purpose is to identify the reasons concerning mobile commerce's functionality and credibility based on mobile users' perceptions. To test the construct validity and hypothesis, SPSS is used. The research findings have showed that perceived credibility has higher explanatory power than perceived functionality in the context of mobile commerce diffusion. The findings can provide useful ideas and insights for marketers, practitioners, and legislators regarding the importance of perceived functionality and credibility towards mobile commerce adoption and users' intention. Results from this research indicate that mobile service providers should increase their mobile device security in order to encourage higher adoption.

Keywords: Perceived credibility, perceived functionality, mobile-commerce adoption

INTRODUCTION

M-commerce is known as extension of e-commerce to wireless media (Siau, Lim & Shen, 2001). M-commerce defined as transactions by using a wireless device and data connection to induce in the value transfer in exchange for goods, services and information (Andreou, Leonidou, Mavromoustakos, and Pitsillides, 2002). In other words, it emphasizes on the mobile devices, such as laptops, phones and Personal Digital Assistants to conduct buying and selling (Andreou et al., 2002). As e-commerce and m-commerce offer comparable crucial business principles and comparative business models on the basis of wireless transactions, thus, m-commerce considered as another pathway through which to add value to e-commerce processes (Coursaris, Hassanein & Head, 2003).

There are different characteristics between m-commerce and e-commerce. Firstly, m-commerce is relatively high attractive because of its efficient and prompt accessibility. Mobility services and transactions facilitated in anytime and anywhere (Sumita and Yoshii, 2010). Secondly, information and services provided in m-commerce are personalized and appropriate to specific user groups. Unlike e-commerce, mobile devices are normally owned by a single user (Bang, Han, Animesh & Hwang, 2013). Lastly, low usability and small screens of mobile devices able to reduce the complexity of m-commerce channel. There is relative less complex navigation and less time spent in m-commerce webpages (Bang et al., 2013).

There is nearly 25 billion of sales have been made by shoppers who used mobile devices to conduct purchases in 2012 (Musil, 2013). Mobile devices also induced traditional sales which expected to reach 600 billion in the next four years (Deloitte, 2012). According to Chong, Chong, Ooi and Lin (2011), m-commerce is currently considered as the potential business model that able to bring greater effect on business industries and communities in the early 2000s. Continuous development of technological in mobile devices, mobile web and mobile computing enhance the growth rate in m-commerce (MMA, 2010). Mobile devices have been used by many customers to initiate shopping and improve traditional shopping experiences. For example, customers use mobile devices to gain product information, check product availability, and get coupon (MMA, 2010). According to Xie, Zhang and Zeng (2009), the number of mobile devices users was estimated to surpass the number of Internet users in several countries. Therefore, many people may use mobile devices to conduct business (Church and Oliver, 2011).

Chen, Lee, and Zhang (2013) found that the development of m-commerce has been gaining popularity throughout the world in recent years. It is because the trend of using mobile device among the phone users in anywhere and anytime as the development of the mobile device has bring a plenty of advantages with its usability to the users in different areas (Kire Jakimoski, 2014). Meanwhile, Shahrokh (2013) also mentioned that customers are familiar with mobile device but m-commerce applications are still new to them. Thus, only minority of users adopted the m-commerce (Yan & Yang, 2015). Smaller displays screen and complex keypads of the mobile devices as the reasons causing people reluctant to adopt m-commerce (Yang, Chen, & Wei, 2015).

According to Yan and Yang (2015), the lack of control toward the mobile payment will influence the intention to adopt the m-commerce among the adopters. It will bring a greater risk and uncertainty due to the lack of control. In comparison with the wired networks, mobile networks are easier for hacker to intercept the user's information (Lin, Lu, Wang, & Wei, 2011). Thus, it will lead the adopters to concern about the m-commerce security. Other than that, those adopters will concern about privacy issue whether the mobile payment can protect their personal account and information from the particular problems and it may cause them not willing to adopt if they do not contribute enough trust to the mobile payment (Lin et al. 2011; Yan & Yang, 2015). A study investigated by Lee, Lee, Park, and Yang (2014) has determined that the adopters who lack of trust will influence to the internet merchants or electronic channel and it will lead the adopters unwilling to involve in the m-commerce activities for the doubt of the security and privacy (Hung, Hsieh, & Yang, 2012). Besides that, Li and Yeh (2010) stated that the network capability such as connection speed and the interface design of the mobile device was challenged by gaining the trust for the m-vendors. The greater risk and uncertainties caused adopters contribute insufficient trust to the m-commerce transaction (Lin et al., 2011). To address these problems, this study helps to bridge the gap by examining the explanation power of PF and PC toward the intention to adopt m-commerce.

LITERATURE REVIEW

Intention to adopt M-commerce

According to Kao (2009), m-commerce is identified as the application of mobile devices and internet connection to conduct transaction which results in exchange of information and value transfer. Juniwati (2014) defined intention as people who have conceived a plan to execute or not to execute their manners in the future while adoption refers to an individual decide to become a user of a product or service. In this research, intention to adopt m-commerce as the DV which refers to the consumers intends to use mobile devices to engage in mobile transaction with sellers (Pavlou, Lie & Dimoka, 2007).

According to Pavlou et al. (2007), the consumer engagement in m-commerce adoption is getting and providing information to sellers and at last make the actual purchase. They stated that theory of implementation intention was used to link the behavioral intention (BI) with the process of consumer engagement in m-commerce. To buy a product, intention is formed from consumer needs while the intention is implemented by fulfilling their needs (Gollwitzer, 1999). Pavlou et al. (2007) found that getting and giving information as the implementation intentions to help achieving the goal behavior which is purchasing in the final action.

Technology acceptance model (TAM) is used by Fred D. Davis to explain the users' intention to adopt m-commerce and acceptance of mobile technological devices. It is simple and credible whenever it is used to describe users' acceptance towards technology (Bourgonjon, Valcke, Soetaert, & Schellens, 2010). Additionally, TAM is applied by Buahom and Yu (2013) to determine the elements that affect the intention of user to adopt mobile commerce. Likewise, perceived usefulness (PU) and perceived ease of use (PEOU) significantly influence the BI to adopt mobile commerce (Gitau & Nzuki, 2014).

Perceived Functionality (PF)

According to Childers, Carr, Peck, and Carson (2001), PF or utilitarian encourages consumers to use internet or interactive media and it is essential to be achieved through electronic commerce. In the view of utilitarian, consumers care about buying products with efficient and prompt manner (Childers et al, 2001). However, Childers et al. (2001) also studied instrumental and hedonic motivations which are characterized to correspond the adoption of interactive buying behavior to a new development of technology.

In the context of TAM, PU and PEOU as the functions in mobile technology acceptance process according to Davis (1989). PU is the antecedent factor of PEOU, whereas PU itself functions the intention (Liu & Li, 2011). Past studies have proved that the determinants of PU and PEOU are perceived as functionality in which they fit between a user's needs and a specific function (Dishaw & Strong, 1999). Consumers perceive functionality and utilitarian as PU according to Childers et al. (2001). Menon and Kahn (2002) also said that consumer perceptions on both of these dimensions are directed to the PU and PEOU.

Perceived Credibility (PC)

In the technology commerce environment, it is important to deliver the PC to adopters to make them adopt m-commerce. There are previous studies had mentioned that PC involved with various type of dimensions to study mobile technology adoption. Sun and Han (2002) revealed that PC is a belief and it can be trusted even under the unanticipated situation which classify to perceived trust. Meanwhile, PC also defines as comfortable feeling and free of uncertainty when using a particular technology by Jacoby and Kaplan (1972), it generally classify to perceived risk. Furthermore, Wang, et al. (2003) indicated that the PC is the degree of an individual has faith in using the m-service without the threats of privacy and security. Moreover, Yu (2012) had used perceived trust, perceived risk, perceived privacy concern, and security concern to delegate as PC to study factors of affecting individuals to adopt mobile banking. Hence, it is generally to agree that perceived trust, perceived risk, perceived privacy concern, and security concern are classified into PC.

Perceived Trust (PT)

Wang et al. (2003) had applied PT as the dimension of PC to study how it brings impact to the behavior of adopters. Trust is characterized as the willingness of a party to be defenseless against the activities of another party (Mayer, Davis & Schoorman, 1995). Nah and Davis (2002) mentioned that trust has played a very important role in the relationship between the company and customer. Besides, PT is significant in affecting the user behavior to adopt the m-commerce (Wei et al., 2009). Siau and Shen (2003) has stated that many factors will influence the trust to adopt m-commerce included culture effect, information quality, usability of wireless devices and m-commerce websites, customer information's privacy and mobile transaction's security. Lin and Wang (2006) also mentioned that trust has the significant influence in building the mobile user loyalty and satisfaction.

Perceived Risk (PR)

Featherman and Pavlou (2003) stated that the PR is the significant variable in managing the relationship between the buyer and seller. Adopters will concern about the risk of their personal information such as the username and password might be stolen or hacked, therefore it will influence the extent of PC to the adopters (Jeong & Yoon, 2013). According to Forsythe & Shi (2003), there are four

types of the risk within the m-commerce activities which are psychological, time, financial, and product's performance. Jarvenpaa, Tractinsky & Vitale (2000) indicated that the higher degree of PR will lead to reduce the consumer's intention to involve in m-commerce activities. PR characterized as a noticeable obstruction to the consumer acceptance of m-commerce (Kim, Ferrin, & Rao, 2009). The wireless technology-based of m-commerce system are less accurate in information interception and high uncertainty than conventional broadband-based web system (Xu, Teo, Tan & Agarwal, 2009). Adoption of m-commerce is involving more instability, vulnerability and uncertainty (Xu et al., 2009).

Perceived Privacy Concern (PPC)

Amin, Hamid, Lada and Anis (2008) had investigated that one of the dimension of PC is PPC. Adopters are concern with the exposure of their private personal information in mobile device and it will bring the impact to the degree of PC directly (Jeong & Yoon, 2013). Privacy indicated to deal with degree of control and entity (Dutta & Macrohan, 2002). Therefore, consumer information's transmission and secure storage is an integral step to enhance the privacy concern (Miyazaki & Fernandez, 2001). According to Malhotra, Kim, & Agarwal (2004), consumers' privacy is the significant issue in m-commerce activities where they concern about financial and personal information provided to companies through internet. Moreover, location-based services and location tracking are unique components of m-commerce which allow more individual data to be gathered such as social relationships and location information (Milne, George & Andrew, 2003). Therefore, privacy issue become more critical and distinctive because of the unique component of m-commerce (Milne et al., 2003)

Security concern (SC)

Security signifies that using the procedures, policies and technical measures to prevent (Laudon & Laudon, 2003). "Security" implicates that any contents are vulnerable by the intrusion of the unauthorized persons (Dutta & Macrohan, 2002). According to Salisbury et al., (2001), perceived web security is believed that the Internet is safe to transmit sensitive information. Even security enforcement mechanisms are adopted, consumers still dissatisfy with the security on the Internet (Miyazaki & Fernandez, 2001; Zellweger, 1997). As a result, Wang et al. (2003) applied the PC to reflect the SC towards m-commerce adoption in TAM to study how the security will influence the level of PC. Udo (2001) stated that the main reason that the users do not buy from online is because of the SC. This high barrier of online shopping caused them reluctant to do internet commerce. There is a significant difference between m-commerce and e-commerce which the m-commerce has created plenty of new security exposures such as mobile device might be lost, damaged and stolen, due to the differences in both technologies (Chari, 2001).

Hypotheses Development

Jung, Perez, and Wiley (2009) stated that perceived functionality (PF) has the strong connection towards the behavioral intention; therefore it is in line with PF has the explanatory power towards intention to involve in m-commerce activities. There have lots of studies applied the PU and PEOU in their study such as Nassuora (2013) used PU and PEOU as IVs to test the affecting factors which will influence the m-commerce adoption of consumers and Vasileiadis (2014) also applied PU and PEOU to study the security concerns and trust in the m-commerce adoption. Hence, we proposed the following hypothesis:

H1: Perceived functionality has an explanatory power on the intention to adopt m-commerce

Previous studies suggested perceived credibility (PC) had been fully supported that PC not only able to apply in impacting mobile banking adoption, but also other technology adoption (Luarn& Lin, 2005).Hence, it accords with the PC towards intention to adopt m-commerce has included the particular impact. Yang et al. (2015) had applied perceived risk (PR) and perceived trust (PT) in their study to understand consumers' web-mobile shopping extension behavior. Besides, Kumar and Mukherjee (2013) had studied security concern (SC) to test the determinants of purchase intentions through a wireless

device by applying PC and SC, and Nasuora (2013) also used PT and PC as the factors to adopt m-commerce. Hence, we proposed the following hypothesis:

H2: Perceived credibility has an explanation power on the intention to adopt m-commerce

CONCEPTUAL FRAMEWORK
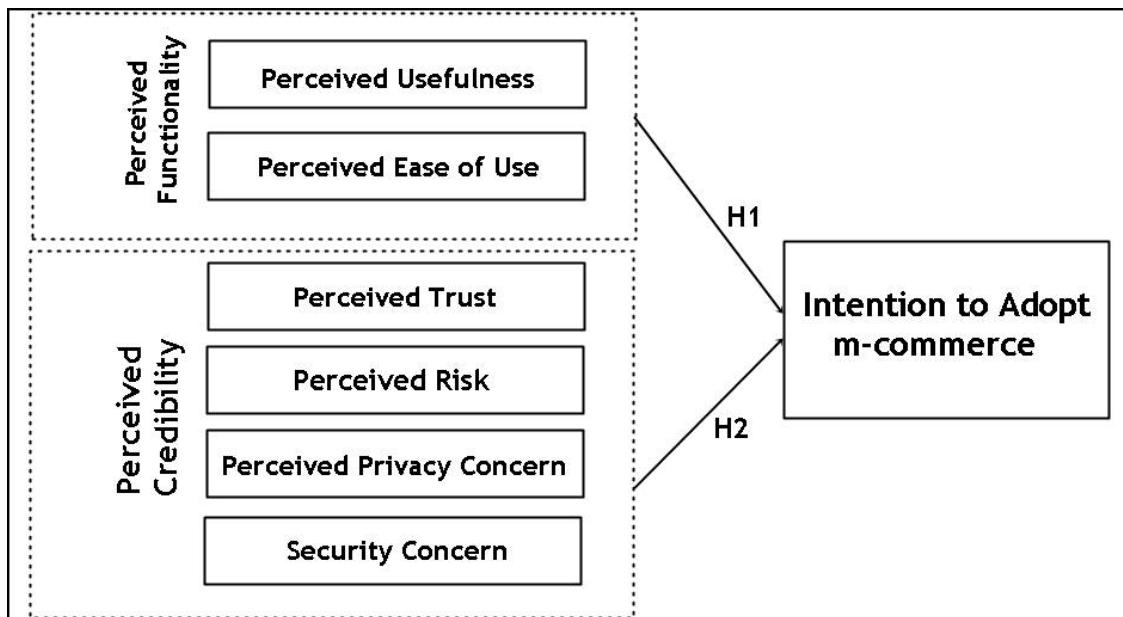
RESEARCH METHODOLOGY

The target population for the study is students of university and college who intend to involve in m-commerce activities. University and college students are chosen as they are constituted of difference backgrounds, races, and reversed geographical origins. According to Hutcheson and Sofroniou (1999), the sample size should be at lowest from 150-300. Among 170 questionnaires distributed, 8 questionnaires are incomplete which left 162 qualified questionnaires.

DATA ANALYSIS

Respondent Demographic Profile

Frequency and percentage of the demographic profile of 162 respondents are showed in the Table 4.1

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	Variable	Frequency	Percentage (%)
Gender	Female	94	58.0
	Male	68	42.0
Age	Below 20 years old	55	34.0
	21 – 25 years old	106	65.4
	26 – 30 years old	1	0.6
Qualification	Diploma/Advanced Diploma	12	7.4
	Foundation	41	25.3
	Bachelor Degree	109	67.3
Smartphone	Yes	158	97.5
	No	4	2.5
M-commerce	Yes	104	64.2
	No	58	35.8

Table 4.14 Reliability Analysis of Research Study

No.	Independent and dependent variables (IV & DV)	Cronbach's Alpha	No. of Items
1.	**IV I: Perceived Functionality**		
	Perceived Usefulness (PU)	.908	5
	Perceived Ease of Use (PEOU)	.909	4
2.	**IV II: Perceived Credibility**		
	Perceived Trust (PT)	.785	3
	Perceived Risk (PR)	.845	4
	Perceived Privacy Concern (PPC)	.889	6
	Security Concern (SC)	.796	6
3.	DV: Intention to Adopt (IA)	.847	2

Cronbach's alpha is calculated to ensure and appraise the reliability of measure (Malhotra, 2010). The rule of thumb for Cronbach's alpha is that the value which larger than 0.7 is considered acceptable and strong (Malhotra, 2010).

Correlations

		PU	PEOU	PT	PR	PPC	SC	IA
IA	Pearson Correlation	.419**	.429**	.272**	.192*	.210**	.471**	1
	Sig. (2-tailed)	.000	.000	.000	.014	.007	.000	
	N	162	162	162	162	162	162	162

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

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

Malhotra (2010) indicated that P-value less than 0.05 is significant. As the value of correlation coefficient of PU is 0.419. Hence, there is a moderate relationship between PU and IA. The value of PEOU's correlation coefficient is 0.429 (p-value<0) hence PEOU and IA has moderate relationship. The value of PT's correlation coefficient is 0.272 (p-value<0) hence PT and IA has weak relationship. The value of PR's correlation coefficient is 0.192 (p-value<0) hence PR and IA has very weak relationship. The value of PPC's correlation coefficient is 0.210 (p-value<0) hence PPC and IA has weak relationship. The value of SC's correlation coefficient is 0.471 and (p-value<0) hence SC and IA has moderate relationship.

Table 4.16 Model Summary

Multiple Regression			
R = 0.472			
R² = 0.223			
Analysis of Variance(ANOVA)			
Model	Sum of Square	df	Mean Square
Regression	38.176	2	19.088
Residual	133.394	159	0.839
F = 22.752	significance of F = 0.000		

a. Dependent Variable: IA

b. Predictors: (Constant), PU, PEOU

Source: Developed for the research

H1: Perceived Functionality has explanatory power on the intention to adopt m-commerce.

According to Shmueli G. (2010), explanatory power is determined by R^2 and it can be tested by the overall F-test to indicate the significance of the explanatory power. Based on table 4.16, PF has the F-value of 22.752 and significance value at 0.000. Therefore, H1 is not rejected as the significance value is less than 0.05 (Malhotra, 2010). Furthermore, the R^2 is 0.223 which means that 22.3% of IA can be explained by PF. PF consisted of 22.3% of explanatory power to explain the PU and PEOU can impact the intention to adopt m-commerce.

Table 4.17 Model Summary

Multiple Regression			
R = 0.499			
R² = 0.249			
Analysis of Variance(ANOVA)			
Model	Sum of Square	df	Mean Square
Regression	42.719	4	10.680
Residual	128.851	157	0.821
F = 13.013	significance of F = 0.000		

a. Dependent Variable: IA

b. Predictors: (Constant), PPC, PT, SC, PR

Source: Developed for the research

H2: Perceived Credibility has explanatory power on the intention to adopt m-commerce.

According to Shmueli G. (2010), explanatory power is determined by R² and it can be tested by the overall F-test to indicate the significance of the explanatory power. Based on table 4.17, PF has the F-value of 13.013 and significance value at 0.000. Therefore, H1 is not rejected as the significance value is less than 0.05 (Malhotra, 2010). Furthermore, the R² is 0.249 which means that 24.9% of IA can be explained by PC. PC consisted 24.9% of explanatory power to explain the PT, PR, PPC and SC can impact the intention to adopt m-commerce.

Table 4.18 Model Summary

Multiple Regression			
R = 0.556			
R² = 0.309			
Analysis of Variance(ANOVA)			
Model	Sum of Square	df	Mean Square
Regression	53.094	6	155
Residual	118.475	155	0.764
F = 11.577	significance of F = 0.000		

a. Dependent Variable: IA

b. Predictors: (Constant), PU, PR, PT, PPC, SC, PEOU

Table 4.18 shows that the F-value is 11.577 and significance value at 0.000 as its significant level is less than 0.05. Thus, this result show that PF and PC are significantly can be used to influence intention to adopt m-commerce. On the other hand, the overall R² is 0.309 which means that 30.9% of IA can be explained by PF and PC. In a conclude, PF and PC only consisted 30.9% of explanatory power to explain the PU, PEOU, PT, PR, PPC and SC can impact the intention to adopt m-commerce.

Table 4.19: Overall Coefficients Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.150	.537		2.141	.034
	PPC	.034	.080	.032	.423	.673
	SC	.380	.101	.300	3.776	.000
	PR	.010	.078	.010	.131	.896
	PEOU	.130	.080	.148	1.626	.106
	PT	.073	.075	.072	.970	.334
	PU	.162	.079	.181	2.052	.042

a. Dependent Variable: IA

Source: Developed for the research

Table 4.19 shows the overall result of coefficient analysis, SC and PU are significant in this study as the p-values are 0.000 and 0.042 respectively which less than alpha value 0.05. SC and PU are significantly affecting the intention to adopt IA. However, PPC, PR, PEOU and PT are not significantly affecting the IA because their p-values are more than alpha value 0.05.

CONCLUSION AND DISCUSSION

Based on the Figure 5.1, the R^2 of perceived functionality (PF) is 0.223 and perceived credibility (PC) is 0.249, which indicates that the PF and PC have 22.3% and 24.9% of explanatory power towards the intention to adopt m-commerce respectively. As a result, all of these two categories together accounted for 30.9% of the explanatory power in adopting m-commerce. In overall, study showed that PC has more explanatory power than PF hence adopters more likely to concern the security and it is still not well-developed in mobile devices. Lastly, there are 30.9% which out of 100% explained the intention to adopt the m-commerce. However, there were still left 69.1% of variance not explain by this theoretical framework.

It is interesting to find that adopters place great emphasis in security concern (SC) which is the most fundamental factor with B=0.380 among those dimensions of PC to leading the intention to adopt the m-commerce from the research. It reveals that the adopters will be more emphasis on the SC during the m-commerce activities rather than perceived ease of use (PEOU) and perceived usefulness (PU) as m-commerce activities is widespread among the people and security of m-commerce is still not well-developing and adopters is not confident about its security, unlike e-commerce which is using by Taobao Company has seen greater success and making a powerful existence in China market (Chong, 2013). It is because of the different types of security measures have taken for the transactions in e-commerce during the payment making in China in these recent years (Chong, 2013). Security of e-commerce developed completely but m-commerce's security is still under developing. Hence, by comparing to the personal computer, the security features such as firewall or antivirus software still not rifeness in m-commerce application. Hence, adopters worry that there will have hackers steal the certain information such as bank account number and password and thus create the unauthorized transaction. Furthermore, they also might be worry about their mobile device will get lost, stolen, damaged and it will lead their personal information leak out, and use their mobile device to do some unnecessary activities. Consequently, it shows that SC has the strongest significant among the dimensions of PF and PC that will impact to the intention to adopt m-commerce.

Managerial Implications

Perceived Credibility

Our study shows further insight on people intention to adopt m-commerce by recognizing two important variables which are perceived functionality and perceived credibility. The findings of study indicated some specific implication for m-commerce practitioners. Result shows perceived credibility has 24.9% explanatory power to explain the intention to adopt m-commerce and which has higher explanatory power than perceived functionality. Result illustrates that security concern of perceived credibility has the highest significant number in Pearson Coefficient Correlation analysis.

Consequently, practitioners should focus more on improving security services as consumers concern the security issue. User identification system of m-commerce activity is relevant to improve security level such as identity-enacted service for mobile financial applications (Liang, 2004). Besides, increase the complexity of security code and the number of security questions able to prevent hacked by hacker.

Other components should not be ignored although result showed the security concern as the most important component toward the intention to adopt m-commerce. Trust and privacy issues arise when customer lack of confidence toward companies. Trust is more complex and crucial in m-commerce environment which compared to traditional commerce due to its unpredictable environment (Lu et al., 2003; Cho et al., 2007). For example, the buyers will perceive lack of control over access third parties may have their own personal information during the online transaction process without physically meeting the sellers (Luarn & Lin, 2005). Therefore companies may develop privacy statement to ensure consumers about their information will only be used for identification purposes. Lastly, practitioners should provide assurance to customers while doing m-commerce in dealing with issue of perceived risk. For example, m-commerce retailer ensures the product quality by providing ISO standards, product warranty or implementing product return policy.

Perceived Functionality

Furthermore, the result of study shows perceived functionality has 22.3% explanatory power to explain the intention to adopt m-commerce and which has lower explanatory power than perceived credibility. Perceived functionality consists of two components which are PU and PEOU.

It is important for m-commerce practitioners in designing m-commerce activities by considering PEOU. M-commerce is still new to young consumers hence practitioners shouldn't design the procedure of m-commerce activities too complex as they might find out difficult to operate and causing intention to adopt m-commerce reduce. M-commerce adoption rate will increase as the simplicity increase. Thus, practitioner should design an easy and simple look mobile webpage and customers may perceive that webpage is easy to operate and product purchase procedure is simple. Furthermore, practitioners should also consider of PU while developing m-commerce activities. For example, useful features have been implemented like shopping carts may enhance online purchase process. Value added services can apply to increase PU. For example, post-purchase services with effective and efficient manner have been provided by retailers to customers.

Conclusion

As a conclusion for the entire research project, the objectives are achieved and the research's problems that stated at the beginning have been solved. The overall findings indicate the explanatory power of PC is higher than the PF on influencing the intention to adopt m-commerce. The final results also proved that security concern affects the most compared to the other three elements that asserted in this study. In this research, target respondents concern more on security of m-commerce rather than the other factors. Hence, future research should take note of this issue and conduct more researches about this field in the future. In the meantime, other components which are from perceived credibility also should not be neglected as they are interrelated to affecting the intention to operate m-commerce activities. Due to the

other factors could possess more explanatory power to the intention of adoption; therefore future researchers are encouraged to further their studies. Last but not least, the inevitable limitations in this research project are sought out and have been covered them up with sound recommendations.

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DETERMINANTS OF TRAVEL INTENTION AMONG FOREIGN STUDENTS IN MALAYSIA-PERSPECTIVE FROM PUSH-PULL MOTIVATIONS

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Abstract

Educational tourism is one of the most important sources for economic growth in Malaysia. Government foresees the positive impact from foreign students that pursue their tertiary education in Malaysia as research statistics ranked Malaysia 11th with the highest demand in population of international students. It then raised the curiosity of government to further discover the determinants on travel intention aligning with Malaysia economic growth. Therefore, this research aims at investigating the push-pull motivations among foreign student's travel intention in Malaysia. Questionnaires were distributed among 500 foreign students in Malaysia. Findings revealed that self-congruity and attitude (push motivations) are key drivers of travel intention while the least influencing drivers are destination image and perceived quality (pull motivations). This research is expected to provide unique insights for tour businesses in attracting more foreign students to engage in the domestic tourism.

Keywords: travel intention, push-pull motivations, foreign students

INTRODUCTION

Tourism sector is vital for nation's economic growth due to its earnings from the foreign exchange. To date, Malaysia is in the list of top 10 countries for foreign students in choosing their study destination ("Malaysia ranks 9th destination of choice for further studies", 2015) where 135,502 foreign students from 160 countries are currently studying in local higher education institutions ("Malaysia has one of highest proportions of international students pursuing higher education", 2015). Foreign students are believed to have stronger effects towards future tourism industry as there is an increase number of students acquiring higher education in other country with vacation during their leisure time (Heidari & Marzuki, 2013; Qiu, 2014). One research found that foreign students spending during their semester break can estimate to be a billion dollar in tourism industry (Bojanic, 2012).

Tourists are rational decision makers whom decision is influenced by both internal and external drivers (Sirakaya, Sonmez & Choi, 2001). These drivers act as the push-pull motivation which related to the intangible and intrinsic personal preferences of tourists (Romao, Neuts, Nijkamp & Shikida, 2014; Uysal, Li & Sirakaya-Turk, 2008). However, tourist's preferences are usually failed to be discovered and satisfied (Marrese-Taylor, Velasquez, Bravo-Marquez & Matsuo, 2013). Abdul-Hamid (2011) has discovered that travel agencies in Malaysia have failed to provide adequate quality services for the travelers.

Moreover, word of mouth sources are also crucial in influencing tourists' decision (Goldenberg, Libai & Muller, 2001; Kim & Morrison, 2005) where electronic word of mouth (e-WOM) has been found to positively affect the destination image, tourist's attitude and intention (Jalilvand, Samiei, Dini and Manzari, 2012). Despite the importance of foreign students towards tourism sector, this area i.e. educational tourism is deemed to be less explored as compared to other segments of tourism sector (Jason, Admad, Azhar, 2011; Abubakar, Shneikat & Oday, 2014). Hence, this research intends to explore foreign students' travel intention within Malaysia.

REVIEW OF PAST LITERATURES

Push and pull motivation theory has been frequently used to predict travel motivation (Kozak, 2002; Lam & Hsu, 2006; Lewis, Kerr & Pomering, 2010; Hung & Petrick, 2012; Guillet, Law & Leung, 2012; Horng, Liu, Chou & Tsai, 2012). Briefly, push factors refers to the inner needs of travelers to travel while pull factor means the attractiveness of the destination which induce travelers to visit the destination (Hung & Petrick, 2012). Travel motivation is seen to be an effective and essential interpreter of tourists' behavior which aggressively affect their travel intention (Kozak, 2002; Jang & Namkung, 2009). Hence, it is being widely discussed and accepted to study the travel intention (Mohamed & Othman, 2012; Mody, Day, Sydnor, Jaffe & Lehto, 2014; Naidoo, Ramseook-Munhurrun, Seebaluck & Janvier, 2015).

Researches on e-WOM were commenced as early as in 1940s and it is still a buzzword among today's researchers due to the advancements in technologies especially the social media (Yi, Jonathon & Liping, 2011; Ishida, 2011). Not surprisingly, e-WOM is widely incorporated as a moderator in recent tourism related researches (Bronner & De Hoog, 2010; Ishida, 2011; Di Pietro, Di Virgilio & Pantano, 2012; Jalilvand et al. 2012; Nieto, Hernández-Maestro & Muñoz-Gallego, 2014; Lee & Hyun, 2015).

In this research, push-pull motivation drivers are used to examine the foreign students' travel intention in Malaysia alongside the temperance impact from e-WOM. In order to comprehend the actual determinants of travel intention, a stack of recent literatures on travel intention arbitrated by e-WOM were reviewed (refer to Table 1).

Table 1: Attributes From Past Studies

Attributes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Visit to destination which align with personal value			✓			✓					✓				
People think the destination image is similar to own personal image			✓			✓									
Visit to destination which similar to own personal image			✓			✓									
Exhibit to people that travelling to a destination which align with own personal image			✓			✓									
Consistency between self-image and destination image			✓			✓		✓			✓				
Association between destination personality and destination image			✓			✓		✓			✓				
Tourist psychological response to a destination		✓			✓										✓
Recommendation from verbal indication among individuals	✓	✓			✓		✓								✓
Evaluation of the destination form an attitude	✓	✓			✓										✓

Safety of the destination	✓			✓		✓			✓						
Beautiful landscape of the destination	✓			✓		✓		✓	✓						
Cultural exchange in the destination				✓		✓		✓	✓						
Heritage of the destination				✓		✓		✓	✓		✓				
Quality service		✓	✓		✓										✓
Convenience of transportation		✓	✓	✓			✓				✓				
Quality accommodation		✓	✓	✓			✓				✓	✓			
Quality facility		✓	✓		✓										

Source: Amaro & Duarte (2015); Jalilvand et al. (2012); Ryu & Lee (2013); Chen, Shang & Li (2014); Tseng, Wu, Morrison, Zhang & Chen (2015); Lee & Jeong (2014); Kiráľová, & Pavlíčeka (2015); Lewis et al. (2010); Filieri (2015a); Leong, Yeh, Hsiao & Huan (2015); Qu, Kim &Im (2011); Filieri (2015b); Rodríguez-Molina, Frías-Jamilena & Castañeda-García (2015); Litvin, Goldsmith & Pan (2008); Kim & Stepchenkova (2015)

As tabulated in the Table 1, the first six attributes belong to Self-Congruity component since it relates to the match between self-image and destination's place identity (Ahn, Ekinci & Li, 2013; Veasna, Wu & Huang, 2013; Zhang, Fu, Cai & Lu, 2014). The next three attributes are about Tourists' Attitude as they relate to the three key dimensions of person's attitude namely cognitive, conative and affective (Zhou, 2014; Kim & Stepchenkova, 2015; Smith, Li, Pan, Witte & Doherty, 2015). The subsequent four attributes are related to the Destination Image component as they depict the attributes of destination (Cherifi, Smith, Maitland & Stevenson, 2014; Ramseook-Munhurrun, Seebaluck, & Naidoo, 2015). The last four attributes are surrounded on the Perceived Quality component (Chung, Lee, Lee & Koo, 2015; Rajaratnam, Munikrishnan, Sharif & Nair, 2014).

OPERATIONALIZATION OF RESEARCH FRAMEWORK

In line with the push-pull motivational theory, the component of Self-Congruity and Attitude can be classified as push drivers while the component of Destination Image and Perceived Quality can be classified as pull drivers. These four components are treated as the determinants of travel intention in this research. The impact of these determinants towards travel intention is to be moderated by e-WOM (refer to Figure 1).

Briefly, self-congruity is attributed as traveler matches their self-concept with a destination image (Boksberger, Dolnicar, Laesser & Randle, 2010). Meanwhile, attitude is referred to a traveler evaluation in positive or negative way based on their psychological tendency (Páez, 2013). Besides, destination image is seen as the impression of travelers towards the image of a particular destination (San Martin & Del Bosque, 2008). On the other hand, perceived quality is about the traveler's perception towards the superiority of the services provided during the tour (Zhao, Lu, Zhang, & Chau, 2012). Besides, e-WOM is a kind of communication via Internet which is made available to a multitude of people and institutions that formed by experienced customers about a product or company (Yoo, Sanders & Moon, 2013). Follows are the research hypotheses developed for this study:
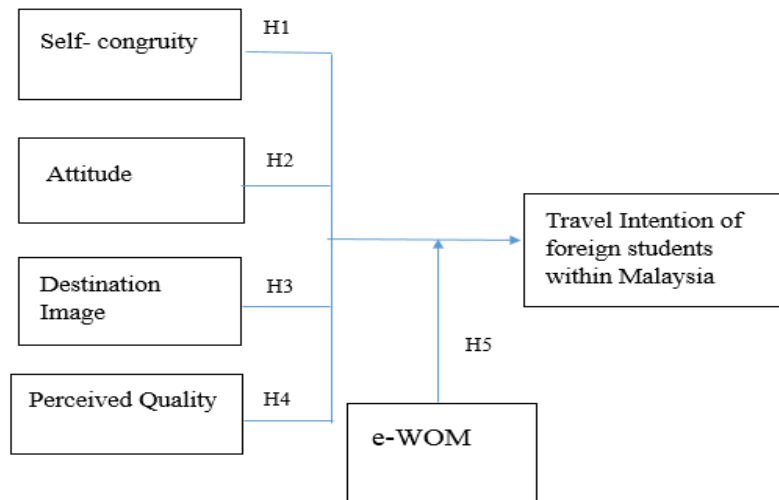
Figure 1: Research Framework

Self-congruity will influence a person behavior and affect their travel intention as human behavior is directly linked with self-congruity (Hung &Petrick, 2012). A self-congruity which can greatly match the self-concept and destination personality would then create a positive or favorable attitude among tourists towards the destination (Usakli & Baloglu, 2011). Self-congruity will positively influence customer satisfaction, interest on pre-trip and the proclivity on purchasing and hence affecting the travel intention (Hung & Petrick, 2012). Self-congruity might influence a tourist on choosing travel destination and it is a factor that will influence a person motivation in travelling to a destination (Beerli, Meneses & Gil, 2007). Therefore, the following hypothesis proposed:

H1: There is a significant relationship between self-congruity and foreign student's travel intention within Malaysia

Attitude and intention have a strong association. A positive attitude will create a stronger behavior to perform an action such as travelers will have stronger intention to travel to a specific destination when the traveler's attitudes have favored the destination (Jalilvand et al. 2012). Tourist attitude can be an effective predictor of travel decision to a certain destination (Jalilvand et al. 2012).

H2: There is a significant relationship between attitude and foreign student's travel intention within Malaysia

Zhang et al. (2014) claimed that tourists' feeling and knowledge about the destination would certainly their visit intention. Similarly, the study by Jalilvand et al. (2012) showed that favorable image towards a destination is one of the most important factors that elicit visit intention to a destination. Therefore, the following hypothesis proposed:

H3: There is a significant relationship between destination image and foreign student's travel intention within Malaysia

Set of quality attributes appear in good assessments can influence consumers' behavior intention (Chi & Qu, 2008; Chen & Chen, 2010). Likewise, perceived quality of the destination has directly or

indirectly influenced the tourists' visit intention (Ozdemir & Simsek, 2015). Attributes of quality that meet the foreign students' preferences will enhance their satisfaction towards the vacation destination which in turn leads to their travel intention (Bigne, Sanchez & Sanchez, 2001). Therefore, the following hypothesis proposed:

H4: There is a significant relationship between perceived quality and foreign student's travel intention within Malaysia

e-WOM is a primary step that tourists tend to convey before an action (Litvin et al., 2008). It is considered as an important information source and has a significant impact on influencing tourists' travel intention (Grewal, Cline & Davies, 2003; Ying & Chung, 2007; Reza Jalilvand & Samiei, 2012b, 2012c). Informal communication through Internet based technologies has significant influence on the impact of travel determinants e.g. travelers' perception, social influences, credibility of the destination, towards the travelers' intention to visit the destination (Di Pietro et al., 2012; Ryu & Lee, 2013; Chen et al., 2014; Chen& Chen, 2015; Lee & Hyun, 2015; Liu & Park, 2015). Therefore, the following hypothesis proposed:

H5: Electronic words of mouth significantly affect the relationship between foreign students' travel determinants and visit intention within Malaysia

RESEARCH METHODOLOGY

Foreign students in Limkokwing University in Cyberjaya were chosen as the target population of this research. The institution was chosen it has the highest enrolment of foreign students. Currently, there are 30,000 international students from nearly 165 countries in Limkokwing University, Malaysia. Such diversified population would certainly represent all the foreign students studying in Malaysia. As a part of the snowball sampling technique, one foreign student from the university was initially approached. Upon completing the survey form, he was then requested to recommend his friends (foreigners) who have intention to visit locally during their spare time. The process was kept going until 500 questionnaires were collected.

DATA ANALYSIS

The measures used in this research are considered as having a good reliability due to its overall Cronbach's alpha value of 0.7189. As a part assessing the validity of items used, face validity was tested. Information and feedbacks given by experts would be more reliable and furnish additional insights to the researches (Torres, Adler & Behnke, 2014). Lecturers of hospitality and tourism department of the Tunku Abdul Rahman University College had participated in the pilot study of this research. These experts have verified that items measured in this study are relevant and within the contact. Thus, the content of questionnaire is considered as valid.

Majority of the surveyed respondents (36.6 percent) had claimed that they travel at least twice a year. About 40.6 percent of the surveyed respondents had also declared that their usual travel duration is 1-3 days while casual travel (54.4 percent) was indicated as the most preferred travel type among the surveyed respondents.

Hierarchical regression analysis was used to examine the transient influence of e-WOM towards the impact of travelers' travel determinants on their visit intention. As shown in Table 2, inclusion of e-WOM is found to significantly influence the relationship between travel determinants and travel intention. This is aligned with the study of Fakharyan, Jalilvand, Elyasi, and Mohammadi (2012) which found that e-WOM indeed serves as significant impact towards travel intention. The significant influence is

demonstrated through the significant F change (0.000) though the (R-square) change is very minimal (0.048).

Table 2: Model Summary – Hierarchical Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.267a	.072	.064	.68098	.072	9.531	4	495	.000
2	.346b	.119	.110	.66385	.048	26.872	1	494	.000

As tabulated in Table 3, two hypothesis (H3 & H4) have been rejected due to their p-value which is greater than 0.05 (0.064 – destination image; 0.164 – perceived quality). Besides, these two determinants have negative relationship with the travel intention. Chen and Tsai (2007) explained that perceived quality is uncertain in creating a positive travel intention as it is not an assurance for the tourist's overall satisfaction. Meanwhile, Hsu, Wolfe and Kang (2004) argued that destination image is unreliable predictor for the travel intention due to the previous inconsistent experience between geographical location and destination image. The remainders i.e. self-congruity, attitude and e-WOM are found to have significant relationship with the travel intention. Hence, H1 (self congruity – 0.030), H2 (attitude – 0.000) and H5 (e-WOM – 0.000) have been not rejected. Inclusion of e-WOM has resulted into highest beta value for e-WOM which signifies its relative importance towards travel intention as compared to others. The importance of e-WOM is unanimously agreed by past studies such as Jalilvand, Ebrahimi & Samiei (2013); Jalilvand et al. (2012); and Gretzel & Yoo (2008).

Table 3: Table of Coefficient - Hierarchical Regression

Model	Unstandardized coefficients		Standardized Coefficient	t	Sig
	B	Std Error	Beta		
1 (Constant)	2.696	.214		12.606	.000
Selfcongruity	.180	.052	.168	3.492	.001
Attitude	.253	.062	.236	4.091	.000
Destination_Image	-.030	.059	-.029	-.513	.608
Perceived_Quality	-.112	.057	-.117	-1.950	.052
2 (Constant)	1.973	.251		7.867	.000
Selfcongruity	.113	.052	.105	2.180	.030
Attitude	.259	.060	.242	4.301	.000
Destination_Image	-.110	.059	-.104	-1.856	.064

Perceived_Quality	-.078	.056	-.082	-1.394	.164
eWOM	.297	.057	.237	5.184	.000

CONCLUSION AND DISCUSSION

Attitude as a push motivation indicates as the highest significant determinant for the travel intention of foreign students in Malaysia. Therefore, government and travel agencies are advised to reschedule their tour arrangement by focusing mainly on outdoor activities and recreational activities to match the foreign student's behavior. This is because foreign students in abroad are known for their explorative and adventures nature. Hence, focusing on the outdoor activities such as caving and climbing would definitely appeal to them. This would also generate an easy viral marketing to induce the visit of more foreign students. As e-WOM represents a strong impact on travel intention, travel agencies are recommended to utilize any kind of e-WOM sources especially social media in promoting their tours and services. This outcome is also expected to enable the government to have better understanding on investing in quality facilities particularly in the tour destinations. As the findings indicates that perceived quality is not a significant contributor for the travel intention, it is highly recommendable for government to reduce expenditures on the improvements of public toilets and public transport services as well as convenient accessibility of the facilities; instead, the resources should be deployed to a more value added activities. This research is also expected to be a good starting for researchers within tourism field to further explore the emerging segment of educational tourism.

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THE MODERATING EFFECT OF GENDER ON THE RELATIONSHIP BETWEEN WORK-FAMILY CONFLICT ANDJOB SATISFACTION

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Abstract

Working adults are often confronted with the conflict between work and family domains, which has detrimental impacts on individuals' attitudes and behavioral outcomes. This paper aims to determine the influence of work-family conflict (i.e. work-to-family conflict and family-to-work conflict) on employees' job satisfaction. In addition, the potential influence of gender on the relationship between work-family conflict and job satisfaction is investigated as well. The data of this study was collected through questionnaire survey. Out of 642 questionnaires distributed, 500 questionnaires were received from employees in healthcare services sector based in Klang Valley. Hierarchical regression analyses results showed that family-to-work conflict has a significant negative main effect on job satisfaction among the sample of the study. But, work-to-family conflict did not show similar effect on job satisfaction. Besides, gender was found to significantly moderate the relationship between the bi-direction of work-family conflict and job satisfaction. As compared to male, female employees exhibit greater decline in job satisfaction when confronted with work-family conflict. Limitations of the study, practical implications and suggestions for future research are discussed.

Keywords: Job Satisfaction, Work-to-Family Conflict, Family-to-Work Conflict, Gender, Healthcare

INTRODUCTION

In today modern society, the working adults regardless of male and female are often face with tremendous challenges in balancing the demands from both family and work roles (Rothbard & Dumas, 2006). Inter role conflict as a result from the incompatible demands from work and family domain give rise to work-family conflict (Greenhaus & Beutell, 1985). Among the trends that led to the escalating attention of work-family interface studies include steady increase of female participants in the paid labour force, rising number of dual career couples, more eldercare responsibilities are expected in view of the rapid aging population, technology advances, and globalization (Allen, Herst, Bruck, & Sutton, 2000; Eby, Casper, Lockwood, Bordeaux, &Brinley, 2005; Major & Germano, 2006). Winslow (2005) argued that male's involvement in household chores and child care activities are rising as well in recent years due to the change in fatherhood definition. That is, a good father is not merely a breadwinner of a family, but it is also judged through the ability of the father to spend more time with their children (Winslow, 2005). Consequently, male also experienced greater sense of work-family conflict.

Work-family studies have evolved from its initial focus on single direction or global measure of work-family conflict to dual directions (i.e. work-to-family conflict and family-to-work conflict). Both work-to-family conflict (WFC) and family-to-work conflict (FWC) may result to detrimental impacts to individual's attitudes, behavioral and well-being (e.g. Zhang, Griffeth, & Fried, 2012; Dorio, Bryant, & Allen, 2008; Mihelič & Tekavčič, 2014). Declining job satisfaction is one of the major attitudinal changes that have been widely discussed in the work-family conflict literatures (e.g. Allen et al., 2000; Grandey, Cordeiro, & Crouter, 2005; Dorio et al., 2008).

Healthcare professionals' job satisfaction is crucial since Malaysia government aims to promote the country as a healthcare hub and encourage medical tourism. Malaysia is practicing dual health care system, which is a mixed between public and private sector (Dahlui & Aziz, 2012). The ratio between Malaysian public versus private healthcare services is 7: 3. Public sector healthcare services are funded by the government and it is the main preference for the majority of the citizens. On the other hand, Malaysian private healthcare services are mainly financed based on fee-for-services (Dahlui & Aziz, 2012). In year 2015 budget, RM258 million was allocated to the healthcare spending, out of total expenditure of RM273.9 billion for the country (Budget 2015 address, 2014). Public healthcare services in Malaysia is of good quality and the charges is very minimum, it has been described as the model for other developing countries by the United Nations Development programme (The Economist Intelligence Unit, 2014). A lot of efforts have been done by Malaysian government in order to market health or medical tourism abroad (Dahlui & Aziz, 2012). Healthcare industry is important for economy growth of the nation. It is also viewed as one of the most dynamic and fast growing industries in the world economy (Economic Transformation Programme, 2014). Medical tourism in the country has a very positive outlook. Table 1 shows the number of medical tourists in Malaysia from year 2011 to 2014.

Table 1 Comparison of Healthcare Travellers between 2011-2014

Year	2011	2012	2013	2014
No. of healthcare travellers	641,000	728,800	881,000	882,000

Source: Malaysia Healthcare Travel Council (MHTC)

Earlier study by Paoli (1997) had reported that there were considerable increase in workload among the healthcare professionals between 1991 and 1996. Till today, healthcare professionals are often been associated with high workload, long working hours, shift work, time pressure, shortage of staff, and lack of flexibility in working hour (Lu, While, & Barriball, 2005; Pal & Saksvik, 2008). Similarly, Malaysian healthcare service personnels also faced with heightened job demands and pressure (Ahmad Zainal Abidin, Che Mohd Zulkifli, & Jamal Nordin, 2010). They are juggling with their work roles and parental roles or other roles within the family domain, such role conflicts will have negative implications to employees' job satisfaction (Dorio et al., 2008). In contrast, satisfied employees can improve job performance, retain qualified staff and reduce turnover rate (Cortese, 2007; Gifford, Zammuto, & Goodman, 2002, Judge, Thoreson, Bono, & Patton, 2001). As such, research on how work-family conflict is related to job satisfaction is critical so that the healthcare service providers can design a constructive strategy or supportive interventions to reduce work-family conflict. By having satisfied employees, the management can attract talented candidates and to retain current employees. Turnover of skillful and experience healthcare employees are indeed a great loss of human capital to the organizations.

Despite its importance, there are limited studies which relate work-family conflict to job satisfaction among the employees in healthcare sector in Malaysia. In addition, majority of the studies were conducted in the West (e.g. Dorio et al., 2008; Anderson, Coffey and Byerly, 2002). In Malaysia context, Chew, Ramli, Omar and Ismail (2013) performed a descriptive study in determining the level of job satisfaction and motivation among different category of healthcare professionals. Others (e.g. Ramoo, Abdullah, & Piaw, 2013; Roslan, Noor Hazilah, Nor Filzatun, & Azahani, 2014) studied how job satisfaction relate to turnover intention or intention to leave among Malaysian healthcare employees. In addition, majority of work-family literatures seem to focus on the direct effects of the inter domain conflict or its antecedents (O'Driscoll, Brough, & Kalliath, 2006). O'Driscoll et al. (2006) in their comprehensive reviews found that fewer studies examine the moderating effects between the work-family conflict and its consequences. Individual characteristics (e.g. gender) should be taken into account in view of the inconsistent findings observed (Allen et al. 2000; Boles, Wood, &Johnson, 2003). In short, this paper aims to determine (a) the influence of WFC and FWC on job satisfaction, (b) the moderating role of gender in predicting the impacts of work-family conflict (i.e. WFC & FWC) on job satisfaction.

LITERATURE REVIEW

Job Satisfaction

Job satisfaction has been defined as "a function of the perceived relationship between what one wants from one's job and what one perceives it as offering" (Locke, 1969) and has received extensive attention in organizational research (Currivan, 1999). It is argued that job satisfaction is an overall construct indicating an employee's utility from the job and serve as an important indicator of a worker's feeling, attitude and behavior (Clark and Oswald, 1996).

Work-to-family conflict, family-to-work conflict and job satisfaction

Conflict or interference between work and family life on employees has caused a rising interest among researchers (Edwards & Rothbard, 2000; Frone, 2003; Grzywarc & Marks, 2000). Pressure arising from work demand can lead to work-to-family conflict (WFC) as it is getting more difficult to meet rising demand in the family role. WFC is defined as "a form of inter-role conflict in which the general demands of, time devoted to, and strain created by the job interfere with performing family-related responsibility" (Netemeyer, Boles & McMurian, 1996). Work demands are mainly related to working hours and quantitative workload. It is reported that there are positive relationship between WFC and working hours, working overtime and shift work respectively (Pleck et al., 1980; Bruck, Allen, & Spector, 2002; Major, Klein, & Ehthart, 2002; Yang, Chen, & Zou, 2000). Numerous studies have shown the existence of conflict between work demand and family life (Edwards & Rothbard, 2000; Frone, 2003; Grzywarc & Marks, 2000; Lu, Gilmour, & Huang, 2006). For example, Lu et al. (2006) found that there are positive relationship between work demands and WFC for Taiwanese and British.

Allen et al. (2000) analyzed the relationship between WFC with three types of outcome namely, work-related such as commitment, non-work-related such as life satisfaction, and stress-related such as burnout. It is found that WFC is found to have significant relationship with job satisfaction (Mcelwain & Korabik, 2005; Howard, Donofrio, & Boles, 2004; Kossek & Ozaki, 1998). Previous research indicated that WFC are negatively correlated to overall job satisfaction (Kossek & Ozaki, 1998).

Work and family can interfere with each other. When family demand interferes with work demand, it will cause family-to-work conflict. Family-to-work conflict (FWC) refers to "a form of inter-role conflict in which the general demands of, time devoted to, and strain created by the family interfere with performing work-related responsibilities" (Netemeyer et al., 1996). The indicators of the family demands include the quantity of children in a family and the different life stages of children (Rothausen, 1999). Previous research reported that FWC may lead to more conflicts in the family life which may lead to lower job satisfaction (Netemeyer et al., 1996). Lu et al. (2006) reported that family demands are positively correlated to FWC.

WFC and FWC are distinct but can occur in both directions (Greenhaus & Beutell, 1985). Thus, researchers have begun to examine the duality of WFC/FWC. For instance, WFC is found to be significantly related to job satisfaction while FWC is not as consistently related to job satisfaction (Kossek & Ozeki, 1998; Howard, Donofrio, & Boles, 2004). The level of WFC was confirmed to be uniformly higher than FWC (O'Driscoll, Griffith, &Kalliath, 2004). A study conducted by Lu et al. (2006) found that both WFC and WFC were negatively related to job satisfaction for both Taiwanese and British. Other studies found that WFC was linked to job dissatisfaction turnover intentions and stress while FWC may be associated with stress and absenteeism (Frone, 1992; Anderson, Coffey and Byerly, 2002).

Hence, based on previous research, we propose the following hypotheses:
*H 1a.*Work-to-family conflict is negatively associated with job satisfaction.
*H 1b.*Family-to-work conflict is negatively associated with job satisfaction.

Gender as moderator

Some research has found gender differences in WFC and job satisfaction (Mcelwain and Korabik (2005); Jones, Latreille& Sloane, 2008). It is found that job satisfaction of females in the United Kingdom. increases as the female share of the workplace increases (Sousa-Poza & Sousa-Poza, 2000; Jones et al., 2008). Using data from the US report, it is also found that women report greater job satisfaction than men (Sousa-Poza & Sousa-Poza, 2000; Bender, Donohue & Heywood 2005).

Some studies had identified gender difference in WFC. For example, Greenhaus & Beutell (1985) found that work is more likely to interfere into family for men while family demand is more likely to interfere with work for women. Another study using a sample of full time professional employees of Canada organization also recognized gender differences in the relationship between family demands and family interference with work, whereas the results for family-work conflict and job satisfaction were ambiguous (Mcelwain & Korabik, 2005). However, few studies have found no gender differences in WFC (Frone et al., 1992; Kinnunen & Mauno, 1998; Anderson et al., 2002).

Few studies have examined the moderating role of gender on the relationship between conflicts in the work-family interface and job outcomes. For instance, a study conducted by Yavas, Babakus and Katatepe (2008) did find moderating role of gender on the relationship between work-family conflict and family-work conflict, and job outcomes among frontline hotel employees in Turkey. Another study from India found gender to moderate the link between job characteristics and work-family enrichment (Baral & Bhargava, 2011). The previous studies, however, conceptualize neither work-family conflict nor job satisfaction in a comprehensive manner; therefore, gender has been included as a moderator in the direct relationship between work-family conflict and job satisfaction in this study.

Hence, based on previous research, we propose the following hypotheses:
*H 2a.*The relationship between work-to-family conflict and job satisfaction is moderated by gender.
*H 2b.*The relationship between family-to-work conflict and job satisfaction is moderated by gender.

RESEARCH METHODOLOGY

Procedure and Sample

The participants of this study comprised of employees who work in healthcare industry who serve the public and private hospitals and clinics around Klang Valley, Malaysia. As cross sectional design quantitative study is employed, self-administered questionnaires is used as the major data collection instrument. A total of 642 questionnaires were distributed to the target respondents based on convenience sampling. After excluding three incomplete questionnaires, there were a total of 500 questionnaires which were usable for data analysis. As such, the total response rate is about 78 percent.

Out of the 500 sample in this study, 265 (53%) were female respondents and the balance, 235 (47%) were male. The participants of this study were relatively young as majority was between 21 to 30 years old (60.8%). This was followed by the respondents whose age range from 31 to 40 years old (20%) and 41 to 50 years old (12%). Only 23 (4.6%) respondents were over 51 years old and the smallest number was those who are 20 years old or less (2.6%).The biggest ethnic group that take part in this survey are Chinese (63.2%), followed by Malay (20.2%), Indian (14.2%), and others (2.4%). Majority of the respondents were still single (63.2%) and another 30.2% respondents are married. Respondents who are widow and divorced composed of 4.2% and 1.2% of the total respondents. Participants of this study include registered nurses (29.4%), medical doctor (26.4%), medical assistants (11.8%), emergency medical technicians/paramedics (10.8%), pharmacists (8.6%), clinical laboratory technologist or technicians (5%) and others (8%).

Measures

The measure for WFC and FWC were adopted from Netemeyer, Boles, and McMurrian (1996). There are five items for each direction of conflict. Sample item include "Things I want to do at home do not get done because of the demands my job puts on me," and "I have to put off doing things at work because of demands on my time at home".

Job satisfaction consists of five items and the measure was adapted from Anderson, Coffer and Byerly (2002). Sample item include "The work I do on my job is meaningful to me".

Five-point Likert scale, with the response options ranged from strongly disagree (1) to strongly agree (5) was used for all the measures. All the above measures showed high reliability in the previous studies, with coefficient alpha reported at above 0.8 (Anderson et al., 2002; Netemeyer et al., 1996). Dummy coding was used for the binary moderator - gender (male = 0, female = 1).

DATA ANALYSIS

Data screening process, which was conducted through the SPSS statistical software, showed that there was no missing data. Casewise diagnostics indicated that there were five cases with a standardized residual more than 3 standard deviations away from the regression line, and these cases were deleted from further analysis. The descriptive statistics, results of reliability and correlation among the key variables of this study were presented in Table 1. Cronbach's alpha for all the variables exceed 0.7, indicating good reliability (Hair, Money, Samouel, & Page, 2007). Pearson correlation analysis was performed to examine the correlations between the key variables in the study. The results showed negative correlation between FWC and JS ($r = -0.210^{**}$, $p < 0.001$), whereas no significant correlations were found between WFC and JS ($r = -0.050$, $p > 0.05$). Multicollinearity is not a problem as correlations for the independent variables were below 0.70 (Sekaran & Bougie, 2009).

Table 1 Means, Standard Deviations, Reliability Coefficients, and Correlations of the Study Variables

	Mean	SD	α	WFC	FWC	JS
WFC	3.0913	.83403	.834	1		
FWC	2.6986	.72300	.811	.354**	1	
JS	3.9463	.52479	.750	-.050	-.210**	1

Notes: N = 395, SD = standard deviation; WFC = work-to-family conflict; FWC = family-to-work conflict, JS = job satisfaction.
*p<0.05 **p<0.01

Hierarchical regression analysis was performed to test the hypotheses in this study. The independent variables (WFC and FWC) were entered in the first step, followed by the moderator (i.e. gender), and the interaction terms were entered at the third step. Table 2 presents the results of hierarchical regression analysis. All the three models [$F_1(2, 492) = 11.523$, $F_2(1, 491) = 9.117$, $F_3(2, 489) = 9.215$] found in hierarchical regression analyses were statistical significant with p-value less than 0.0001. FWC was found to have significant main effect on employees' job satisfaction ($\beta = -0.22$, $t = -4.667$, $p < 0.01$), hence H1b was supported. However, H1a was not supported as there was no significant relationship found between WFC and job satisfaction ($\beta = 0.28$, $t = 0.599$, $p = 0.549$, $p > 0.05$). Model 2 indicated that gender was a significant predictor of job satisfaction ($\beta = 0.098$, $t = 1.013$, $p < 0.01$).

By adding the two interaction terms into the model as shown in Step 3, the total variance accounted for by all the variables increase from 5.3% to 8.6% ($R^2 = 0.086$, R^2 change = 0.033). As indicated in Model 3, the interactions between gender and WFC ($\beta = -0.382$, $t = -2.182$, $p < 0.05$) as well as gender and FWC ($\beta = -0.508$, $t = -2.848$, $p < 0.01$) were both significant. This means H2a and H2b were supported. In order to better understand the nature of interactions, graphical presentations were shown in Figure 1 and Figure 2.

Table 2: Hierarchical Regression Analysis Results – Predictors of Job Satisfaction and Moderating Effect of Gender

	Job Satisfaction		
	Model1	Model2	Model 3
Step 1			
WFC	.028	.040	.154
FWC	-.220**	-.185**	-.032
Step 2			
Gender		.098*	1.013
Step 3			
Gender x WFC			-.382*
Gender x FWC			-.508**
df1, df2	2,492	1,491	2, 489
F	11.523	9.117	9.215
Sig.	0.0001	0.0001	0.0001
R^2	.045	.053	.086
R^2 Change	.045	.008	.033

Notes: N = 395, WFC = work-to-family conflict; FWC = family-to-work conflict.
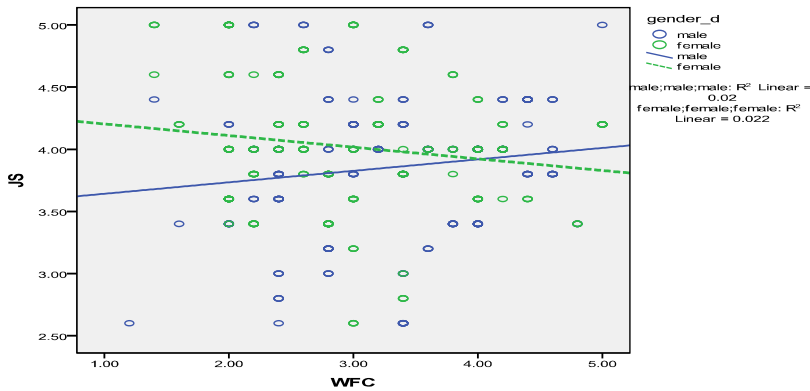*$p<0.05$ **$p<0.01$

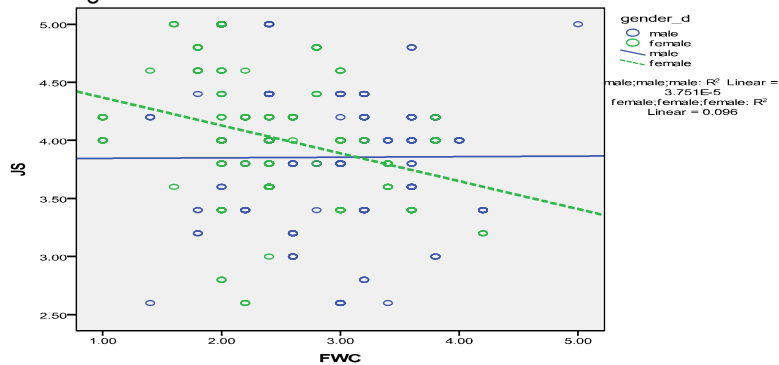Figure 1 Plot of significant WFC x Gender interaction

Figure 2 Plot of significant FWC x Gender interaction

Table 3: Regression Analyses Results in Predicting Job Satisfaction for Male and Female

DV: JS	Male (n=230)		Female (n=265)	
	Beta	Sig.	Beta	Sig.
WFC	.143	. 030	-.147	.016
FWC	.006	.926	-.309	.000

Notes: WFC = work-to-family conflict; FWC = family-to-work conflict, JS = job satisfaction.

The results as depicted in Figure 1 showed that when WFC is low, female employees experienced greater job satisfaction than their male counterparts. But, once the WFC increase, the job satisfaction among female employees decline more significantly as compared to their male counterparts. Similarly, when FWC is high, the level of job satisfaction among female employees is lower than male employees (Figure 2). When FWC is low, female employees' job satisfaction is higher than male employees. Male employees are not much influenced by the increase of FWC. Further slope analyses showed that the relationship between WFC and job satisfaction is significant for both female (β = -0.147, p = 0.016) and male (β = 0.143, p = 0.030). Slope analysis between FWC and job satisfaction indicated that it is only significant for female (β = -0.309, p= 0.0001), and for male is non-significant (β = 0.006, p= 0.926).

DISCUSSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

Only FWC, and not WFC that showed significant direct negative relationship with job satisfaction. This is to a certain extent contrary to our expectation that both directions of the inter-domain conflict cause deterioration of job satisfaction. Previous studies, such as Rathi and Barath (2013) concluded that both WFC and FWC negativelyassociated with global measure of job satisfaction in an Indian police sample. Other studies (e.g. Anderson et al., 2002; Netemeyer, Maxham, & Pulling, 2005) also found significant relationship between WFC, FWC and job satisfaction. Nevertheless, Lynes and Thompson (1997) did not discover any significant relationship between work-family conflict and job satisfaction. The aforementioned studies have not taken gender influence into consideration. The significant interactions (WFC x gender, and FWC x gender) found in this study proved that there is a need to evaluate the impact of personal characteristics in analyzing the relationship between these variables.

Female showed lower job satisfaction than male when WFC increase.The graphical presentation and regression slope analysis showed weak but significant positive relationship between WFC and job satisfaction among male healthcare employees. Though surprising, Zhang et al. (2012) also found that WFC is positively related to job attitude (i.e. affective commitment) among Chinese managers. The positive attitude is developed though they are experiencing WFC is mainly due to the belief that demanding job will eventually bring benefits (e.g. economic benefits) to them and their families. In addition, some studies (Adams, King, & King, 1996; Sekaran, 1989) argued that as male tend to show greater involvement with their work, they are able to develop more skill and possess greater sense of control in their work. Consequently, they are more satisfied with their jobs than those who were less involved. Gender role theory explains that the central role for female is family, whereas male is more involved in work role (Gutek, Searle, & Klepa,1992). As such, female employees exhibit greater negative job attitude (i.e. job dissatisfaction) than male. Longitudinal study by Grandey, Bryanne, and Crouter (2005) reported that work interference with family predict job satisfaction among women, not for men. On the other hand, the relationship between FWC and job satisfaction was significant for female, but not for male. Female showed greater degree in job dissatisfaction when FWC increase, but no significant changes are found for male on this relationship. As such, it provides support for the assumption that there are differences in the way how male and female prioritise their family and work roles (Martins, Eddleston, & Veiga, 2002).

In view that female showed significant decline of job satisfaction than male when confronted with WFC, it is essential that the management of the healthcare services provider to give greater support and

flexibility to female employees. Besides, the management should promote supportive work-family culture (Andreassi & Thompson, 2008). Such culture is essential for male employees as well since work-family conflict may lead to burnout (Zhang et al., 2012). In addition, instrumental and emotional support from spouse and family members are essential to reduce are also essential in reducing family-to-work conflict, particularly for female (Aycan, 2008).

The present study is important as it provides more insights on the impact of gender between work-family conflict and job satisfaction. Nevertheless, there are several limitations of the present study. Firstly, self-report measure has been used in this study, which is commonly subject to social desirability bias. In this case, there is potential that the respondents may tend to answer based on what is considered as more favorable to the current social norms and standards regardless of their true feelings (Sekaran & Bougie, 2009). Researchers may consider use multi-source data to avoid the mono-method bias (Miao & Kim, 2009). Second, the model of the current study explained less than 10% of the variance in the dependent variable (i.e. job satisfaction), as such future study should include other variables, such as occupational specific work characteristics (e.g. number of patients served, workload, relationship with patients and colleagues etc.) and household demands (e.g. eldercare and parenting demands) into the model in predicting healthcare employees' job satisfaction. Future research may also examine the mediating effect of work-family conflict between work characteristics and job satisfaction. Next, the sample of present study is restricted to healthcare employees found in specific location. As such, future study may extend the analysis to the employees in other sectors.

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Compensation Factors and Job Satisfaction in the Fast Food Industry

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Abstract

Previous research indicates that satisfied employees are generally happier and more productive at work. This is especially true for front-line employees working in the fast-food industry, as they are in constant contact with customers. Previous literature indicates that compensation factors (both financial and non-financial) play a positive role on employee satisfaction in the fast-food industry. There is however, a lack of studies that examine the impact of these compensation factors in the fast food industry in Malaysia. The fast food industry contributes significantly to the Malaysian economy with annual sales exceeding RM1.3 billion, at a growth rate of 15% per annum. The current study therefore examines the impact of five compensation factors commonly cited within organizational behavior literature (namely salary, promotional opportunities, recognition, working environment, and relationship with co-workers), and its influence on employee satisfaction in the Malaysian fast food industry. 170 front-line employees in McDonald and KFC outlets were selected for this study. Results indicate that these five compensation factors alone accounted for as high as 60.3% of total employee satisfaction. A conducive work environment was perceived as the most important factor, followed by cordial relationship with co-workers, salary, recognition, and promotional opportunities. Implications suggest that fast food outlets should emphasize on creating a conducive work environment, as this is the primary factor that drives employee morale and satisfaction. Cordial relationships among co-workers and team spirit should also be encouraged, as opposed to unnecessary political behavior and conflict.

Keywords: Job Satisfaction, Financial Compensation, Non financial compensation, Organizational behavior, fast-food industry

Introduction

Previous research indicates that satisfied employees are generally happier and more productive at work. This is especially true for front-line employees working in the fast-food industry, as they are in constant contact with customers. Previous literature indicates that compensation factors (both financial and non-financial) play a positive role on employee satisfaction in the fast-food industry. There is however, a lack of studies that examine the impact of these compensation factors in the fast food industry in Malaysia. The fast food industry contributes significantly to the Malaysian economy with annual sales exceeding RM1.3 billion, at a growth rate of 15% per annum. The current study therefore examines the impact of five compensation factors commonly cited within organizational behavior literature (namely salary, promotional opportunities, recognition, working environment, and relationship with co-workers), and its influence on employee satisfaction in the Malaysian fast food industry.
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Literature Review

Job satisfaction is a popular research area over the past decade. Cranny, Smith and Stone (1992) estimated that over 5,000 studies of job satisfaction have been published. From those studies, many scholars have reached a high level of consensus on the meaning of job satisfaction (Oshagbemi , 1996). Job satisfaction is viewed as a way to assess an individual's work attitude (Firebaugh and Harley, 1995). According to Robbins (2002), the concept of job satisfaction was first developed from the Hawthorne studies.

The current study therefore examines the impact of five compensation factors commonly cited within organizational behavior literature (namely salary, promotional opportunities, recognition, working environment, and relationship with co-workers)

A large number of literature investigate the relationship between pay and job satisfaction across various occupations. Literature indicates that pay is a valid predictor for job satisfaction across various occupations such as doctors, nurses, teachers, and accountants (Ali,2008; Bhamani, 2012;Groot and Maassen ,1999; Knan, Nawaz, Aleem and Hamed, 2012; Malik, Danish and Munir ,2012; Prasetya and Kato ,2011; Yaseen ,2013). According to Yaseen (2013), high salary is a motivation of employees to improve their performance in the nursing industry. Pay is an important factor that affects the job satisfaction of nurses. According to Danish, Malik & Munir (2012), pay has significant and positive impact on job satisfaction of an educationist. The level of job satisfaction can be judged by depending on the salary payment system. Employees will have a high level of job satisfaction when they receive high amount of pay whereas those that receive less pay would have lower levels of job satisfaction (Danish, Malik & Munir, 2012). Accordingly, we hypothesize that:
    H1: Salary is positively related to employees' job satisfaction

From the literature review, Promotion received mixed results as to its validity in predicting Job satisfaction for certain occupational and performance context. The findings in Malik, Danish and Munir (2012) suggest that Promotion has less influence and is partially significant in explaining job satisfaction of educationalist since only two influencing factors like pay and promotion were used in conducting their research. This is also consistent with Prasetya and Kato (2011) which indicate that Promotion was not significantly related to employee job satisfaction. However, a meta-analysis by Naeem (2013) showed a consistent, positive correlation between Promotion and Job satisfaction. The paper shows that by promotion an employee's satisfaction increases, as they feel confident about their job performance and a sense of justice. Besides that, Onukwube (2012) also demonstrated that Promotion appears to a valid predictor of job satisfaction for professionals and skilled labor. In addition, according to Shrivastava and Purang (2009)promotion opportunity has a positive correlation on employee job satisfaction in both private and public bank sector. It has been shown that individuals who perceive that promotion decisions are made in a fair and just manner are likely to experience satisfaction with their jobs (Witt & Nye, 1992). Some researchers also argues that promotional opportunities will affect their attitudes in a positive way and increase their level of job satisfaction (Okpara, 1996). Mustapha and Zakaria (2013) also indicated that there was a positive significant relationship between promotion opportunity and job satisfaction among lecturers in Malaysia. Logically then, Promotion opportunities would be expected to be an important aspect of a worker's career and life. Accordingly, we hypothesize that:
    H2: Promotional opportunities is positively related to employee job satisfaction

Previous studies also suggest that there is a significant relationship between recognition and job satisfaction. According to Yaseen (2013) there is a strong relationship between recognition and job satisfaction. Mason (2001) mentioned that although there are many factors that contribute to job satisfaction, recognition is one of the most important elements which significantly relates to job satisfaction. In addition, majority of the employees committed towards the organization is based on rewards and recognition (Andrew, 2004). Deeprose (1994) also discovered that by giving employee due recognition, the manager is able to enhance motivation in the organization. As a result, it is important to provide recognition programs for employees and most of the organizations have fully complied with it (Danish & Usman, 2010). Therefore, recognition is the element which can become a major cause of employee satisfaction at the workplace. Accordingly, we hypothesize that:

H3: Recognition is positively related to employee job satisfaction

Previous studies also indicate that are significant relationships between work environment and job satisfaction exist. Robbins (1989) stated that work environment is a key determinant in order to increase the job satisfaction of employees. According to Robbins (2005), employees prefer physical surroundings which are safe, comfortable and with a minimum degree of distractions. Employees tend to be satisfied with their work environment if they perceive low levels of constraints in term of their work environment (Spector, 1997). According to Volkwein and Zhou (2003), job satisfaction and work environment result in different behavioral aspects which affects the employees. Holland (1997) stated that based on vocational theories of person-environment fit, people work in environments that are similar with their personalities will experience higher job satisfaction. According to Dawis and Lofquist (1984), if the degree of fit between the needs and demands of both the person and the environment are maximized, employees will experience higher job satisfaction. Walsh, Price and Craik (1992) also state that people and their work environment have a reciprocal relationship such that people influence their work environment and the work environment influence people. According to Baron and Greenberg (2003), the worker's physical and mental well-being can deteriorate due to the absence of a conducive work environment. Accordingly, we hypothesize that:
H4: Work environment is positively related to employee's job satisfaction.

Several literatures investigate the main effect of co-worker relationships and job satisfaction within different work environments. The results of previous studies indicate that relationship with coworkers are a valid predictor of job satisfaction. Danish and Usman (2010) indicate that coworker relationship and job satisfaction have a significance relationship., Knan, Nawaz, Aleem and Hamed (2012) shows that the relationship with co-workers appear as a predictor of job satisfaction over the occupational group which are doctors, nurses, administrative, accounts and finance staff. Moreover, Bhamani (2012) found that there is a significant relationship between relationship with coworkers and employee's job satisfaction. According to Bhamani (2012) coworkers play a main role in a work place as it reflects organization teamwork and harmony among the entire workforce. Accordingly, we hypothesize that:
H5: Relationship with Co-workers is positively related to employee's job satisfaction

As illustrated in Figure 1, the hypothesized relationship between compensation factors and job satisfaction is as follows.

Figure 1. Proposed Conceptual Framework.
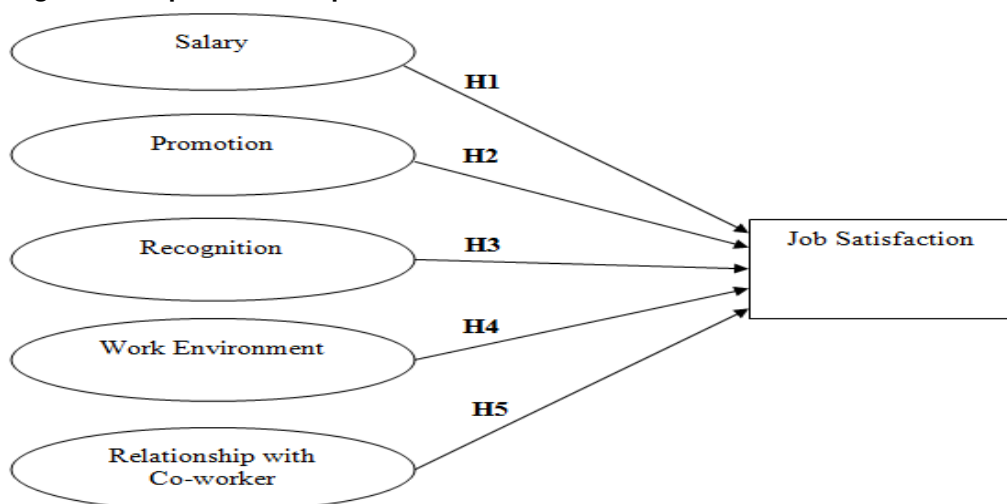
Method

Participants
A total of 179 front line workers (67 males, 112 females) working in McDonalds and KFC in Selangor participated in this study.

Research instrument
Compensation factors was assessed using Igalensi & Roussel (1999) compensation package questionnaire, along a 5-point likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Job satisfaction was assessed using Spector (1997) job satisfaction questionnaire, along a 5-point likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Data Analysis method
The current study examines the main effects of each compensation factor on job satisfaction, thus a regression analysis will be conducted using SPSS version 17.

Results

Descriptive statistics and correlation analysis
Table 1 shows the cronbach alpha and correlations values among the variables in the study.

Table 1. Cronbach alpha and pearson correlation vales

	Salary	Promotion	Recognition	Working Environment	Relationship With Co-worker	Job Satisfaction
Salary	(0.872)	.504**	.468**	.572**	.580**	.621**
Promotion	.504**	(0.866)	.607**	.513**	.464**	.593**
Recognition	.468**	.607**	(0.856)	.484**	.393**	.571**
Working Environment	.572**	.513**	.484**	(0.793)	.562**	.647**
Relationship With Co-worker	.580**	.464**	.393**	.562**	(0.857)	.598**
Job Satisfaction	.621**	.593**	.571**	.647**	.598**	(0.887)

Note: Cronbach alpha values in brackets. *; $p < 0.05$. ***; $p < 0.001$.

With reference to Table 2, compensation factors accounted for 60.3% of the total variation in job satisfaction (R^2 = .603, $p < 0.001$).

Table 2. Regression Analysis of Compensation on Satisfaction

R	R Square	Adjusted R Square	Std. Error of the Estimate
.776[a]	.603	.589	.53938

Note: *; $p < 0.05$. ***; $p < 0.001$.

With reference to table 3, it is observed that all five compensation factors (namely salary, promotional opportunities, recognition, working environment, and relationship with co-workers), were valid predictors of Job Satisfaction. As a result, hypothesis 1-5 of the current study were supported.

Table 3. Coefficient table of Compensation factors on Job Satisfaction

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.482	.250		1.929	.056
Salary	.173	.063	.196	2.727	.007
Promotion	.159	.070	.164	2.283	.024
Recognition	.165	.063	.180	2.602	.010
Working Environment	.233	.066	.254	3.550	.001
Relationship With Co-worker	.201	.071	.196	2.815	.006

Dependent Variable: Job Satisfaction
Note: *; $p < 0.05$. **; $p < 0.01$.***; $p < 0.001$.

Discussion and Implications

As the research results show, salary is the most important factor that affects employees' job satisfaction. Thus the management fast food outlets should emphasize more in terms of salary in order to improve the performance of the organization. Management should make sure that the salary structure is designed in a fair and transparent manner in order to satisfy employees. Generally, the majority of employees tend to compare their salary with that of other individuals to gauge whether their organization is paying a reasonable amount of money for their work. Management should therefore assess the market rate of the salary given in that specific industry,

Second, Promotion" appears to be valid predictor of Job Satisfaction among the fast food restaurant employees in Selangor. An employee will feel satisfied with their job if his/her effort makes a shift in organizational hierarchy or moves to a higher rank with larger responsibility. Therefore, HR practitioners need to emphasis on and wisely use Promotion as a tool to retain productive and talented employee in this intensely competitive business environment.

Recognition also appeared as a valid predictor of job satisfaction. In an organization, appreciation is a fundamental need of every human. If employee feels their work is valued by the organization, they will feel appreciated and work harder. Besides that, employee will be motivated to improve they feel they are being appreciated, valued or recognized by the organization.

A conducive work environment also appeared to be a valid predictor of job satisfaction. As a result, managers of outlets in the fast food industry should provide a safe and comfortable working environment for their employees in order to increase job satisfaction while working. HR practitioners should also strife to create a better environment for employees to enhance work morale. Besides that, HR practitioner should keep up to date the facilities and equipment to make sure employees have sufficient personal workplace to increase job satisfaction. In addition to that, employees should also be also oriented to the right use of defensive equipment for personal protection.

Cordial relationships with Co-workers also appear to be valid predictor of job satisfaction among employees in fast food industry. Relationship with co-workers in the workplace was important because employees that develop a social relationship in their job enhance overall satisfaction. Other than that, relationships with co-worker may also benefit the organization as it will develop a sense of teamwork. Teamwork is an essential criterion of organization output and accomplishment. Teamwork cause employees to achieve organization's goal more effectively and efficiently. Furthermore, having friends at the workplace makes the job more fun and enjoyable. Social support is the most important aspect of interpersonal relationships at work.

Conclusion

In conclusion, this study aims to examine the relationship between compensation factors and job satisfaction in the fast food industry. The current study examines the impact of five compensation factors commonly cited within organizational behavior literature (namely salary, promotional opportunities, recognition, working environment, and relationship with co-workers), and its influence on employee satisfaction. Results indicate that these five compensation factors accounted for as high as 60.3% of total employee satisfaction. A conducive work environment was perceived as the most important factor, followed by cordial relationship with co-workers, salary, recognition, and promotional opportunities. Implications suggest that fast food outlets should emphasize on creating a conducive work environment, as this is the primary factor that drives employee morale and satisfaction. Cordial relationships among co-workers and team spirit should also be encouraged, as opposed to unnecessary political behavior and conflict.

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Compulsive Buying Behaviors among Generation Y- A Cycle Mapping of its Antecedents, Consequences and Implications for Policy Makers

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Abstract

Living in the material focus of society, compulsive buying disorder continually destructs the life and balance of young generation nowadays. Their relentless pursuit of happiness and social status, undeniable is causing them to face the tragedies of mood disorder, impairment in relationship, financial problem and bankruptcy at the young age. The side effects of compulsive buying behavior have become the rising concern of many families, societies and governments over the globe. The problems are not only affecting the young generations but also the country's resources, standard of living and future economy growth. Regrettably, there appears to be very little studies and investigations about this addictive behavior in emerging economies countries like Malaysia even though there has been a notable increase in insolvency rate among young Malaysian nowadays. As advocated within the literature, the compulsive buying behavior can be driven complicatedly by multiple aspects including psychology and sociology. Inspired by this phenomenon, our study attempts to examine the antecedents and consequences which brought by compulsive buying behavior. This study proposes an overall mapping framework on compulsive buying behaviors which supports the policy makers with the aim of increasing the awareness and taking early intervention towards the education of young Malaysian consumers on financial planning.

Keywords: Compulsive Buying Behavior, Overall Mapping Framework, Policy Implication, Education.

INTRODUCTION

Alam, Rahim, Haq and Khan (2014) highlighted the seriousness of credit card debt issues which happened in Malaysia nowadays. According to their article, Department of Insolvency Malaysia reported that from year 2005 to year 2009, there were a total of 3,548 Malaysian declared bankruptcy due to credit cards debts and half of them, around 1,774 are those who below aged of 30s. The president of Federation of Malaysian Consumers Associations (FOMCA), Datuk N. Marimuthu commented that 47 percent of young Malaysians were reported to be in a serious debt situation in year 2012 due to unhealthy spending habits (Lee, 2012). Currently, report from Department of Insolvency Malaysia showed that about 5,547 Malaysian whose age below 35 proclaimed as bankrupt in year 2014 due to their excessive spending and mismanagement of their financial resources. Muzammil (2014) stated that Malaysian youth whose below aged of 25 faced the challenge of bankruptcy caused by over-emphasize on materialism spending attitude. Other than that, pressure to adapt the increasing standard of living also become the main contributor to high insolvency rate among young Malaysian nowadays. According to Yurchisin and Johnson (2004), compulsive buyers categorized as individuals who addicted to uncontrollable urge to

purchase. They happened to have lower self-esteem and deep feelings of unhappiness, guilt, shame and embarrassment; however, they are unable to avoid the temptations of splurge spending. Faber, O'Quinn and Krych (1987) stated that compulsive buyers tend to repeat again the excessive spending behaviors to solve their level of depressions. As the cycle repeats within long-term, terrible outcomes such as crest of unpayable debts, despair of family, suicide cases and so on occurred as well as rising of social issues to our society. Although previous studies have examined the antecedents of compulsive buying behaviors and credit card usage (Dittmar, 2005; Black, 2007; Ridgway, Kukar & Monroe, 2008; Teoh & Chong, 2013; Alam et al., 2014), nevertheless, few studies have systematically articulated compulsive buying behaviors in a form of cycle-mapping between its antecedents and consequences. Most of the previous researches focus more on Western countries and little research was being carried out to investigate the antecedents of compulsive buying behaviors among Generation Y in Malaysia context (Omar, Sainz, Rahim, CheWel & Alam, 2014). Furthermore, very few studies have noted the moderating role of credit card misused in the relationship between the antecedents of compulsive buying behaviors and its consequences. Thus, the research objectives for this study is to investigate the development of compulsive buying behaviors among Generation Y and seek to understand the antecedents that drive consumers towards this behavior and its consequences in the form of cycle-mapping which will affect the economic well-being of our society. Besides, the moderating effect of credits usage in the link between the antecedents and consequences of compulsive buying behavior among Generation Y in Malaysia will also be examined.

LITERATURE REVIEW
Compulsive Buying Behavior

Purchasing is a daily routine activity for almost everybody. However, improper spending behavior in young generation such as unplanned purchasing, use spending as hedonic sources for arousal seeking and coping negative feeling through a short period of self-pampered buying may cause their spending to be out of controlled. Through daily social life, most of us are only known little about buying disorder which has become a potential abuse to our young generations nowadays. This type of bad buying habit is very much similar to other addictive behaviors such as alcoholism, drug abuse, eating disorder and internet addiction which may bring unfavorable consequences (Black, 2007). Compulsive buying behavior has been classified from many perspectives including addictive disorder, obsessive-compulsive disorder and mood disorder (Black, 2007). Moreover, compulsive buyers identified as those who are not able to resist buying desires and repeat purchased once they encountered negative events or feelings for instance alleviate tension, anxiety, or discomfort aroused by obtrusive thought or obsession (Ridgway et al., 2008; Sohn & Choi, 2013). Ridgway et al. (2008) and Hollander and Allen (2006) evaluated that compulsive buying behavior should be a kind of mental illness that not only content the elements of impulse-control disorder but also obsessive-compulsive disorder.

Although the appropriate classification of compulsive buying behavior is still under debate, there are many consistent findings of clinical symptoms have been proven (Ridgway et al. 2008; Benson & David, 2013). One of the symptoms is their mind preoccupied with spending and devoting significant time to this behavior (DeSarbo & Edwards 1996; Black, 2007). Other than that, a person who was getting compulsive buying disorder tends to increase the level of urge and will act more anxiously than those non-compulsive buyers. The feelings of anxiety only will be alleviated once the purchase is made (Raab, Elger, Neuner & Weber, 2011). This type of behavior has brought many unfavorable psychological consequences such as depression, guilt, fear, additional anxiety and lower self-esteem. The impact does not only affect the individual but their family members as well. On the other hand, they will also suffer from financial difficulties due to large amount of accumulated debt and may face legal issues such as bankruptcy (Sohn & Choi, 2013).

Antecedents of Compulsive Buying Behavior
Materialism

Materialism has grown popularity among the young generation nowadays. Materialism originally defined in Oxford English dictionary as "devotion to material needs and desires, to the neglect of spiritual matters; a way of life, opinion, or tendency based entirely upon material interests (As cited in Richins &

Dawson, 1992). According to Belk (1985), materialism refers to the importance a person attaches to worldly possessions. In a similar vein, Richins and Dawson (1992) argued that materialists treat acquisition of possessions as their personal goals which will affect their lifestyle. Their life satisfaction is significantly influenced by material satisfaction, and they perceived satisfaction from material possession is more important than the satisfaction from other life domain such as family life (Sirgy, Tech & Lee, 1998).

Previous studies indicated that one of the important antecedents of consumers engaging in compulsive buying behavior is materialism. As suggested by Belk (1985), there appears to be three main traits of materialists which are possessiveness, non generosity and envy. O'Guinn and Faber (1989) posited that compulsive buyers are more envious and non-generous. These consumers engage in compulsive buying because they envy the possessions owned by others and they purchase to secure their social status and self-esteem (Shrum, Wong & Arif, 2012; Dittmar, 2005). Richins and Dawson(1992) and Belk (1985) found that materialists have low self-esteem, dissatisfy with one's life and desire for higher income for spending as well as place greater emphasis in acquiring possession more than to have warm relationships with others. Hence, based on the evidence above, we propose the following hypothesis:

H₁ₐ: There is a significant relationship between materialism and compulsive buying behavior.

Low Self-Esteem

Self-esteem refers to a person's feelings about the value or worth of himself or herself (Rosenberg, Schoenbach & Schooler, 1995). Self-esteem can be categorized into true self-esteem and contingent self-esteem (Deci & Ryan, 1995). True self-esteem is the stable and solid sense of self which is not easy engaged in self-evaluation and self-doubting. The formation of this self is simply by being "who you are". Hence, a person with high level of true self-esteem is self-confident and self satisfaction to his or her own self-worth and value. In contrast, contingent self-esteem refers to "feeling about oneself that result from indeed, are dependent on matching some standard of excellence or living up to some interpersonal or intra psychic expectation" (Deci & Ryan, 1995).Therefore, contingent self-esteem often involve in social comparison with reference group (Festinger, 1954) to judge their own self-worth by comparing with reference group through their physical attractiveness, social standing and job performance (Deci & Ryan, 1995). Thus, consumers whose self-esteem is contingent tend to have a kind of narcissism that anxiously worries how they perceived by others such as to be famous, fashionable and wealthy.

Low self-esteem considered as one of the most consistence antecedents posited by previous researcher that causes consumer engaging in compulsive buying behavior (Ridgway et al., 2008). Research has found that compulsive buyers tend to engage in compulsive shopping as way to temporary escape from or alleviate their anxiety and tension that caused by low self-esteem (Roberts, 1998). Thus, compulsive buyers seek self-esteem, social acceptance, self-confidence and feeling of personal power through spending activities (DeSarbo & Edwards, 1996). Roberts, Manolis and Pullig (2014) further provided a clearer explanation that anxiety is not driven by low self-esteem itself, but through the association with social image and fear of negative evaluation. In other words, a person with contingent self-esteem are resents negative evaluation from others, oppositely, they feel to be higher self-esteem when being acceptance by others. Hence, low self-esteem tends to have higher tendencies to engage in compulsive buying behavior (Ridgway et al., 2008) because the lower the self esteem, the greater the fear of being negative evaluated (Roberts et al., 2014). Based on the evaluation and evidence above, we propose the hypothesis:

H₁ᵦ: There is a significant relationship between low self-esteem and compulsive buying behavior.

Arousal Seeking

Every individual will seek for appropriate arousal level for different situation in order to maintain his or her best performance. When an individual is at high arousal level, he or she is experiencing excitement, anxiety or tension. On the contrary, an individual is experiencing depression, boredom at the

low level of arousal. Sometimes, an individual may simply desire to seek for a way to adjust their arousal level through daily events like shopping. Unfortunately, many may fall into the trap of compulsive behavior especially for those who intermittent bouts of binge buying (impulse buying). Buying in a quick and rush situations will make an individual "feeling good", "high", "satisfied" and "wonderful" or merely to feel better (Rook, 1987). The short-term positive rewards like sensory gratification from product and shopping environment strengthen the behavior, thereby motivating the repetitive and compulsive processes (Ridgway et al., 2008).

Numerous researches have done on the relationship between arousal seeking and compulsive buying behavior. Ridgway et al. (2008) found that when consumers experiencing low level of arousal, they intend to spend and buy in high quantity. This is because consumers' thoughts are occupied by thinking of buying and repetitive buying behavior is performed so that they are able to reduce anxiety (Ridgway et al., 2008). According to the evidence above, thus, we propose that:

H_{1c}: There is a significant relationship between arousal seeking and compulsive buying behavior.

Fantasizing

An individual may be able to escape from negative feeling through fantasies of personal success and social approval while engaging in certain behavior. Fantasies may become the reinforcement for the occurrence of the compulsive behavior because it allows an individual to mentally rehearse predicted positive consequences of these activities (O'Guinn & Faber, 1989). In other words, compulsive buyers may generate positive motivation to perform compulsive buying behavior through fantasizing the positive outcome of the behavior. The over fantasizing in an individual while shopping may cause them to experience fantasize feelings of lavishness and immunity from the outcomes of their behavior (DeSarbo & Edwards, 1996). Thus, compulsive buyers may have more fantasy life than someone who is not.

There were not much studies in the past that examining the relationship between fantasizing and compulsive buying behavior. O'Guinn and Faber (1989) suggested that consumers who fantasize more while shopping are able to focus on their thoughts and allow them to temporary escape from the reality. Nevertheless, on the other hand, DeSarbo and Edwards (1996) found an opposite result that fantasizing has non-significant relationship with compulsive buying behavior. His study mentioned that the inconsistent results may due to measurement error that caused by the intervening of others variable, including nature of anxiety and the coping mechanism. Hence, in order to obtain a better understanding on the relationship between these aforementioned constructs, we propose that:

H_{1d}: There is a significant relationship between fantasizing and compulsive buying behavior.

Lack of Impulse-Control

According to Rook (1987), impulsiveness refers to "a strong, sometimes irresistible urge; a sudden inclination to act without deliberation". The occurrence of an impulse behavior is sudden and spontaneous. Impulse may be hard to resist because they often involve anticipated enjoyable feelings and experiences. The impulsiveness in a person triggered when confronting with certain external stimuli such as promotional stimulus and visual stimulation (Rook, 1987).The author explained that impulsiveness can be triggered through intensity and force. For instance, an individual feel compelled to purchase something in urgent and intense situation. Sometimes, the impulsiveness considered as the source of personal excitement. For instance, someone might feel exciting and "high" when shop in quick and rush situation. Contrarily, some consumersshared their painful experiences like they become "restless", "nervous", "out-of-control" or "helpless" after they have experienced the behavior.

An individual who is lack of impulse control will lead to the development of impulse-control disorder (Miller, 2010). This means that the individual will be vulnerable or fail to resist urge, temptation and impulse. Miller (2010) defined *feeling-state* as a thinking that composed of the feelings (sensations and emotions) associated with the behavior and the remembrance of the behavior itself. For example, "high" feeling generated by shopping plus memory of shopping experienced. Just like the traumatic memory created during childhood. Once it is created, it will continue to exist in a person mind and lead to

impulse control problem. This is because every time when the same feeling comes, the individual will impulsively behave the same way according to his or her memory of that behavior experienced. Although impulse control disorder is created by positive event such as feeling of gratification from shopping, but it needs an underlying negative belief to trigger the impulsiveness. For instance, when an individual is feeling down, she may have the desire for happiness; this reaction stimulates the feeling state that links the "high" feeling generated from by shopping with the memory of positive shopping experience. Ultimately, the person has an irresistible urge of going shopping every time when the individual is feeling down. Thus, the more a person desire a particular feeling, the more at risk the individual is having an impulsive control disorder (Miller, 2010). In short, that individual is out-of-control. As noted earlier in Miller (2010), the greater the desire of an individual to relieve anxiety, the greater the risk the individual will engage in compulsive shopping.

Some studies have indicated that compulsive buyers have weak impulse-control because the compulsive buyers may be the first to engage in impulse buying. O'Guinn and Faber (1989)'s study revealed that compulsive buyers have greater than normal wish for products and low degree of determination to control their behavior. This hypothesized relationship has been strongly supported by O'Guinn and Faber (1989) and Ridgway et al. (2008) that lack of impulse control is common to all types of compulsive buyers and they purchase whenever the buying impulse strikes. Hence, we proposed that:

H1e: There is a significant relationship between lack of impulse-control and compulsive buying behavior.

Compulsivity

Ridgway et al. (2008) noted that the majority of the previous studies on compulsive buying behavior emphasized on impulse-control dimension. Since compulsive buying is a repetitive behavior, Ridgway et al. (2008) pointed out that compulsive buyers have the characteristic of obsessive-compulsive disorder. An obsession is an intrusive and recurrent thought or image that repeatedly appears in an individual mind. This contributes to anxiety and distress that accompanies such thoughts. Compulsion, on the other hand, refers to repetitive behaviors such as mental acts that individual feels obliged to perform in order to reduce anxiety that produced by the obsessions (Allen et al., 2003). For instance, a boy who is obsessive with video game will always have the urge to play video game even busy with other things like homework. The boy feels anxiety and distress and his anxiety could be relieved by playing video game. However, the obsessive-compulsive disorder can be resisted by impulse control or by overcome the urges created by obsession to do compulsive behavior.

How a consumers become out-of-control? According to Hollander and Allen (2006), the compulsive buying behavior contains both obsessive-compulsive disorder and impulse-control disorder which categorized as *obsessive-compulsive spectrum* (compulsivity versus impulsivity). Just like pathological gambling *(gambling addiction)*, internet addiction and kleptomania (*an obsessive desire to stealing*), the consumer's mind are preoccupied with the recurrent urge of "buying" that created by obsession and then repetitive perform it without the ability to inhibit due to lack of impulse-control (Ridgway et al., 2008). In short, compulsion and lack of impulse control will provide synergy to let an individual repetitively engage in an addicting behavior. Ridgway et al. (2008)'s study further indicated that the compulsive characteristic resulted in the purchase of products that consumers mostly do not need. Therefore, the researchers suggested that the compulsive buying behavior should be classified as a disorder with the elements of both obsessive-compulsive disorder and impulse-control disorder. Thus, we propose that:

H1f: There is a significant relationship between compulsivity and compulsive buying behavior.

Consequences of Compulsive Buying Behaviors

Many young generations nowadays faced depression and fear because they were unable to control their spending behavior by their own meaning (Faber & O'Guinn, 1992; DeSarbo & Edwards, 1996; Black, 2007; Ridgway et al., 2008). Due to guilt, they tried to hide their products purchased and lie

to their family about how much they had bought (Ridgway et al., 2008). Furthermore, they eventually concealed their problems from friends and family because they fear of negative evaluation, criticism and disproval from others. Due to this reason, they had lower self-esteem in front of others (DeSarbo & Edwards, 1996; Sohn & Choi, 2013). Even though the affected individual attempted to stop or moderate this habits but they lost control at the end which caused them to have additional anxiety and frustration (Raab et al., 2011). At last, individual who engaged in this behavior will suffered from economic difficulty due to their excessive purchase to the extent which exceeded their salary (O'Guinn & Faber 1989; Faber & O'Guinn 1992; DeSarbor & Edwards, 1996; Sohn & Choi, 2013). In long term, they need to face bad debts and legal issues for instance bankruptcy at their young age (Ridgway, 2008; Sohn & Choi, 2013). Therefore, we proposed that:

H2: Compulsive buying behaviors will cause negative feelings, lower self-esteem, additional anxiety, debt and legal issues as well as impairment in relationship.

Credit Usage as the moderator

In modern commerce nowadays, consumer use credit card not only for substitute of physical cash, but as a source of revolving credit (Yilmaz, 2013). However, improper management of credit card usage will lead to abuse behavior caused by the spending attitude and compulsiveness lies in materialistic generation (Roberts & Jones, 2001). They abuse the credit functionality of credit card for seeking social status by simply ignoring the cost of credit card (Roberts & Jones, 2001). Besides that, it's easy for a person to obtain credit card in Malaysia, due to the hyper competition of credit card market, many card issuer offer different incentives such as interest-free scheme to encourage consumers acquire a credit card for increasing spending power (Teoh & Chong, 2013). Credit card usage became the general indicator to the compulsive buying tendency as these consumers purchased more to achieve instance gratification but tend to ignore future cost of payments (DeSarbo & Edwards, 1996; Khare, 2013).Consumer who always engaged in compulsive buying will use credit card for payment and tend to own more than one credit card than other normal consumers (Ridgeway et al., 2008; Wang & Xiao, 2009). Moreover, Roberts and Jones (2001) found that credit card usage moderated the relationship between compulsive buying behaviors of young American college students and three types of multidimensional money attitude such as power prestige, retention time, distrust and anxiety which introduced by Yamauchi and Templers (1982). Oliveira, Falciano and Perito (2014) in his empirical study also supported that credit card usage moderated the relationship between money attitudes and compulsive buying behaviors among the young Brazilians consumers. From above viewpoints, credit card played an important moderating role to determine the desires of consumers who performed compulsive buying. Hence, we proposed that:

H3: The amount of credit usage will moderate the relationship between the antecedents of compulsive buying and consequences of compulsive buying behavior.

PROPOSED CONCEPTUAL FRAMEWORK
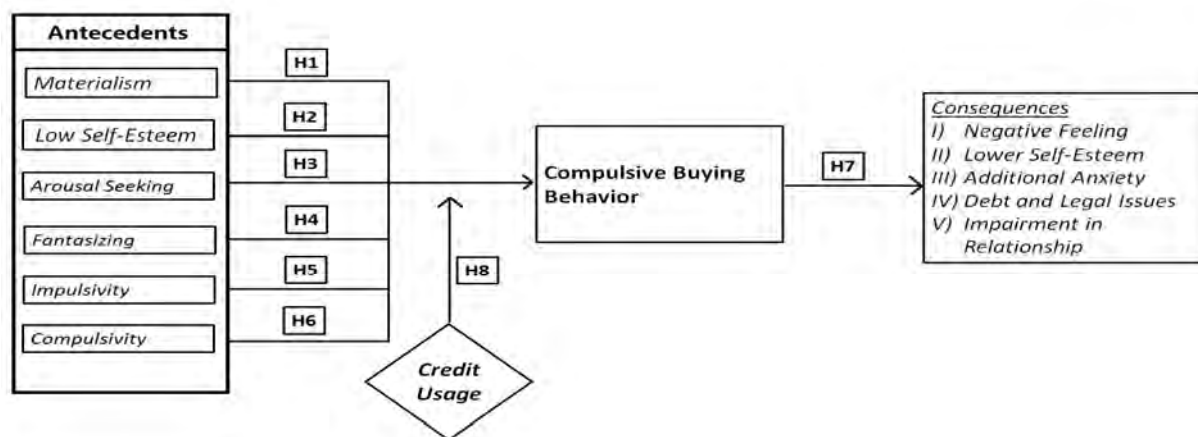
CONCLUSION AND DISCUSSION

This paper examines the antecedents of compulsive buying behavior as well as the consequences of this behavior among the Generation Y in Malaysia. Besides credit card usage, the other underlying behavioral factors such as materialism, low self-esteem, arousal seeking, fantasizing, impulsivity and compulsivity within an individual are posited to have influences on compulsive buying behavior among the young consumers. Compulsive buying behavior may contribute to the rise of bankruptcy among Generation Y in Malaysia. Therefore, government should play a significant role in educating young generation with financial knowledge through media and schooling. For example, organize speech and talk in every college or university to educate students how to be a rational consumer. Besides, parents also should give at least basic financial knowledge for their child to develop a good and healthy spending habit such as budget planning, shop with a list, and distinguish needs and wants as the attitude of spending mostly formed during a person childhood. This paper therefore aims to raise the awareness of the government, society, family and individual in general concerning the problems of addictive behavior through early intervention.

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LEARNING QUALITATIVE METHODOLOGY IN DOCTORAL MANAGEMENT RESEARCH

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Abstract

Literature suggests that the learning of qualitative methodology is a craft that requires a close interaction between a student and a teacher. However, thus far, there is a lack of discussion on how qualitative methodology is learned. The lack of knowledge about the use of qualitative methodology could have serious consequences on the practices of management in organisations as well as for future studies. These include possible rejection and misuse of the methodology amongst researchers. To address this gap, the objective of the paper is to suggest a framework on doctoral learning process of qualitative methodology. To achieve this objective, we review literature on learning qualitative methodology in management. Based on this review, we introduce the concept of doctoral research, covering the topics of doctoral research process and doctoral program in management. Next, we discuss the concept of qualitative research in management by presenting the definition of qualitative research and the use of qualitative research. We later describe the required knowledge and skills in conducting qualitative research in management and the methods of learning them. Finally, we propose a framework that i) relates doctoral research process and the learning methods; ii) relates learning methods to the types of knowledge and skills required to conduct qualitative methodology, and iii) points out the importance of having the right internal values in helping students achieve completion of their doctoral program.

Keywords: Doctoral Research, Knowledge, Learning Process, Management and Qualitative Methodology

INTRODUCTION

Conducting research in management is important because theories in management support business and organisation practices in the industry. Many business organisations are established in today's societies and they have become the foundations for job creation and economic development within these societies. They have also becoming the main employers of many and most of us spend a lot of time working in or interacting with these organisations. Thus, as a society, the well-being of individuals is directly affected by the quality of management in these business organisations. The level of management quality in these businesses is being informed by research in management and organisations. Therefore, conducting an effective management research is critical to the development of the organisations and well-being of a society. In this regard, development of competencies in conducting research in management and on organisations is of a strategic imperative.

Developing competencies in conducting management and organisational research involves understanding about relevant theories of management and related fields, as well as. Acquiring the know-how and know-what about research design and methodologies. The groups that conduct research in the discipline of management and organisations include the academic communities as well its potential members, which include students in the masters by research and in the doctoral programs. In fact, acquiring competencies in doing research and producing research output constitute the main requirements for conferment of a master or a doctoral degree.

Within the discipline of management and organisations, the main methodologies that are utilised to study research problems can be categorised into quantitative and qualitative methodologies. Quantitative research generally refers to a method of scientific inquiry that utilises existing theory to formulate a set of research hypothesis, which are then tested empirically, while qualitative research is a form of scientific inquiry that attempts to understand the meanings of a specific phenomenon based on the perspectives of the respondents (Merriam, 2009, p. 14).

While the procedure of conducting quantitative methodologies seemed to be converging among scholars, including those in discipline of management, the application of qualitative methodologies seemed to be diverging. This is not surprising given the high variances of the types of qualitative methodology and how they are utilised. For example, case study methodology, being a form of qualitative methodology can be embraced as a full-fledged research strategy or can be utilised to describe the boundary of the study. In the case of the former, the use of the methodology encompassed understanding the epistemological and ontological dimensions of the methodology. Moreover, the application of qualitative study as a research strategy often requires transfer of tacit knowledge from teacher to student or what Breuer and Schreier (2007) have termed as cognitive apprenticeship, which describes teaching and learning of qualitative methodology as a craft; they state that learning qualitative methodology is not a mere technical procedure, rather it is a craft, which requires a learner to be involved in a close apprenticeship with a teacher.

Unfortunately, however, the diverging perspectives of the qualitative methodology and the tacitness of the knowledge on their applications can lead to difficulties in the use of the methodology and in assessing the quality of the research. The lack of knowledge about the use of qualitative methodology could result in erroneous application of the methodology, which could then lead to incorrect study propositions being forwarded. This could have serious consequences on the practices of management in organisations as well as future studies. The lack of knowledge could also result in researchers avoiding the use of this methodology even if it is the most appropriate for their research. It is also likely that some qualitative research might be abandoned halfway because of lack of knowledge in carrying it to completion. Most importantly, the lack of knowledge could result in certain exploratory research, which could be addressed through the use of qualitative inquiry, not being conducted altogether. This is a critical issue that requires attention from the academic communities. Therefore, to address this gap, the aim of the paper is to suggest a framework on doctoral learning process of qualitative methodology. The framework is designed to explain the relationship between the doctoral research activities and the learning process that occur during these activities. Its purpose is also to explain the types of knowledge and skills needed in conducting qualitative study in doctoral management research. Its goal is also to emphasize the significance of having correct internal values by the students to help them complete their study.

In this paper, we introduce the concept of doctoral research, covering the topics of doctoral research process and doctoral program in management. Next, we discuss the concept of qualitative research in management by presenting the definition of qualitative research and the use of qualitative research in management. We later describe the required knowledge and skills in conducting qualitative research in management and the methods of learning them. Finally, we propose a framework that i) relates doctoral research process and the learning methods; ii) relates learning methods to the types of knowledge and skills required to conduct qualitative methodology, and iii) point out the importance of having correct internal values that will help students to achieve completion of their doctoral program.

DOCTORAL RESEARCH IN MANAGEMENT

Doctoral Research Process

Generally, academic research activities involve five major phases: *designing research questions developing research instrument*, *gathering data, analysing data*, and finally *disseminating the research findings* (Stuart, McCuthceon, Handfield, McLachlin, & Samson, 2002). Although these phases seemed to progress in a linear manner, the research process is usually quite complex and the movement toward later phases are sometimes iterative. Nevertheless, all phases need to be performed in order to complete the research project.

Specifically, literature on doctoral studies has also identified staged models of doctoral research process. For example, Tinto (1993) conceptualises the doctoral process in three main stages of *transition and adjustment*, *attainment of candidacy*, and *completion of the dissertation*. Building upon the staged models of Tinto (1993) and others, Ampaw and Jaeger (2012) also suggest three stages of doctoral research: *transition*, *development*, and *degree completion*. The *transition stage* involves students enrolling in the required coursework and socialising into the program, by getting to know other students in the program and faculty members. As the doctoral students complete their coursework as well as acquire fundamental understanding about how to conduct research and on the theoretical aspects of their selected discipline, they will move into the *development stage*. In this stage, the students are required to establish their topic, prepare their research proposal and defend it. Finally, in the last stage of *degree completion*, students are expected to collect and analyse data, and then defend their thesis.

Based on the institutional perspective of doctoral study persistence, Ampaw and Jaeger (2012)'s study focuses on the variables of individual and institutional conditions. Ampaw and Jaeger analyse doctoral process in stages, highlighting the importance of studying influential individual and institutional factors in relation to stages of doctoral studies as this type of research design supports in-depth understanding of the distinctive issues of each stage. In turn, such an understanding assists the implementation of proper intervention in support of degree completion. Their study found that financial sponsorship in the form of research assistantship plays the most significant role in pushing the students to graduation. Unfavourable doctoral job markets, particularly high unemployment rate, also induce doctoral candidates' completion of their study. Moreover, the higher the salary levels in the environment, the higher the possibility of degree completion amongst the advanced level students, although the effect is less on the new entry students.

Based on management of staged process, Grover (2007) suggests the need for effective management of the doctoral process to alleviate the occurrence of potential mistakes during the process. He recommends four stages of doctoral process, which are *exploration*, *engagement*, *consolidation*, and *entry*. The exploration stage comprises the orientation stage for new entry students that involves students socialising into the program through getting to know their peers and faculty members as well as recognising the kinds of resources that they can accessed. Failing to socialise at this stage or making mistakes at this point may lead to ineffective management of the early doctoral process which could lead to many problems later. The engagement stage involves students to have more engagements with the faculty members and to establish their research goal and direction. At this point, abilities to have integrative thinking and prioritise on their high value activities are required before moving to the next stage of consolidation. At this stage, students establish their research topic and achieve candidacy. They must also be able to manage relationship with their supervisors, while avoiding complacency and procrastination, which could lead to delayed completion of their doctoral studies. The entry stage refers to the final stage of doctoral education, in which students are now getting prepared for the job market. The most common mistake at this point is when students do not give priority to completion and focus more on getting a job.

Doctoral Research Process based on Personal Narratives

There are several studies on doctoral research process that utilise personal narrative approach. The use of personal narratives allows the description of one's doctoral experiences and process that one

has to go through to completion. Our review on several narratives enabled us to derive emergent constructs that influence doctoral experiences. Based on our understanding of the discussion in Ryan (2012)'s edited book, we generate these constructs: a) family-study balance, b) emotion, c) life experience, d)work experience, e) motherhood and Ph.D., f) academic career, which all have bearings on the doctoral research process. Brown (2014) edited book indicates a number of emergent constructs, which include a) cultural adaptation in foreign setting, b) family culture, c) societal expectation, d) early-life experiences, e) transition to family life in foreign setting, f) matching of actual societal issue with theoretical debate, g) transformation into a scholar, h) openness, i) self-confidence development, j) dreams and inspirations, k) family history, and l) discovering oneself.

Joseph (2014)'s personal narration provides insights into two important constructs in conducting qualitative research: a) cultural adaptation in data collection and b)competencies in using different types of data collection techniques and analysing them. Based on Watt (2007)'s personal narration article, we interpret the emergent constructs as a) family-study balance, b) emotion, c) data access, d) value of reflexivity during as well as after the study, e) research process, f) research reporting trade-offs, g) communication with respondents, h) subjectivity in interpretation, and i) data trustworthiness. The use of surveys, as in the case of Anderson and Swazey (1998) also generates emerging inquiries that require more discourses in the future. This include the need to explore why students perceive that certain things in graduate school cause personal changes that they do not like and to identify what are these specific personal changes.

Based on our review of literature on reflective studies (Brown, 2014; Joseph, 2014; Ryan, 2012; and Watt, 2007), we deduce that underneath the above constructs there are prevalent within the doctoral process the existence of elements of certain values. On the whole, these studies give positive impacts on both the authors and the readers; some give more focus in telling about their life as doctoral students, others describe in details specific research activities that they had to go through. However, there is less attention given to discussing the methods that they had employed in learning about qualitative methodology.

Doctoral Program in Management

Doctoral program in management has been offered to graduate students since the 1930s. For example, the Kellogg School of Management in the US started its Ph.D. in management in 1935 (Kellogg Doctoral Program, 2015). In the recent years, many business schools worldwide have their own program, and often, one of the main purposes of this program is to prepare candidates for academic jobs in higher education institutions. Those who graduated will likely serve as faculty members in the universities, and their job responsibilities include teaching, conducting research and servicing the needs of the academic communities, the industries as well as the general public. There are some variances in regard to the doctoral program structures across universities and countries. For example, in the US, attending required coursework, passing comprehensive examination and completing a dissertation as a partial requirement, are necessary for graduation. This type of program structure is common among universities in that country. In contrast to that, in the UK, the need to complete coursework plus thesis as a full requirement, are needed for study accomplishment. Malaysian universities, however, adopt various types of structure. For example, the UKM-Graduate School of Business offers both the US-based and UK-based Ph.D. structures, while the format of the doctoral program of management at the Putra Business School in UPM follows the UK-based Ph.D. structure.

Academics who graduated with a doctoral degree in management are expected to teach undergraduate and post-graduate students in business and management. They are also likely to be involved in academic research projects. For this purpose, doctoral candidates are required to gain the necessary competencies and skills in conducting academic research. These include having the abilities to design a research and complete it. Designing and completing a research require the abilities to conceptualise a research problem, use research methodology, collect and analyse data, reach the study conclusion, and disseminate the study's findings through conference presentations and publications. In many universities, academics act as research project supervisors, either for undergraduate or post-graduate students or both. In addition, they are expected to be directly involved in academic community's

activities by serving as examiners, editors, and reviewers. Besides, to some commercial entities, they play the role as industry advisors and business consultants.

QUALITATIVE RESEARCH IN MANAGEMENT

Definition and Types of Qualitative Research

Merriam (2009, p. 14) describes qualitative research as a process of scientific inquiry that tries to comprehend the meanings of a specific phenomenon from the viewpoints of the respondents. Normally, qualitative researchers collect data directly from the respondents through interviews or focus groups. Other methods that are also utilised by them include observations, photography, video recording, and document reviewing. Merriam (2009) categorises qualitative methodologies into six, which are a) Descriptive/Basic/Generic, b) Grounded Theory; c) Ethnography; d) Phenomenology; e) Case Study; and f) Narrative Analysis. Creswell (2007) also suggests, except for descriptive, similar approaches to conducting qualitative research. Among these methodologies, the most utilised qualitative methodology in the field of management is the case study methodology.

Yin defines the case study methodology as "an empirical enquiry that investigates a phenomenon within its context, especially when the boundaries between the phenomenon and context are not clearly evident and when the context is pertinent to understanding the phenomenon" (Yin, 1994, p.130). Yin further specifies that the case study methodology design involves a conceptual (the theoretical underpinnings of the study, the gaps that are addressed, and the conceptual framework to be utilised in explaining the data) and methodological design (how data are collected and analysed, how validity and reliability are achieved, and how findings are concluded), thus making it a full-fledged methodology in support of empirical inquiries. Yin (1994)'s treatment of the case study as a research strategy, concurs with Eisenhardt (1989), by proposing a comprehensive eight-step procedure for conducting case study research.

On the other hand, Merriam (2009) describes a case as a bounded system, and thus a case study methodology is an in-depth description and analysis of the "bounded system". She treats case study as a form of qualitative research, with the conduct of case study being done within a bounded territory, which is the distinctive characteristic of a case study research design. According to Merriam, being a qualitative study, case study methodology share similar characteristics with other forms of qualitative research, which are, the study 1) aims at searching for meaning and generating understanding; 2) involves the researcher as the primary actor in collecting and analysing data; 3) involves the researcher using inductive approach to investigating the inquiry; and 4) generates rich description based on the data collected, which output is presented in the form of a case. Therefore, according to Merriam (2009), except for the need to predefine the "boundary" of the study, the conduct of the case study could be carried out following the basic qualitative technique.

The use of the grounded theory methodology has also gained ground within the discipline of management, especially in areas in which the theories are not yet well developed. Grounded theory is a type of interpretative qualitative design that derived theory from the gathered data (Strauss & Corbin, 1990). The use of grounded theory can also support the function of data analysis of other types of qualitative inquiry (Merriam, 2009).

Use of Qualitative Research in Management

Based on our review of the literature, research that focus on discussing about the use of qualitative research in management in general is wanting compared to other fields of research. Many of the research guidebooks on qualitative research are written in the discipline of education (e.g., Merriam, 2009; 1988; Bogdan & Biklen, 1997) and general social science inquiries (e.g., King, Keohane, & Verba, 1994; Ritchie & Lewis, 2003; Corbetta, 2003) and general qualitative researches, which are not explicit on the specific discipline of studies (e.g., Mason, 2002; Creswell, 1998; Denzin & Lincoln, 2000, 2005; Seale, Gobo, Gubrium,& Silverman, 2004; Maxwell, 2005; Miles & Huberman, 1984; Patton, 2002; Ragin, 1989).

In the management field, references for doing qualitative research are generally lacking, with a few exceptions such as Bryman (1989), whose book focuses on research method in relation to organisations' studies.

The few papers that provide some background information on the status of the use of qualitative research in management include Cassell, Symon, Behring and Johnson (2006); Piekkari and Welch (2006); Johnson, Buehring, Cassell and Symon (2007), and Cassell, Bishop, Symon, Johnson and Buehring (2009). Cassell et al. (2006) review the role and status of qualitative research in management. Their findings identify five main issues of concern related to qualitative research in management. According to Cassell et al. (2006), the main issues in conducting qualitative research in management include the lack of agreement on the definition of "qualitative management research" (what is qualitative management research?) and the roles of qualitative research (what does qualitative research supposed to do?). Cassell et al. (2006) also highlight issues of disseminating the qualitative study findings because of the domineering quantitative stance amongst management journal editors and reviewers. Moreover, they also stress on the issues of measuring the quality of the qualitative research findings, and emphasise the need of training on how to conduct qualitative research.

Piekkari and Welch (2006) describe the process that researchers have to go through in conducting qualitative management research in the international contexts. Based on their own experience of conducting a qualitative study, they describe issues related to interviewing corporate elites, managing language barriers, utilising case studies as the study method. Their narratives can inform novice qualitative researchers in managing their research projects related to qualitative international management studies.

Johnson et al. (2007) explore how researchers and stakeholders interpret the conduct of qualitative management research. They found eight categories of interpretation on the definitions and purpose of qualitative research. First, qualitative research as a tool to increase understanding about organisation behaviour (or what they refer as *verstehen*); Second, as a *verstehen* in combination with explicit researchers' reflectivity; third, as a part of a portfolio of research tools; fourth, extends from the third definition, to a tool that has specifically defined function in the organisation research; fifth, as a form of independent exploratory research; six, as a research tool that is not able to support scientific management research; seven, as a research philosophy other than quantitative research; and eight, as a qualitative data collection technique. They highlight that the definition of qualitative research is highly dependent upon the perceptions. Because of these differences in perceptions, researchers might face difficulties and barriers in enhancing the legitimacy of the method in the discipline of management. On the positive side, these different perspectives enrich the field of management in regard to the application of research methodology in research.

In their 2009 study, Cassell et al's study focuses on the type of skills and knowledge that are required in conducting qualitative research. They highlight the need for skills in collecting data, analysing data, writing the findings, as well as providing critique and evaluation, and three types of knowledge, including the techniques, philosophical underpinning, and familiarity with the qualitative research process.

CONDUCTING QUALITATIVE MANAGEMENT RESEARCH

Knowledge and Skills in Qualitative Management Research

In conducting a qualitative management research, Cassell et al. (2009) suggest a researcher needs to have knowledge and skills. They define knowledge as the foundation to all activities conducted under a research, while skills concern with the 'how to do', in which skills are required when trying to perform the actual activities of a research. Having both knowledge and skills enable a researcher to take informed choices in his research conducts.

According to them, knowledge are categorised into three types: a) knowledge about various types of qualitative methodologies, b) knowledge about the underlying philosophical approaches in qualitative

research, and c) awareness of the complexities of conducting a qualitative research. According to the authors, researchers can be exposed to all three types of knowledge through self-learning or course-work. However, only through conducting actual qualitative study, can the knowledge be effectively acquired by a researcher.

Cassell et al. (2009) also believe that to be effective in qualitative research, a researcher needs to master four skills, which are abilities to collect data, analyse the data, write findings on the data, and interpret and conclude the findings. However, according to them, these skills are difficult to learn.

Data Collection: A researcher has to have knowledge in data collection techniques selected for a study. Moreover, a good communication skill is required in addition to the selected technique. He must also have a deep interest in the subject and be flexible when circumstances required during data collection. The data collection technique as well as the data that are to be collected must be logically linked to the research questions. This skill can be learned via self-learning, course-work, but required a learning-by-doing process to gain this skill.

Data Analyses: A researcher must have the knowledge on the specific data analysis technique based on his research design. Cassell et al. (2009)'s study also found that it is an advantage to a researcher if the research conducted has a systematic approach and framework that guided the data analysis process. The researcher must also be able to demonstrate ability to logically link the research design to data collection technique, data, and data analysis process. Data analysis for a qualitative research, being an interpretative type of research, required a researcher to have the ability to reflect on his data, be able to make an interpretation of his data and express his data findings into a written form. Similarly data analysis exposure can also be done via self-learning and course-work.

Writing: A researcher must write persuasively and convincingly. His writing-up of the findings must be in coherent with the research questions and designs. Skill of writing must be developed through a combination of self-learning, course-work and continuous writing activity

Critique and Evaluation: His ability to qualitatively critique the work of others in preparation of his academic career. He has to have the knowledge on the various qualitative research designs and criteria. He must also be aware about the characteristics of the various designs and criteria. For these skills, a researcher can learn them by self-learning, course-work and reflection.

According to Cassell et al. (2009), knowledge is different from skills. While skills are concerned with the 'how', knowledge serves as the foundation to all activities under the research. Cassell et al. (2009) also add that knowledge and skills must be complemented by reflect, reflex, and phronese. Reflection is the ability of the researcher to understand his past action, learn the effect of this action and use this knowledge for his future action. The review of past action can happen throughout the qualitative research process. Reflexivity seems to be a deeper reflection on the part of the researcher focusing on self-critical thinking about his research assumption and his roles in the research. The third element suggested by the authors involves phronetic knowledge, in which refers to the ability to gauge the context of a study and respond to it accordingly. They refer to this ability as "street smart" in conducting and completing a qualitative study.

LEARNING THE KNOWLEDGE AND SKILLS FOR USING QUALITATIVE METHODOLOGY

Generally, learning is a process that an individual go through in acquiring new knowledge or information, which might lead to changes in his or her behavior (Lachman, 1997; Schacter, Gilbert, & Wegner, 2011). De Houwer, Barnes-Holmes and Moors (2013) suggest that this act of acquiring knowledge is a part of the individual's effort to facilitate his or her adaptation to changes in the environment.

According to OECD (2015), learning can be classified into three major categories: formal, non-formal, and informal learning. Formal learning involves learning activities that are well-organised and

have specific learning objectives. The learner intentionally seeks to learn the knowledge or skills, and the occurrence of learning is not coincidence. On the other hand, informal learning is not properly organised and has no set objectives. The learner sometimes does not have intention to learn but acquires the knowledge "accidentally". In the middle of the two types of learning, is the non-formal learning, which can be rather organised and can have specific learning objectives. This type of learning output can be initiated by the learner himself or it can emerged as a by-product of a formal learning activity or formal education.

In the context of higher education, the doctoral program is a formal education program. The program comprises a structured coursework or classes and writing of the doctoral dissertation. The coursework normally are the required preparatory classes for the doctoral students before they move into the research phase and they are normally held in the first year of doctoral studies. These classes usually cover the topics related to research methodology, and the contents of the field of discipline.

For a doctoral student, the non-formal learning can be sourced from any organised educational or training activities that have specific learning objectives, but are outside of the formal doctoral education system. It includes learning through mentoring with the academic supervisor, which is considered as the most important learning method during doctoral studies and the key element in the student's research progress (Acker, Hill, & Black, 1994; Ray, 2007). The supervisor acts as a mentor while the student is a mentee orprotégé. Mentoring might involve long term and personal relationship between the mentor and mentee (Cheetham & Chivers, 2001; Management Mentors, 2013). In fact, Mainhard, Van Der Rijst, Van Tartwijk, & Wubbels (2009) found that the supervisor-student relationship in a doctoral education is one of the most influential factors in affecting the success of a doctoral student. Moreover, poor relationship between them sometimes might cause the students to withdraw or sometimes delay their study duration (Mainhard et al., 2009).

Other sources of non-formal learning are instruction and coaching where the former aims to inculcate the specific skills to many individuals while the latter concerns on one-to-one learning support (Cheetham & Chivers, 2001). The example of the instruction method is the doctoral workshops, which can be organized either by the faculty or students, or by external private training consultants. The workshops usually aim to inculcate specific knowledge needed by the students. Some of the workshops can be classified as pure instruction, in which instructions provide mainly information about a specific topic. On the other hand, coaching, involves more hands-on practice of software use, on how to analyse data, and on how to manage the references in the thesis.

Anderson and Swazey (1998) found learning methods that are important for doctoral students include, learning through collaborating with others (especially amongst those involved in collaborative projects) and learning through experiences as research or teaching assistants. These forms of learning occur through interactions in the project team via face-to-face meetings, social media interactions, and other communication channels available for them to stay connected. According to Anderson and Swazey (1998) the job of research or assistances help facilitate the completion of doctoral studies, although they do not deliberate on which aspect of the jobs are important. In 2012, Ampaw and Jaeger also highlight the importance of research assistantship in contributing toward doctoral degree completion in comparison to teaching assistantship perhaps because involving in research enabled students to socialise into the academic communities, in comparison to a teaching job.

Anderson and Swazey (1998) suggest that students consider self-directed learning as the most significant form of doctoral learning. The doctoral students have to read a lot of books and use many forms of learning through personal interactions, and these can be considered as a form of self-study. For example, after attending a workshop or a class, a student goes home to try to apply what he learnt in class. However, when the student got stuck and does not know what to do, he will either refer to books or/and ask his friends or the facilitator/instructor in order to gain the necessary knowledge to the point where he can solve the problems and complete the tasks. This shows the importance of reading books for know-how, in addition to reviewing journal articles. It also shows the importance of doing the tasks through trial-and-error and continuous interactions with those in the know in a doctoral student's journey. Without trying and enquiring, it is difficult for a student to know what he does not know. A doctoral student has to be proactive to learn the things that are necessary to complete his tasks. For this purpose, he has

to be open-minded and ready to learn new things, new knowledge, or new skills in support of his doctorate journey.

Watt (2007)'s article suggests that recording of reflections during the conduct of her qualitative study provides her with the opportunity for further reflections and to retrieve them for use in facilitating the completion of her study. Joseph (2014)'s personal narrative approach provides insights to the readers on the data collection techniques for future research. Therefore, learning through reflection is beneficial to a researcher, in terms of understanding the studied phenomenon because of the deep thinking that occur during the research process. A researcher's reading of reflections of other researchers provides him with lessons and examples to follow in conducting his own research.

According to Baker and Pifer (2011), learning via interactions with others could facilitate general students' well-being, their survival in the program as well as their development as scholars. 'Others' can be the faculty members (supervisor and advisor), the more senior students, or those in their personal networks (family and friends).They suggest that faculty members provide all forms of support, while support for the students' general well-being can be sourced from the moral support of their seniors as well as of their personal relationships. Relationships with senior students also help them to socialise into the doctoral program. Their survival in the program could also be facilitated by their peers from the same admission batch.

The informal learning source for a doctoral student is via any experience outside of the formal education. It is a lifelong process where the individual acquires attitudes and skills from his daily experience in adapting to his environment. The student does not have intention to learn but he incidentally learns something from the events that he faced or goes through. Examples of informal learning method are from observations and role-modeling. From the observation of an event or a person, one can learn a lot and he may use the experience to be applied in his life. However, not everyone observes and learns. This is because of the absence of desire to learn and an individual always being selective, so if he opts to give attention to what is being observed and motivate himself to do the same, he is learning from the observation. According to Bandura (1986), there are four components in learning by observation: 1) attention; 2) retention, 3) production; and 4) motivation. However, if any one component is missing, the learning process will not completely occur.

FRAMEWORK FOR UNDERSTANDING LEARNING OF QUALITATIVE METHODOLOGY

Completion of a doctoral program involves several stages. Based on the staged model proposed in the literature, we conceptualise doctoral program into three phases, which are transition/adjustment, attainment of candidacy, and completion. In this paper, the transition/adjustment phase can be defined as all activities related to students enrolling in required coursework and socialising into the program. In the candidacy stage, students are to complete their proposal and successfully defend it. The final stage of completion is indicated by successful defense of the thesis and students making serious consideration of academic career.

Learning about qualitative methodology can occur at any point in the doctoral research process. Based on literature on learning methods, most of formal doctoral learning can be expected to happen in the transition/adjustment phase, when students are doing their coursework. Students could gather knowledge and skills about qualitative research methodology during the transition stage, through attending the required coursework. Upon completion of this requirement, self-directed learning constitutes the major learning method. During the candidacy phase, it is highly possible that students realise the need for skills that required them to attend workshops or outside trainings. They need to strengthen their skills in using the methodology and be engaged in applying the methodology at the candidacy stage. Students then need to achieve independence in using the methodology to the point that they could achieve doctoral study completion.

Another form of learning about qualitative methodology during the doctoral program is through self-reflection. Reflective learning can happen in the candidacy phase when the students reflect from

other people works by doing literature surveys and while they collect their data (through interview or survey questionnaires). Meanwhile, in the completion phase, the students will reflect by writing their own reflections during the writing of their findings and conclusion chapters. In this regard, reflective learning could occur in all phases of the doctoral research process. Students could also learn through writing their own reflections about their research or reflecting on the experiences of others, which they could gather through their own readings or direct communication with others.

Watt (2007)'s article suggests that recording of reflections during the conduct of her qualitative study provides her with the opportunity for further reflections and to retrieve them for use to facilitate completion of her study. Joseph (2014) personal narrative approach provides insights to the readers on the data collection techniques for future research. Therefore, learning through reflection is beneficial to the researchers, in terms of understanding the studied phenomenon because of the deep thinking that occur during the research process. On the other hand, researchers' reading of reflections of other researchers provides them with lessons and examples to follow in conducting their research. Interactions are expected to be heavier during the candidacy stage. Doctoral student might apply observation and role modeling methods after the potential supervisor had been identified and the supervisor-student relationship becomes established, mostly in the start if the candidacy stage.

Figure 1: Conceptual Framework of Doctoral Learning Process of Qualitative Methodology
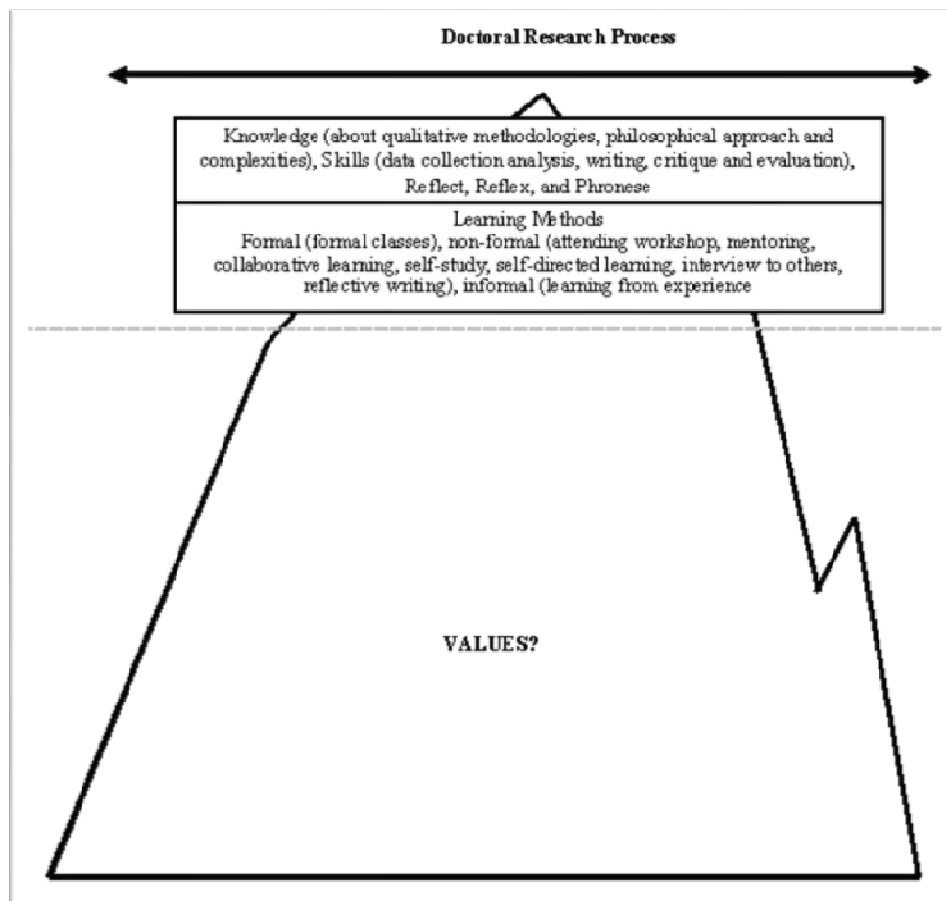
CONCLUSIONS

Current literature has highlighted the knowledge and skills needed in conducting qualitative research in doctoral study. Many past studies have pointed out the process that a student has to go through in completing his doctoral research. However, the issues of 'what' and 'how' of qualitative learning is not much discussed. Thus, it is vital that future studies look into what are the sources and methods used by doctoral students in completing their research. In addition, we believe that doctoral process is an internally driven, thus, values play a major role in pushing the students toward completion. Presently, the issue of values are not looked into in details. In enhancing the understanding 'what' values are need, a way toward this is through the use of personal narrative in doctoral study.

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THE Z FACTOR: MANAGING THE NEXT GENERATION OF WORKPLACE

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Abstract

The principal factor separating our society is not gender, race or income but generation. Distinctive changes among Baby Boomers, Generation X and Generation Y, due to their unique constructive environments, significantly influence numerous aspects of an organization. While technological innovation do drastically change the way we work, recent researches tend to overlook the question of members of the most latest generation want to work in the 21st century, Generation Z.To accomplish that goal, the aim of this study is to propose a conceptual study investigating the association of the new generation and the workplace attitudes. The developed conceptual framework is based on the following variables; relation to internet and relation to work. The novelty of the proposed conceptual framework shall increases our understanding on the needs of the forthcoming generation's contribution towards organizational behavior and management literature in the contemporary world.

Keywords: Generation Z, workplace attitude, relation to internet, relation to work

INTRODUCTION

The next generation of Malaysians entering the workforce will be ambitious, entrepreneurial and hyper-connected. They will be more interested in forging their own career path rather than following traditional job structures, leveraging technology to meet their demand. Generation Z (Gen Z) will be entering the workforce and a noteworthy transformation in the age demographic of office workers is near (Carlson, 2009). Just as organizations are coming to grips with the needs of the emerging Generation Y (Gen Y), a new group, Gen Z, is looming on the horizon. Little is known about Gen Z, the children of Gen Y. The first of this group have graduated university and entering the workforce, right about the time when Gen Y will hit its peak as a share of office workers. Thus, the workplace will need to address both groups. In the sense, the challenge will be to serve not only Gen Y workers, but to also anticipate the workplace needs of the emerging Gen Z so that both groups can work effectively.

LITERATURE REVIEW

Who is Gen Z?

The Internet and social networks open up new possibilities for society, and help us to define the new generation known as Gen Z. According to a study by Grail Research (2011), the individuals belonging to this group were born between the years 1995 and 2010 although some experts dispute the actual year Gen Z begins with most agreeing they were born after 1990 (Peterson, 2014). As we take a closer look at Gen Z, what distinguishes these adolescents from those of every prior generation is that they are the most electronically connected generation (Geck, 2007), being technologically savvy and consuming information through digital media (Glum, 2015; Holmes, 2011). Additionally, these individuals are the first generation to be born into a world in the digital era where the behavioral traits of this generation are unique. They are growing up with the Internet, laptops, mobile phones and other electronic devices, which have become their characteristic accessories (Samodra & Mariani, 2014).

Traits of Gen Z

The most unique traits of the Gen Z are dependence, self-determination, individuality, obsession to technology and speed (Hubbard & Kitchin, 2010). There is a countless variance in terms of utilizing technology between this generation and the Gen Y, who are their parents. The members of the Gen Z trying to comprehend the rapidly changing world and grow up in it are the generation of the future. The assessments carried out concerning the Gen Z cannot go beyond assumption as they are under age, their behaviors are not maturated and it is not known what actions may have an impact on them in the years to come. The Gen Z, the children of the Gen Y that were an important generation, is a complete technology generation as they were born into technology rather than being accustomed to it. They have been equipped with the technological devices since they were babies (Ahlstrom, 2010). The advancement of technology is the most distinctive trait of the Gen Z. Introduction of the continually advanced products of the Apple company which are not like the others, the Facebook hitting the markets in 2004, the Twitter used by millions of users and other social media such as Instagram, Pinterest and Foursquare, especially used by the young people have become an important part of Gen Zs life. It is estimated that the social media would leave impacts and cause addictions on the members of the Gen Z.

The members of the Gen Z who were born into a techno-global world can get contact with any person in any location of the world in seconds and share information. The Gen Zs that may be called as the technology addict have a command of Internet technology, play Internet-based games, socialize on Internet environment, like to be online 7/24, get information from Internet and share continuously something (Berkup, 2014). The members of this generation accessing to any kind of information on Internet they need are supposed to be the most connected generation ever born.

The Gen Z perceive the technology as a part of usual life but not an innovation, convenience or a requirement one must be accustomed to. It is also defined as the Global System for Mobile Communications (GSM) based generation. This generation, which wants everything to happen speedily and instantly because of the influence created by the development of technology, is impatient exactly like the Gen Y. Their attention span is short and one of the positive traits contributed to this generation by the Internet technology is that they are able to be interested in more than one subject at the same time. As their ability to be interested in more than one issue is highly advanced, they are thought to have the highest motor skill synchronization for hand, eye and ear in the history of humanity. The Gen Z like activities and games allowing creativity. Their most distinct traits are socializing through Internet, consuming rapidly, practicality and speed, interactivity, efficiency, dissatisfaction and being result-oriented (Berkup, 2014). They suppose anything possible in the world and can do everything thanks to their equipment. Their self-reliance is high and they tend to be efficient and innovative. They are expected to live under better living standards, longer and be wealthier than the previous generations thanks to the advanced technology.

As matched with the previous generations they start to be educated at the earlier age and get a planned and developed education. They may benefit from the advantages of the education they get in business life. Based on the specified traits of the Gen Z, they are anticipated to have characteristics such as efficient technology utilization, multitasking and independence (not to like the teamwork), creativity, global point of view and preference of non-standard and personalized works. The aforementioned traits cannot be beyond a supposition as the economic and political processes that may be arisen when the Gen Z reach the working age.

Readiness of Gen Z in Workforce

According to a survey conducted by Ipsos research (2015) with a focus group discussion and in-house interviews with 511 respondents that fit into the Gen Z age bracket, youth entrepreneurship is gaining popularity in Malaysia and is being seen a major game-changing element to ensure sustainable economic growth. Giving Gen Z the resources they need to become successful entrepreneurs could be the key fuels innovation, creates new jobs and increases productivity and competitiveness. The need to

forge their own path in life can be seen in the result of the survey where the Gen Z need to be bold and adventurous, being entrepreneurial and wanting to seek career linked to hobbies or interests. In evidence, 42% of the respondents entertained the idea of doing something completely new in career while 37% said that they would like to transform their hobby into their profession. Therefore, holding a traditional day job is not really a priority for Gen Z.

On the other hand, the self-driven motivation sets Gen Z apart from Gen Y peers. Gen Z is generally considered to be more driven and less narcissistic than Gen Y (Nambiyar, 2014). Their ambitious nature of Gen Z brings with it high demands where 75% of respondents said they consider getting higher salary to be the key factor where earning good pay is a higher measure of success than being happy, being healthy or being able to enjoy their career. However, it is interesting to note the place that non-monetary measures have in relation to monetary needs. Even though money has always been the top priority since the Baby Boomer generation, the key insight here is that the other factors are moving to be almost equally as important as monetary measures (Erickson, 2013). Furthermore, there is also the possibility that Gen Z may not be willing to put in the long-term effort needed to achieve goals and they may be more willing to 'jump ship' to a new venture if their current efforts fail to produce the results that they want (Settersten & Ray, 2010). As a result, this mindset may cause many of Gen Zs to leave companies prematurely.

Apart from the above concern, Gen Z is also a generation that is hyper-connected, spending an average of eight hours per day online. The survey result showed that 80% of the respondents look at between one and three screens on a daily basis with their smartphones being their main device. Having a very significant online presence means that Gen Z will have clear sense of how competitive the world in form of global perspective. In addition, Gen Z use the web as tool to gather information where websites like YouTube, become repositories of knowledge and social networks like Facebook and Google+ become avenues for discussion and networking. Virtual sources of knowledge become as important as classes and books where in the past, there was a clear divide between the virtual and real world.

CONCEPTUAL FRAMEWORK

In view of the above-described literature and survey results, Figure 1 illustrated a diagrammatic view of the conceptual framework for the study is constructed in Gen Zs relation to internet and relation to work towards workplace attitude.

Figure 1: Proposed Conceptual Framework
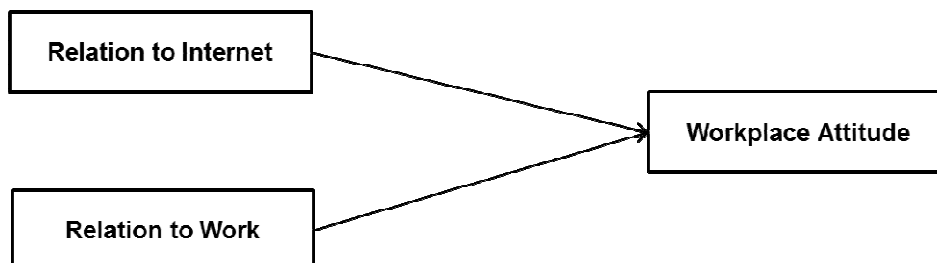
CONCLUSION

The up and coming Gen Z represents a whole new paradigm and being the most technology savvy generation of all time. As Gen Z is currently in their formative years, entrepreneur has the opportunity to create lasting impressions as a good employer and positive work environment. Managing this generation requires adequate understanding of their attributes and a rethinking of current managerial practices. Although there are extreme examples of Gen Z making mark for themselves, parents, educators, political leaders and entrepreneurs can function as role models and inspire Gen Zs to go beyond their boundaries and achieve greatness.

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Customer Perceived Value in Medical Tourism Industry in Malaysia

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Abstract

The aim of this paper is to identify the dimension of perceived customer value as well as the customer satisfaction in the context of medical tourism. It seeks to demonstrate the conceptualization of perceived customer value construct in medical tourism. The four dimensions of perceived customer value include perceived hedonic value, perceived pricing, perceived service quality and perceived product quality. This research also attempts to examine the effect perceived customer value dimensions on customer satisfaction dimensions of medical tourism. This paper focuses mainly in local patients since there is very little empirical research has been carried out at the local patient level. The main method of data collection is the self-administered questionnaire. This survey will cover the major private hospitals which promote medical tourism in Klang Valley. Findings from the research enables healthcare providers and policymakers to better position and take good care the needs of local patients rather than too focus in earning the foreign currency of foreign patients.

Keywords: Customer perceived value, local patients, medical tourism, customer satisfaction

INTRODUCTION

Medical tourism is one of the important subsectors under the Healthcare National Key Economic Areas (NKEA). Medical tourism refers to any activity related to medical services like cosmetic surgery or other medical procedures are covered under the Healthcare NKEA (ETP, 2009). Wellness and spa are included in the scope of the Tourism NKEA (ETP, 2009). The health sub-sector is distributed from tourism sector to be the most burgeoning market in Malaysia (Ormond, 2011). Today, Malaysia is one of the most preferred medical tourism destinations in the world (Ormond, 2011; Dahlui & Aziz, 2011). Malaysia has the good prospects in developing the medical tourism industry such as affordable medical price, short waiting time for treatment, well-trained medical specialists, state-of-the-art medical facilities, worldwide recognized safety and quality services, reasonable exchange rate compared to nearby competitor countries (Dahlui & Aziz, 2011). However, this phenomenon brings harm to local populations (NaRanong and NaRanong, 2011). What is the darkness of medical tourism industry to local patients in Malaysia?

Sarah & Mahmoud, (2014) stated that the growth of private hospitals in promoting the medical tourism in Malaysia have brought to low satisfaction level among local patients. The level of dissatisfaction appears to be very high, especially in the public hospitals in Malaysia (Milton, 2015). The primary reason is too much attention is emphasized in improving the private hospitals to promote medical tourism to gain better revenue but at the same time ignored the quality and services deliver in public hospitals (Manaf, 2012). The private sectors are the current medical service providers of medical tourism in Malaysia. It has some debate that Malaysia has dual healthcare delivery system, regarding the provision and the equality of

access of quality of healthcare services to local populations. Alvarez, Chanda and Smith (2011) mentioned that foreign medical tourist access high-tech medical equipment services in private hospitals with high qualified staff-to-patient ratio, whereas the local patients would receive basic and under-sourced medical treatments.

NaRanong and NaRanong (2011) reported that high inflow of medical tourists caused the increment of medical fee in Thailand. This phenomenon undermines the access of state-of-the-art medical treatment among the local populations who forgo the chances to receive the quality medical care (Hazarika, 2010; Gupta, 2008; Ramirez de Arellano, 2007).

There are abundance of studies carried out in the perspective of medical tourists in terms of customer satisfaction and customer loyalty. Currently, there is no any empirical study to determine the customer satisfaction and of local patients towards the medical care in Malaysia. The purpose of this study is to investigate the perspective of local population at their customer satisfaction towards the emerging of medical tourism industry in Malaysia.

To achieve the problem mentioned, the proposed study needs to answer the following research question: What are the relationship to show the link of perceived customer value, perceived service quality, perceived pricing, perceived hedonic value, perceived product quality and customer satisfaction in Malaysia medical tourism industry?
The specific objective of this proposed study is:

1. To examine relationship between perceived product quality and perceived customer value

2. To identify the relationship between perceived pricing and perceived customer value

3. To examine the relationship between perceived service quality and perceived customer value
4. To examine the relationship between hedonic value and perceived customer value

5. To examine the relationship between perceived customer value and customer satisfaction relationship

In order to achieve the objectives of this study, the hypotheses are:
H_1: There is a positive relationship between perceived product quality and perceived customer value
H_2: There is a positive relationship between perceived pricing and perceived customer value
H_3: There is a positive relationship between perceived service quality and perceived customer value
H_4: There is a positive relationship between hedonic value and perceived customer value
H_5: There is a positive relationship between perceived customer value and customer satisfaction

LITERATURE REVIEW

Customer Perceived Value
Perceived value is divided into two sections, one is benefits received which includes relationship, economics and social while the other is sacrifices refers to effort, price, time, risk and convenience (Dodds, Monroe & Grewal, 1991; Grewal, Monroe & Krishnan, 1998; Cronin, Brady, Brand, Hightower & Shemwell, 1997; Cronin, Brady & Hulf, 2000; Bigne, Moliner & Callarisa, 2001; Oh, 2003). Perceived value is a subjective construct in some ways; it is differ between people (Wikstom & Normann, 1994; Parasuraman, 1997), between cultural (Assael, 1995) and at not the same item variables, post-purchase experience, at the time of usage and after the usage. The evaluation made may not be the same for each of the time (Gardial et al, 1994).

Five dimensions are identified such as reputation, quality, emotional response, monetary price, and behavioral price (Petrick, 2002). The precursors of the formation of value in the restaurant industry include brand, price and risk (Kwun, 2004). Satisfaction with leisure activities covers the cognitive and affective assessment and affective assessment dominate the function (Benkenstein et al., 2003). The consumer behavior is commonly studied from a rationalist perspective though the emotional component is given lots attention (Holbrook & Hirschman, 1982; Oliver, 1997; Peter & Olson, 1999). Information

processing approach is favored recently. Fantasies, feelings and emotions need to be embedded in leisure activities like tourism to explain purchasing behavior. A lot of products have symbolic meanings that includes emotional, price and quality which influence customer when purchase (Havlena & Holbrook, 1986).

Perceived Hedonic Value

Hirschman and Holbrook (1982a) said that the hedonic consumption is the facets of consumer behavior that relate to the multi sensory, fantasy and emotion aspects of one's products' experience. The aesthetic and experience-based subjective aspects of consumption and meant regarding to mundane products as rich symbols is hedonic value. Hedonic value is more personal and subjective compared to utilitarian components and gained more fun and playfulness compared to task completion (Holbrook and Hirschman, 1982).

Arnold and Reynolds (2003) give interest on the hedonic shopping motivation. They recognized six dimensions of hedonic shopping motivations are identified: adventure, gratification, role, value, social and idea shopping. These dimensions and additional background variables are used, to profile five shopper types. But these authors are accompanied to advance motivation-based shopper typologies – see (Westbrook and Black, 1985) for a nice review and alternative perspective. Customers are segmented based on underlying motives lends support for the need to broaden the understanding of how customers derive value from the department store shopping experience per se without regard the motivation typology.

Perceived Pricing

Price has been viewed as an vital criterion to affect the diffusion of new products and services, but pricing of a new product or service is particularly not easy (Foxall, 1984)., Price is indirectly generates revenues that allow organizations to create customers retention at a profit, as a bargaining tool but also can be used as a communicator, and as a competitive weapon (Brassington and Pettitt, 2013). Similarly, Shipley and Jobber (2001) suggested price management is a key determinant of performance, a critical component in marketing and competitive strategy and. Price is the measure by which the value of an offering is judged by industrial and commercial customers and the brand selection among competing alternatives are impacted strongly.

Consumers' reaction to price is very heterogeneous (Dickson and Sawyer, 1990). Price is multidimensional, which covers two positive and five negative price cues (Lichtenstein et al., (1993). Price/quality relationship is the first positive role of price. Customers will think that high price of a product will equal to high product quality and they are willing to pay more to get higher quality of certain product. A lot of variables may mediate price/quality relationship: the time used to search the product (Gardner, 1970); the perceived risk to buy the product (Monroe and Krishnan, 1985; Peterson and Wilson, 1985); the frequency of buying; and the level of price for certain product category and product class (Lichtenstein and Burton, 1989). When consumers gain more purchasing experience and the knowledge of the product, they become less depending on price-quality inference

Prestige sensitivity is the second positive role of price at where an individual are willing to make more payment as they feel that expensive product signals prestige to others. Prestige sensitivity is the perceptions of price cues favored are depends on the feelings of prominence and status that higher prices symbolize the buying (Lichtenstein et al., 1993). Prestige sensitivity is then expected to be associated to other socially visible products and certain behaviors (Lichtenstein et al., 1993). As the environment undergoes rapid and constant change, possessions on display are important (McCracken, 1988). Korean consumers experienced changes in retail patronage behavior in the 1998 economic crisis (Shim and Cho, 2000)

When consumers postpone or give up to buy an expensive product, high price plays a negative role in the buying decision. Five negative price cues include sale proneness, price consciousness, coupon proneness, price mavenism, and value consciousness (Lichtenstein et al., 1993). From an economic

perspective, the product price can influence the customers' buying behavior negatively (Lichtenstein et al., 1993). Higher product prices can repel customers away from buying a product as a result of consumers' implied monetary sacrifices (money outlay) and non-monetary sacrifices (psychological consequences, lack of product benefits received) (Lichtenstein et al., 1993). Four dimensions related with the negative role of price is identified by Lichtenstein et al., (1993): sale proneness, value consciousness, price mavenism and price consciousness.

Perceived Service Quality

Perceived service quality is regarded a crucial achievement determinant to influence an organization's competitiveness. Service quality refers to the forefront of both the marketing literature in common, and the services marketing literature in particular. (Jensen and Manolis, 1996; Lassar et al., 2001). Furthermore, perceived service quality is considered an essential factor to allow an organization to differentiate itself from the competitors and achieve a sustainable competitive advantage.

Perceived service quality refers a perceived verdict where customers compare their received service with their expectations (Grönroos, 1984). Perceived service quality can be divided into technical quality and functional quality (Grönroos, 1984). According to Bolton and Drew (1991); Parasuraman et al., (1988), perceived service quality is a form of attitude, where it is not equal to satisfaction that is the results from the comparison of performance and expectations. Perceived service quality can be explained in professionalism and skills, service recovery, attitudes and behavior, , reliability and trustworthiness, servicescape, accessibility and flexibility, reputation and creditability (Grönroos, 2000).

Perceived service quality include employees providing prompt service and respond to customer's needs promptly. According to Watson et al., (1988), responsiveness dimension in perceived service quality symbolizes the service provider's ability to give immediate response to request and suggestion, and to assist customers when they face problems (Zeithmal et al, 1990). Responsiveness able to create time benefit such as it saved time when service employees responded promptly to customers.

Perceived Product Quality

Product quality refers to a value, excellence, conformance to specifications of products and meet or exceed the customers' expectations towards the product. According to Juran (1988), the researcher defines that quality as purpose for fitness and use for fitness. Juran also emphasized that the quality is crucial in every stage of the product development cycle and the value chain of the product. Crosby (1991) defines quality refers to the requirements of the products that are conformed. There are three ways for quality improvement as suggested by Deming (1994) which are through a product or service design innovation, through processes innovation, and through existing processes improvement. The product quality has portrayed the design of the product and customer requirement (Flynn et al., 1994; Lynch, 1999).

Customer Satisfaction

Satisfaction is important for business success. However, interest in adopting the satisfaction measurement focus the concept of loyalty as it has better prediction of consumer behavior which is a key to business continuity (Chi & Qu, 2008). Previous studies identified that perceptions of service quality and value affect satisfaction, and satisfaction furthermore affect loyalty and post-behaviors (Oliver, 1980; Cronin & Taylor, 1992; Fornell, 1992; Anderson &Sullivan, 1993; Tam, 2000; Bignie, Sanchez & Sanchez, 2001; Petrick & Backman, 2002; Chen & Tsai, 2007; De Rojas & Camarero, 2008). For instance, the satisfied tourists may revisit a destination, recommend it to others. On the other hand, dissatisfied tourists may not return to the same destination and may not recommend it to other tourists (Reisinger & Turner, 2003).

Intention to Loyalty

Behavioral, attitudinal and compound perspectives conceptualized the loyalty (Bowen & Chen, 2001; Zins, 2001). Repeat purchase examined the behavioral loyalty, attitudinal loyalty reflects to recommend

the service provider to others and has repurchase intention while compound loyalty combines both perspectives of behavioral loyalty and attitudinal loyalty which can predict better the construct (Dimitriades, 2006; Pritchard & Howard, 1997). Loyalty refers to repeat purchase commitment a certain product or service in the future regardless the changes of environment marketing strategies to influence a customer's behavior (Oliver, 1997). Berne´ (1997) showed loyalty is a consumer's promise to repeat the certain purchase of a product or service in the future.

Figure 1: Proposed Conceptual Framework

Source: Developed for Research
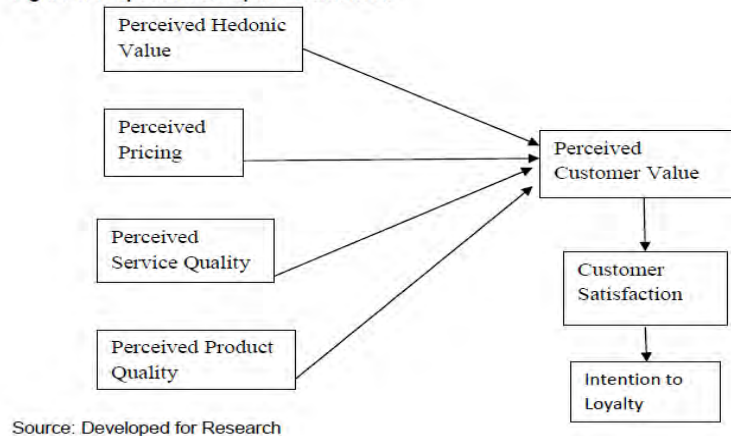
Theory of Planned Behavior

Theory of Planned Behavior stated behavioral beliefs, normative beliefs, and control beliefs affected an individual's actions (Ajzen, 2006). Behavioral beliefs reflect the final outcome of a particular behavior that a person performed. Normative beliefs reflect the perception of a person at how others view his particular behavior. The others' opinion influences the person to perform the behavior. Control beliefs reflect the personal opinion of an individual about the certain behavior. The combination of these three beliefs affects the person's behavior. If the control, behavioral and normative beliefs are satisfied, it increases the chances of performing a certain behavior (Ajzen, 2006). However, each belief has its own characteristics so all these three beliefs are interrelated.

These three beliefs establish an attitude toward a certain behavior and finally affect the person to make a decision. The local patients' behavior is influenced by many factors. A patient will have particular behavioral beliefs about the possible outcomes of seeking medical care in private hospitals which promote medical tourism. Affordability is one of the vital considerations to receive medical treatment in private hospitals and cost can cause an individual's particular behavior. Quality of healthcare is another crucial consideration. Normative beliefs also affect the decision making of a local patient to receive medical care in private hospitals which promote medical tourism. The family's and friends' perceptions on taking medical treatment with medical tourists will influence the patient's view in seeking care in private hospitals. If his family and friends favor the concept of medical tourism, the patients will feel supported to receive medical care in private hospitals which or vice versa.

Lastly, control beliefs also influence the decision of a local patient. Equity to access and quality of medical care for local patients and medical tourists may be different. However, these negative perceptions that can be overcome can affect positively the local patients' behavior.

RESEARCH METHODOLOGY

Sampling Design
This proposed study will focus the local patients who receive medical treatment in Malaysia private hospitals for medical care. The private hospitals which promote medical tourism that located in Kuala Lumpur, registered under Associate Private Hospital Malaysia (APHM) are chosen. The local patients who stay at least a night at the chosen private hospitals which promote medical tourism will be selected in this proposed study. Self-administered questionnaire will be used in this proposed study. Primary data and secondary data will be used to collect the information. Structural Equation Modelling (SEM) and Partial Least Squares (PLS) will be used in this proposed study to do the data analysis.

Directions for Future Research
This proposed study will be done with an intention to understand the customer perceived value of local patients towards the emerging of medical tourism industry in Malaysia. The proposed constructs and the conceptual framework proposed need empirical evaluation in order to be established. It is important for the empirical study to analyze the medical tourism industry landscape from the perspective of local patients, in order to understand the propositions. Further, it is also essential to conduct research on the effect of the apprehensions faced by the local patients during the consumption of the service on the customer experience.

CONCLUSION

Medical tourism is being perceived as an important source of foreign exchange earnings for the countries which promote medical tourism to encourage the cross-border patient flows. Government sectors, private organizations, non-governmental organizations (NGOs) and tourism industry players in Malaysia and overseas cooperate to coordinate medical tourism activities. It is a need to understand the subjective customer perceived value among local patients for the development of medical tourism industry. These findings lead us to better understand the predicament of the prospective local patients of medical tourism and thus the latent needs of the local patients in order to serve them better.

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Talent Retention:
A Study of Manufacturing Industry in Malaysia

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Abstract

Talent retention is a worldwide controversial issue. Employing and retaining talented employees is the main concern for employers today. Managers anxious about their company capability to site, attract, employ, expand and reserve the qualified employees to operate their business. During last decade, insufficient number of talents has occurred in the workplace. Leaders were facing difficulties of ways to retain the talented employees and supersede about 70 million Baby Boomers who will go for retirement. Retention is reformed after employees have sustainable work civilization, employees are provided benefits and allowances and employees can balance their work and life activities. Efficacious retention implementation because of good employment practices. Eligible and enthusiasm employees will stay permanently. Therefore, in order to create a high retention rate working environment for employers, this research will provide in depth understanding about the vital factors for retaining their talented employees which could ensure the organization sustained in a competitive environment.

Keywords: Talent Retention, Compensation, Training & Development, Work Environment, Work-life Balance

Introduction

Talents describe an individual who have the specific skills, knowledge, capability and experience to fulfill the current and oncoming demands of companies (Bhatnagar, 2007). Talent is essential for survival of an organization (Beheshtifar, Nasab & Moghadam, 2012). According to Acharya & Neswankar (n.d.) "no organization can survive if all the top performers quit". However, many considerations of employee retention as relating to the efforts by which employers placing employee's in the most appropriate position and retaining it as long as possible in their workforce. Moreover, in the 1970s and later, a phenomenon of job mobility and voluntary job changes began to increase dramatically, employees face this new phenomenon to call – "Employee Turnover". Employee turnover is an issue that has not been resolved. Therefore, management began to be developed - "Employee Retention" to retain its valuable employees (Samal, 2014). When in 1997, McKinsey study discloses the term "war for talent" as a strategic business challenge and a critical driver of corporate performance. In such scenario, strategies talent management has emerged as a central aspect of many Human Resource strategies and is based on a belief that managing valuable talent in delivering organizations goals and target (Vrontis & Thrassou, 2013). Therefore, to reduce the high turnover rate of employees, the better way is going to retain them first. It is because high turnover rate will brought the serious talent shortage problems to the organization. According to the Talent Shortage Survey 2013 in Asia, more than half (51%) of employers who were participated expressed that skills gaps posits obstacles in process of hiring especially is Japan (85%), following by India and Hong Kong (Talent Shortage Survey, 2013). While in Malaysia, employee turnover rate was increased from 0.9% from 12.3% in 2012 to 13.2% in 2013 and obviously showed that manufacturing industry and financial industry were suffering a high staff turnover (Mystarjob.com, 2013).

According the largest manufacturing association in the US, the National Association of Manufacturers (NAM) Manufacturing Institute 2011 Skills Gap study show that 82% of manufacturers have a medium or critical labor shortage of skilled employees, and 5% of all manufacturing jobs are empty due to lack of qualified talent. Furthermore, 2.7 million of the manufacturing employees are over or 55 years of age and they are willing to exit the labor market over the next 10 years in the worldwide (Phillips, 2014). Similarly, The Productivity Report 2013/2014 had stated that the major challenge facing by the manufacturing sector in Malaysia is finding and retaining talent. In the manufacturing sector, they are not only competing with the foreign competitor, they also face sub-sector in domestic pursue for talent worker (Tham, 2001). As the result, skill worker often joins other industry due to seeking for better wages and job security. In the other hand, some emerging local industries such as aerospace are too small to provide worker for entire local talent pool, so skilled worker is beginning move to established industry such as oil and gas (Fisher, Agarwal & Green, 2012).

That was a big challenge to manufacturing industry Malaysia which are quickly developed recently comparing to previous few years. Malaysia manufacturing industries was contributes nearly 80% of country's overall export. It has been demonstrating outstanding growth since the early 1980s, when the country has been transformed from being a predominantly agricultural economy country into industrial-based economy (The Malaysia Government's Official Portal, 2015). Upon the realization of not being too depended on its own import as well as its technology-based sector, a huge thrust to change the economy was undertaken to warrant the nation success in term of economy.

The purpose of this study is focus and provides in-depth understanding about the retention factors which could attract and influencing the high possibility for talent's retention rate. We found that there are lacks of in-depth exploratory study in manufacturing industry especially in Malaysia. Therefore, in order to fill the gap, this study aims to investigate the relationship between training & development, compensation, work environment and work-life balance with talent retention. By conducting this study, the organizations will be able to execute the appropriate approaches to retain their talented employees. The following discussion comprises three parts. First is to examine the literature review to propose the theoretical framework. Then continue with the methodology and analysis results for the proposed model. Lastly, the final part prevails the discussion and conclusion with several important ideas of study.

Literature Review

In the 1990s, the word "talent retention" begins to emerge frequently in the business. During 1950s and 1960s, it was not specially for the individual who get in to the job market to remain with the same employer for a long duration of time, occasionally for the permanent of the whole work life (Farley, 2005). Talent retention indicates the capability of an organization to avoid helpful and gifted employees from resigning their jobs. Efficacious talent retention is an orderliness achievement by employers to initiate and nurture the environment which cheer on present employees to continue hiring by having practiced and strategies that fulfill their different requirements. It is a strive of an organization to restrain and grab its talented employees as closely as possible. However, an organization needs to remind that talent retention is reserving the competitive sustainability of an organization and it is not reserving few talented employees (Samal, 2014).

Training & Development
An organization has a prosperous future and become successful depends on its well experienced, skilled and knowledgeable employees. To successfully accomplish the organizational objectives and goals, training is an essential and effective tool. Training can help employees improve their resourcefully, thus it also gives the employees have the opportunity to understand their work (Nadeem, 2010). While employee development, according to Anis, Ijaz-Ur-Rehman & Safwan (2011) was the process for future work. Thus, Jehanzeb & Bashir (2012) describe that employee development program includes a variety of teaching methods, schedule, and help in the learning environment to ensure that employees to improve their skills and later apply to their own work. This program is for employees to improve their skills to the changing work and ensure that it adding value to their organization's growth.

H1: Training and development affects talent retention.

Compensation
Compensation is an employer provided monetary or non-monetary for their employee as a reward based on the requirement for the work performance (Patnaik & Padhi, 2012) such as profit sharing, year-end bonuses, overtime pay and commission of sales for monetary compensation. The non-monetary compensation includes company-paid car, stock options in certain instances, company-paid housing and so on (Ballentine, McKenzie, Wysocki & Kepner, 2003). According to Osibanjo, Adeniji & Falolaand Heirsmac (2014), compensation is one of the methods that human resource management using different type of reward received from the employee based on their performing organizational task. It is a double input-output exchange between the worker and hirer. Employee's satisfaction will also directly affected by the compensation. There is significant positive relationship (Igalens & Roussel, 1999).

H2: Compensation affects talent retention.

Work Environment
Generally, work environment factor was discussed by most of the researchers in industrial hazardous about safety and health previously. There were including the risk in dimensions to cause work accidents, exposure to hazards and diseases and injuries. However, recently, Markey, Ravenswood, Webber & Knudsen (2013) had provided another definition about work environment which was employees feeling appreciated by management and not feeling threatened at work when there are low levels of stress at a good workplace. According to Fatima (2011) devoted that employers shall actively and promote work towards creating and maintaining a safe and secure working environment in which employees feel satisfied, valued and can develop a sense of belonging to the job itself and to the organization, in other words work towards retaining that top talent or employee retention. It was because employee's need is extremely critical step to build loyal employees in the organizations. An organization with practicing a good employee relations program will provides that fair and positive treatment to all employees, as consequence they will increase their commitment toward the jobs and sustain employee's loyalty to the organization. Thus, the work environment is identified as important factors that affecting worker and workplace outcomes. Besides that, a company that creates right culture will have advantage to create competitiveness, changing employee behavior and attitude: to improve employee's performances, get them act persistently with the firm's objective or desired corporate culture and with the company's humane, thereby attracting and keeping employee retention (Moncarz, Zhao & Kay, 2009).

H3: Work environment affects talent retention.

Work-life balance
Work-Life Balance (WLB) had defined by many authors and the term WLB has been widely adopted. Then, Greenhaus, Collins, and Shaw (2003) had provided a definition on WLB that refer to the continuum on the engagement of one individual toward their job as well as the satisfaction on their work role and family role that comprises of 3 components of time balance, work family balance, satisfaction balance and involvement balance. Thus, Kirchmeyer (2000) had provided another definition on WLB to which an individual attaining their satisfying experience in every of life domains and these are done through personal resources, for instance, time, energy as well as commitment that is to be distributed spreading across domains. Generally, WLB had defined as the perception of individual in which there us compatibility on both work as well as non-work activities and encourage growth according to the life priorities of an individual currently (Kalliath & Brough, 2008).

H4: Work-life balance affects talent retention.
H5: There is a significant relationship between training and development, compensation, work environment and work-life balance with talent retention.
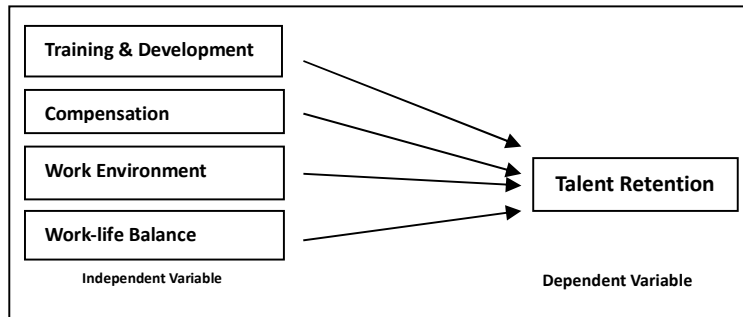
Figure 1: Research Framework

Methodology

The study focuses on manufacturing industry which located in Johor, Perak, Selangor and Penang. The main reason of researchers distributed in these four states due to that they are contributed almost 60% of the total manufacturing employees in Malaysia. For instance, Penang was well known as "The Silicon Valley of the East", it aspires to heighten its international and intelligent city status by leveraging on it's highly innovative and sophisticated manufacturing and services sectors and will benchmark to global standards. Non-probability sampling technique will choose for this study. The convenience sampling technique was used to collect known and unknown respondents for huge being numbers. It also considered high accessibility, convenience and quickly to get the relevant information through the questionnaire. A total of 500 questionnaires had been distributed and just left 410 scripts after did the data processing. It because some of the information was in error or the target respondents was out of our expected. The Statistical Analysis System (SAS) was used to generate the proposed framework with the data collected.

Analysis

The table 1 showed that the level of reliability for dependent and independent variables are reliable and acceptable which all the Cronbach's Alpha values are more than 0.60.

Variables	Cronbach's Alpha
Talent Retention	0.774146
Training and Development	0.861652
Compensation	0.882561
Work Environment	0.861444
Work-life Balance	0.753592

Table 1: Summary of Reliability Analysis

Table 2 is showed the significant level of independent variables with talent retention. All independents variables were show the positive relationship towards talent retention and scored correlation values 0.66 to 0.82.

Pearson Correlation Coefficients, N=410 Prob> |r| under H0: Rho=0				
	Training and Development	Compensation	Work Environment	Work-life Balance
Talent Retention	0.80094	0.82686	0.78725	0.66884
Talent Retention	<.0001	<.0001	<.0001	<.0001

Ta

Table 3 showed that all independent variables are significant explaining the variance in talent retention and the all hypotheses were supported by data due to the p-value (<.0001) was less than alpha value 0.01. The R-Square showed that 79.53% of independents variables able to explain of the variations in talent retention. There are leaves 20.47% unexplained the variations in this study.

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr> F
Model	4	154.71491	38.67873	393.42	<.0001
Error	405	39.81670	0.09831		
Corrected Total	409	194.53161			

Root MSE	0.31355	R-Square	0.7953
Dependent Mean	3.05902	Adj R-Sq	0.7933
CoeffVar	10.24996		

Table 3: Multiple Regression Analysis Result

Discussion

The study found that there is significant relationship between training and development and talent retention. The value of the correlation coefficient is 0.80094. The value justifies there is a good relationship due to the result fall under the range of ± 0.71 to ± 0.90. Through the training and development provided by organization, employees could feel the care and concern from employer. They also will feel that they are owed to the organization, so in return, this is a way to maintaining the employees to stay longer in the organization (Brum, 2007). In addition, Van Dyk, Coetzee & Takawira (2014) found that training and development opportunities can lead to the commitment and it may result in a higher chance of employee retention. So, it has confirmed that there is a strong relationship between employee training and development and retention among employees (Jehanzeb & Bashir, 2013).

Next, there is no doubt that the result was showed the positive relationship between compensation and talent retention. It reaches the value as 0.82686. Compensation was play as the driving factor to attract and engage the employees. Phonsanam (2010) indicated that talents will show their loyalty to the company when they satisfied with their compensation packages. Davies (2001) also devoted that talents will stay longer with company when their contribution and efforts can get the equal returns. Therefore, company should accord different types of contributions and an effort provides different types of compensation packages to fulfill various types of situation.

Work environment was achieved 0.78725 for value of correlation coefficient between the relationships of talent retention. A quite high score value. Work environment treated as influencing elements that have greater impact on the talent retention (Moncarz, Zhao & Kay, 2009). In manufacturing industry, employees those who work with the machines and exercised equipment require strict safety guidelines and protocols. Additionally, the study indicates that, when workplace filled with healthy, balanced and fulfilled employees that could retains its employees easily (Barling & Kelloway, 1996). However, when having an unfavorable work environment condition was associated with low productivity.

According on the analysis results, work-life balance was showed the lowest value in the relationship between talent retention. It achieved 0.66884. The lowest scoring might due to the Malaysia working environment especially for manufacturing company. They still remain as old style management system. The working hours are fixing, not much flexibility as well. However, accord for involving the new Generation in the workplace, work-life balance this needs or desires will be gradually strongly existed in the workplace. According to the Gunavathy (2011), employers should provide employees more authority

to handle their work through planning, scheduling and allocating their work resources. Thus, McGraw & Heidtman (2013) stated that work-life balance can help employers attract and retain more talented workforce.

Conclusion

As a conclusion, this study had derived five objectives which to determine the relationship between training and development, compensation, work environment and work-life balance with talent retention. The results were showed that all the variables have positive correlation with talent retention. The results also greatly support to all hypotheses and answering the research questions despite of several limitations. In order to increase the reliability and validity of study, future researchers might try to replace the independent variables with others variables such as employee relation and supervisory support.

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What Attracts Malaysian SME's towards Facebook Advertising? A Conceptual Paper

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Abstract

As people continue to get attracted on their gadgets (i.e., smartphone and tablet), the way that people spent their free time has gradually shift from desktop to mobile which has become the facts of life. As matter of facts, social networking sites (i.e., Facebook) gains more and more interest from both academia and practitioners, however, the empirical evidence of Small and Medium Enterprises (SMEs) adoption of Facebook advertisements remain unexplored. The study proposes factors that may influence SME's decision towards adopting Facebook advertising. The conceptual model not only valuable to social networking sites in formulating business strategic move, but also provide better picture on SMEs adoption behavior to mobile stakeholders.

Keywords: Facebook advertising; Small and Medium Enterprises (SMEs), Adoption

INTRODUCTION

Mobile internet traffic is blooming across the globe and it is ratify that the mobile internet will grow beyond than the desktop internet. In the scenario of Asian, Malaysia is amongst four Asian nations where smartphones have exceeded desktop devices for internet surfing. This also implies that 51 % of the respondents depend on smartphones for web access against 39 % who used computers (Subramaniam, 2014). Thanks to the continuous effort from local mobile network providers (i.e., Maxis, DiGi, and Celcom) where affordable smartphone phone packages were offered (Teo et al., 2014). The rapid growth of mobile internet is believed due to the high mobile phone penetration of 144 per 100 inhabitants (Ibrahim, 2014).

Amongst the visited sites, Facebook is currently the most visited social media website in Malaysia. Mahadi (2013) also indicated that 13.3 million or 45.5 % of Malaysia's population are Facebook users. This placed Malaysia on the 8th and 21st place in Asia and world respectively. The facts simply meant an opportunity for SMEs to utilize social networking sites, particularly, Facebook to convey advertising messages to consumers. Ainin et al. (2015) indicated that embracing Facebook as a platform for business has become a necessity in today's marketplace. Derham et al., (2011) further indicated that Facebook is progressively becoming an alternative in promoting business as it has gone beyond from one-to-one conversation to many-to-many.

Although Facebook advertising has existed for many years, SMEs are recently shifting from the traditional advertising and heading towards Facebook advertising. Unfortunately, ACCCIM (2012) survey indicated that Malaysian SMEs are still bond of using traditional method of running business, with 48 % of the respondents are not involved in e-commerce. Indeed, SMEs possess the attitude of 'wait-and-see' in adopting Facebook advertising. On the other hand, many study focuses on usage of Facebook (Mazman et al., 2010), Facebook usage patterns (Koles and Nagy, 2012), impacts of usage (Chu and Meulemans, 2008), with little attention has been paid on the use of Facebook advertising by SMEs. This situation leads to the call of research in answering the question of why SMEs have yet to embrace Facebook advertising. In view of UTAUT explains 70% of the variance in explaining users' intention (Venkatesh et al., 2003), hence, the paper aims to further extend UTAUT model with the inclusion of two additional variables, namely, branding strategy and costs.

The flow of the paper begins with introduction with overview of Facebook advertising in Malaysia. Thereafter, the paper continued with the review of relevant literatures. Based on the previous research findings, the proposition development and research framework has been formulated and designed. Lastly, the paper ends with the implications and conclusion.

LITERATURE REVIEW

Unified theory of Acceptance and Use of Technology (UTAUT)

UTAUT model was built upon and extends beyond from the renowned IS model, namely, Technology Acceptance Model (TAM). More specifically, UTAUT was developed by Venkatesh et al. (2003) after the reviewing the eight renowned IS theories/models such as Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), the Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM), the Motivational Model, the PC Utilization Model, the Social Cognitive Theory (SCT), and the integrated model of technology acceptance and planned behavior According to this unified model, user adoption and usage of IT are derived by four constructs, specifically, performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). Although UTAUT model has not been extensively adopted as compared to other IS models (i.e., TAM) (Zhou et al., 2010), but it has increasingly drawn more researchers attention to adopt the model in understanding adoption behavior.

Factors affecting facebook advertising adoption

Similarly to TAM model, PE and EE are the key factors in UTAUT. PE and EE refers to the extent to which adopting a technology will beneficial to users and ease linked with users' use of technology respectively (Venkatesh et al., 2003). PE and EE have consistently been shown to be the key predictor of behavioral intention (Venkatesh et al., 2003). SI refers to the extent to which users perceive that important ones believe they should adopt a particular technology (Venkatesh et al., 2003). Study by Suhendra et al. (2009) denoted that SI has the biggest impact towards Information Technology acceptance in Indonesia small enterprises. This implies that SMEs tend to seek for social recommendations prior adopting Facebook advertising. Venkatesh et al. (2003), FC refers to the extent to which user believes that an organizational and technical infrastructure exists to support the use of the system. Research by Lu et al. (2003) stated that FC is one of the critical determinants in using wireless internet. Therefore, the following propositions are proposed:

P1. PE positively affects SMEs' Intention to use Facebook Advertising
P2. EE positively affects SMEs' Intention to use Facebook Advertising
P3. SI positively affects SMEs' Intention to use Facebook Advertising
P4. FC positively affects SMEs' Intention to use Facebook Advertising

In view of media fragmentation to be a serious challenge for SMEs, the paper extend UTAUT model with branding strategy and costs to understand SMEs intention to use Facebook advertising. Okazaki (2005) through 53 senior executives of multinational companies supported that branding strategy and costs are the strongest factors of mobile advertising adoption. Backed with various functions of Facebook (i.e., sharing, tagging, messaging, commenting, and notifying), business can embrace Facebook to sell, advertise and market their product offerings at lower cost (Ainin et al, 2015). Hence, the researcher proposes the following propositions:

P5. BS positively affects SMEs' Intention to use Facebook Advertising
P6. CO negatively affects SMEs' Intention to use Facebook Advertising

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework

UTAUT

- Performance Expectancy — P1
- Effort Expectancy — P2
- Social Influence — P3
- Facilitating Conditions — P4
- Branding Strategy — P5
- Costs — P6

→ SMEs' Intention to use Facebook Advertising
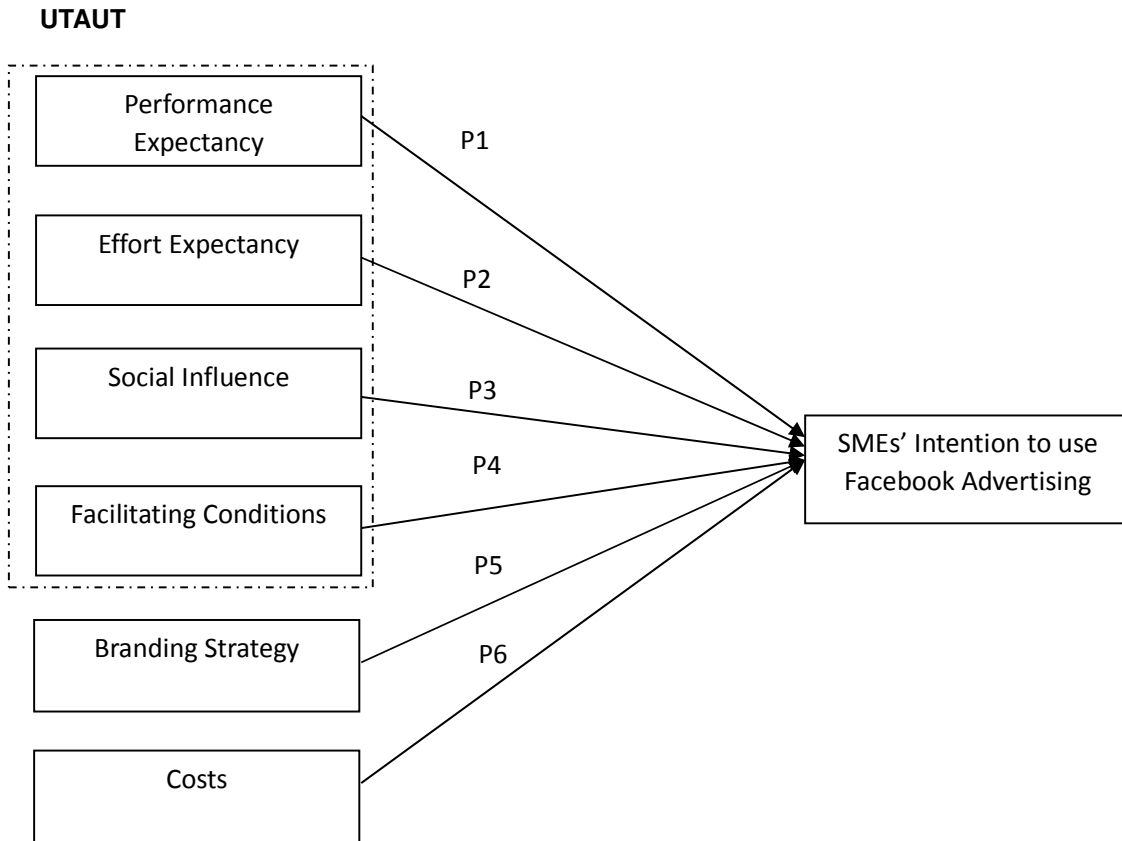
CONCLUSION AND IMPLICATIONS

The conceptual paper extended UTAUT inclusion with branding strategy and costs to examine SME's intention to use Facebook advertising. There are several implications identified from this paper. Firstly, as several studies focuses on different Facebook usage patterns, there is relatively little research exist in the literature on SMEs' perceptions of embracing Facebook advertising. Recognizing that SMEs significantly contribute to the nation's gross domestic product (GDP), the paper also provides new insights for academics and practitioners. More specifically, the paper will be beneficial to marketers and other service providers in formulating and implementing strategic move related to Facebook advertising.

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WHAT MAKES CONSUMER PURCHASE ORGANIC VEGETABLES – A CASE STUDY IN MALAYSIA

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Abstract

Going green and consuming organic food is the current worldwide trend, which is also happening in Malaysia. The growth on organic vegetable consumption in Malaysia is apparently quite slow. This issue has triggered the research which is to determine the factors that influence the purchase intention of organic vegetable by Malaysian. Theory of Planned Behaviour (TPB) was applied in this research and the five factors that found to influence the purchase intention of organic vegetable in Malaysia are environment concern, perceived price fairness, trust on organic labelling and certification, health consciousness and social norms. Insight from this research contributes to the development of literature in organic vegetable consumption in Malaysia which is still rare. Some insightful recommendations were also provided to the industry for the advancement of the trade.

Keywords: Green, Organic Vegetable, Purchase Intention

INTRODUCTION

The objective of this study is to determine the factors that influence consumer purchase intention towards organic vegetable. It is very important to understand the factors that influenced consumer in purchasing organic vegetable so that the consumption of organic vegetable could be increased. Five factors that found influenced consumer in preferring the consumption of organic vegetable are environment concern, perceived price fairness, trust on organic labeling and certification, healthy consciousness and social norms. The subsequent sections laid out the theoretical review, research conceptual framework and conceptual reviews; followed by discussion on the methodology, data analysis and result presentation. This paper ends with discussion on the research finding, limitation and future recommendation.

LITERATURE REVIEW

Theory of planned behavior (TPB) is an extension of the theory of reasoned action (TRA) with the inclusion of volitional control factor (Ajzen, 1991). The central element of TPB is the intention of an individual to perform a particular behavior (Tarkiainen & Sundqvist, 2005). Intention is the motivational factor that affects human behavior by indicating the degree of willingness to try as well as the amount of effort that planned to contribute (Ajzen, 1991). There are three factors that used to determine the intention in TPB. The first factor of intention is the attitude toward the behavior. It is the degree of an individual who has a positive or negative judgment about the planned behavior (Hsu, 2012). The second factor of intention is subjective norm. It is the social pressure that an individual received from his/her social group/s

to perform or not to perform a planned behavior (Bilic, 2005). Last factor, the degree of perceived behavioral control described as the perception by the performer on his/her ability to control the planned behavior (Ajzen, 1991).

The research conceptual framework shows the relationship between the independent variables and the dependent variable. The framework showed that environment concern, perceived price fairness, trust on labelling and certification, health consciousness and social norms are affecting customer purchase intention towards organic vegetable.

Figure 1.0: Research Conceptual Framework

Conceptual Framework
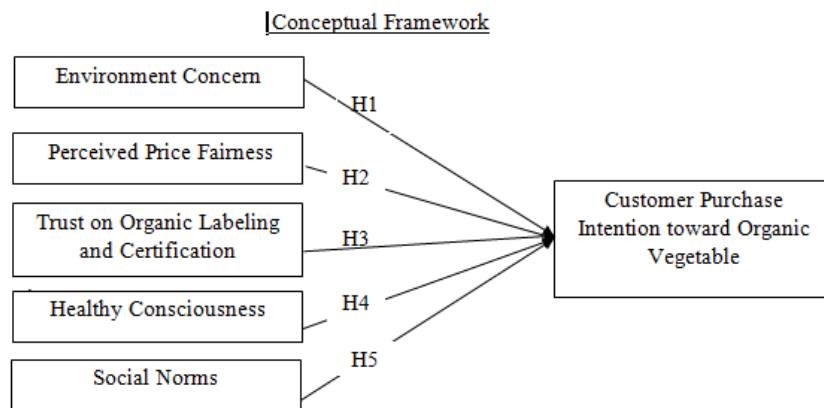
Purchase Intention

Purchase intention is a person's motivational components of behavior in expressing an intention to either purchase or not to purchase a product or service (Shim, Eastlick, Lotz, & Warrington, 2001). Purchase intention is described as the consumer's behavior in searching, evaluating as well as disposing the goods and services which are expected to satisfy his/her need and want (Chowtanapanich & Chaipoopirutama, 2014). This is also supported by the Kim and Kim (2004) who defined it as one of the consumer's preferences toward an object. Ahmad and Juhdi (2008) revealed that purchase intention on organic food could be caused by ecological concern of consumer which is the willingness to protect environmental and concern about food quality and safety. According to the Suh (2009), consumers with high green concern do have high concern on ecological values, natural food and less concerned about conveniences in purchase. Besides, safe food is defined as food without any chemical spray, fertilizer, artificial additive, preservative and with produced with organic farming method (Monika & Simon, 2014).

Environment Concern

According to Crosby, Gill and Taylor (1981), environmental concern defined as a strong attitude towards protecting the environment. Environment concern works as the motivator in moving consumer to consumer organic food (Smith & Paladino, 2010). According to Khan, Chamhuri and Farah (2015) environmental friendliness and issues significantly influenced Malaysian in choosing to consume green food. Huang (1996) said that the increase in consumption of organic produce shows that the society has started to concern about the environment. Furthermore, environment concern has affected consumer food choice behavior (Guadagni & Juhl, 1995). According to Vermeir and Verbeke (2006) consumer who are environmental friendly and relate to organic issues shown positive attitude towards organic food with strong purchase intention. This notion is supported by Muhammad, Muhamad, Sharina, Norazira and Rafiatul (2013) who found that organic knowledge, attitudes and environmental concern do influenced the purchase intention towards organic food. Furthermore, according to the Lockie, Lyons, Lawrence and Grice (2004), consumer that performed environmental friendly activities such as recycling, composting

and use environmental friendly cleaning product would have higher chance of consuming organic food. Environment factors in concern include pollution of soil, artificial fertilizers in agriculture, herbicides and pesticides that shown negative impact toward the environment (Suh, 2009). Consumers that believed in protecting the environment so as to protect their family wanted their children to have a healthy planet too (Suh, 2009). Consumer who has high level of environment awareness concerned about organic food production and shown a high chance in consuming organic food (Lockie et al, 2004).

Perceived price fairness

From the customer perspective, perceived price defined as the price that consumer willing to pay in order to receive a different kind of products or services (Zeithaml, 1988). According to Thaler (1985), consumers' perceptions of price fairness derive from buyers' perceptions on the producer's internal production costs. According to Oliver and Swan (1989), supplier commitment, quality of goods and services significantly affect the consumer perception on price fairness. Sinha and Batra (1999) said that perceived price unfairness is a consumer's subjective evaluation when they assumed that they have been charged at a higher price as compared to other customer/s. Perceived price unfairness will make customer dissatisfaction (Oliver & Swan, 1989). Empirical research by Gielissen, Dutilh and Graafland (2008) shown that the perception of price fairness directly or indirectly influenced customer satisfaction. Organic vegetable which is sold at a higher price than non-organic vegetable does caused lower demand on organic vegetable (Shashikiran & Madhavaiah, 2014). Thus, less consumer consume organic vegetable than non-organic vegetable (Soares, Deliza, & Oliveira, 2008).

Trust on Organic Labeling and Certification

Trust is one of the elements that affect the consumer purchase intention towards organic vegetable as well as in enhancing long-term relationship between the business and customer (Karatu & Mat, 2015). According to Chen and Chang (2012), trust is defined as the willingness of one to rely on other party or object due to the belief and expectation created from benevolence, ability and credibility about the possible performance. According to Carmina and Carlos (2011) trust is intimately related to other basic marketing concepts such as safety, perceived risk, nutrition and health. Trust refers to a belief underlying consumer's attitude toward buying behavior and thus it can be considered as an influential aspect that affects consumer purchase intention (Huong, 2012). According to Air Quality Sciences, Inc. (2010), organic labeling and certification are important in influencing consumer's evaluation on the product's attributes as it is certified by an independent party. However, Padel, Susanne and Foster (2005) revealed that consumer is facing a low level of understanding and high level of confusion regarding the label of organic. Consumers are increasingly concerning about the quality and safety of foods that they are eating (Young, Joowon, Miri, & Junghoon, 2008). Hence they will seek for sufficient information about the quality insurance and brand before making purchases.

Health Consciousness

Safety food refers to food which is produced without chemical, genetically modified (Michaelidou, Nina & Hassan, 2008). Healthy concern found to be the primary reason for majority consumer to purchase the organic food (Michaelidou, Nina, & Hassan, 2008). This finding is supported by Smith and Paladino (2010) and Lockie (2002). According the Lockie (2002) organic produce is a type of food where it is safe and has better taste than conventional produce. Furthermore, organic produce is perceived to be healthier than conventional food. Consumer perceived that organic food has good quality and has higher vitamin and mineral content (Smith & Paladino, 2010). Besides, based on Krystallis et al (2005) survey, consumer chose to purchase organic food because organic food is perceived to be healthier than conventional food.

Social Norms

Social influence is defined as individual that changes his/her thought, perception, feeling, attitude or behavior due to the influence from another individual or a group (Nestle et al., 1998). Social group is a group of people that shared social norms of cognition, emotion and behavior (Greenwood, 2014). Social

norms are informal laws or implicit codes of conduct that provide guideline for appropriate action that accepted by the social group. For example, buying organic food is a socially acceptable action by organic food consumers (Klockner, 2012). Ajzen (1991) explained that subjective norm is the factor that influence purchase behaviour. Subjective norm refers to the pressure from social group on an individual to conduct or not conduct certain behaviour (Ajzen, 1991). Besides that, attitude is affected by subjective norm (Shimp & Kavas, 1984). A positive attitude toward a product will influence an individual and his/her social group members. This is supported by Chen (2007) who found that consumer has higher intention to purchase organic food if the people surrounding him/her perceived organic food as healthier and environmentally friendly.

RESEARCH METHODOLOGY

Research Design

Descriptive research design by using researcher administered questionnaire survey in collecting data for this research was carried out. Target population consists of residents in Kampar district. The total population in this district is 98,534 people which comprising of Malay, Chinese, India and other races (Kampar District Council, 2015).

Research Procedure

A pilot study was carried out to improvise and to ensure the reliability of the questionnaire. A total of 400 questionnaires were distributed to collect the data for this study, out of which 300 set of questionnaire were completed and usable. Out of the 300 respondents, 150 of them are males and another 150 are females. The reliability test shown that the data collected are reliable where Cronbach's coefficient Alpha value ranges from 0.76 to 0.81 for the variables of the research (Table 1.0).

Table 1.0: Cronbach's Alpha Value of the Constructs

Construct	Cronbach's Alpha	Number of Items
Purchase Intention (PI)	0.777502	3
Environment Conscious (EC)	0.762248	5
Perceived Price Fairness (PPF)	0.792798	4
Trust (T)	0.756135	4
Health Concern (HC)	0.798813	4
Social Norms (SN)	0.806206	5

The Anova test shown that the model of the study is significant since the probability value is lower than 0.05.

Table 2.0: Result of ANOVA

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	5	143.88210	28.77642	46.65	<.0001
Error	294	181.37123	0.61691		
Corrected Total	299	325.25333			

From the R square value of 0.44 obtained from the multiple regression analysis, the model is able to explain 44% of the relationships between independent variables and dependent variable.

Table 3.0: R Square Value

Root MSE	Dependent Mean	Coeff. Var	R-Square	Adjusted R-Square
0.78544	3.10667	25.28226	0.4424	0.4329

Table 4.0 shows that all the independent variables are significant in affecting the purchase intention of organic vegetable except the intercept. The standardized beta coefficient values show that environmental concern has the highest impact on customer purchase intention followed by social norm, trust, price fairness and health concern. The beta coefficient values show that by increasing 1 unit of environmental concern, purchase intention will increase by 0.7; by increasing of 1 unit of social norm, purchase intention will increase by 0.24; by increasing 1 unit of trust purchase intention will increase by 0.19; by increasing 1 unit of perceived price fairness, purchase intention will increase by 0.16 and by increasing 1 unit of health concern, purchase intention will decrease by 0.17.

Table 4.0 Beta Coefficient Value

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>|t|	Standardized Estimate
Intercept	1	-0.54137	0.30957	-1.75	0.0814	0
Mean EC	1	0.67296	0.08332	8.08	<.0001	0.45518
Mean PPF	1	0.16203	0.07714	2.10	0.0365	0.10932
Mean T	1	0.18868	0.07653	2.47	0.0143	0.14924
Mean HC	1	-0.16513	0.08306	-1.99	0.0477	-0.10355
Mean SN	1	0.24310	0.06045	4.02	<.0001	0.19468

Source: Developed for the research

The final equation that represent the relationship between independent variables and dependent variable is:

PI= 0.67296(EC) + 0.24310(SN) + 0.18868(T) + 0.16203(PPF) -0.16513)(HC)

PI	= Customer Purchase Intention
EC	= Environment Concern
PPF	= Perceived Price Fairness
T	= Trust on organic labeling and certification
HC	= Health Consciousness
SN	= Social Norms

CONCLUSION AND DISCUSSION

This study found that environmental concern, perceived price fairness, trust and social norm significantly influenced purchase intention of consumer in organic food consumption. This research project has achieved its purposes to investigate the relationship between the dependent variable and independent variables.

Among other independent variables in influencing purchase intention toward organic vegetable, environmental concern has the highest significant impact. Government should have more campaign to educate consumers about the important of environment and understand the environment protection as part of their duties. The advantages of buying organic vegetables could be promoted through advertisement to reduce harm to environment and help to sustain the natural resources. Besides that, the company should involve in Corporate Social Responsibility (CSR) to show that it concerns about environmental issues and its product is eco-friendly. Companies also can cooperate with government to promote their organic vegetable in the market.

Perceived price fairness is an important factor that influence purchase intention of consumer toward organic vegetable. Perceived price fairness refers to how consumer evaluates organic vegetable relative to the price of non-organic vegetable. The organic vegetable retailer can offer the organic vegetable that match to its value. It also should provide more information to consumers to make them understand the benefits of consuming organic vegetable which is worth to pay for. With the right knowledge instilled into consumer mind, the purchase intention of consumer and thus demand of organic vegetables will increase.

Trust has a positive influence purchase intention of consumer towards organic vegetable. The labeling which is easy to identify will increase consumer's trust toward the organic vegetable. The organic vegetable retailer can offer eco-label to differentiate it from non-organic vegetable. Moreover, the organic vegetable retailer can apply Malaysia Organic Scheme Certification (SOM) because it is a trusted label that helps to convince consumer to purchase. This will help the company in building its brand image too. Proper and detailed labeling and certification on the packaging of organic vegetable is also an important factor that can help the company to attract more consumers to purchase.

Social norms have a positive influence on purchase intention because consumers are influenced by their social groups such as friends, family, peer and neighbor. Positive or negative word of mouth will spread in social groups that may affect the perception of their members. Consumer will tend to purchase organic vegetable if the people surrounding them consume organic vegetable. The organic vegetable company can have a creative and innovative advertisement to increase awareness and positive word of mouth.

Health concern has significant negative impact on purchase intention toward organic vegetable. This is contradict to the norm, which found that consumer perceived organic vegetable to be healthier, friendly and safer compared to non-organic vegetable, as the result they will prefer to purchase the organic vegetable. According to Padel and Foster (2005) consumers who emphasize on health are more likely to purchase organic vegetables to ensure less chemical impact on their body. The negative result that found

in this study may be due to misunderstanding on the questions that being used, data collection error or respondents do not think that organic vegetable is better and healthier than non-organic vegetable. Therefore it is propose that the future researcher to look into this issue carefully and a qualitative research may be conducted to understand more about this issue.

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Effective public policy intervention for migration behaviour among highly skilled workers: A conceptual framework using Theory of Planned Behaviour

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Abstract

Within the scope of international migration, the issue of migration among the highly skilled workers in developing countries always receives a special attention among the academicians and policy makers. Due to the complexity of the migration phenomenon, the past theories or models on the causes of migration are generally focused on narrow disciplines such as economics, politics and sociology. However, limiting the research on labour migration to such narrow disciplines has reduced the ability of policy makers to develop appropriate intervention policies in reducing brain drain. As a result, this paper recognizes an immediate need of studies that could propose the development of public policy interventions which could shape individuals behaviour to remain in the home country. Based on the past migration studies, this paper has identified the field of behavioural economics as an alternative research area. It argues that researches based on behavioural economics are able to guide researchers to develop public policy interventions in changing the behaviour of highly skilled workers, thus reducing the drain of talent workers from developing countries. Consequently, this paper identifies Theory of Planned Behaviour (TPB) as a behavioural economic model that can be used to investigate the factors that explain the intention of highly skilled workers to migrate abroad. TPB is considered as more appropriate than other behavioural models mainly because it is not a context-specific model and allows researchers to suggest appropriate intervention policies to policy makers. Finally, this paper seeks to propose a TPB based conceptual model that researchers may use to develop intervention policies in reducing brain drain in developing countries.

Key words – brain drain, behavioural economics, Theory of Planned Behaviour, public policy intervention

INTRODUCTION

The prevalence of globalisation and market liberalisation has led to sharp increase in the number of international migrants worldwide. A published report by United Nation's Department of Economic and Social (UNDESA) indicates that the number has increased from 154,000 in 1990 to 175,000 in 2000 (UNDESA, 2013). The number saw a drastic increase in the last few years, with the latest figure shows that about 232,000 people have moved across the borders in 2013.

Within the scope of international migration, the issue of migration among the highly skilled workers always receives a special attention among the academicians and policy makers. Nedeljkovic (2014) claims that when a highly skilled worker emigrates to another country, his country of origin is not only going to lose a talent needed by its economy to generate higher income, but is also losing the public money it has invested to educate and train the worker. Moreover, the country is also expected to lose huge sum of tax revenues when the talent migrates abroad. As such, the issue of brain drain – a term

coined to indicate movements of skilled human capital with at least a bachelors' degree – is continue to raise concern among many countries around the globe (Engle, Schlagel, Dimitriadi, Tatoglu, & Ljubica, 2015)

The World Bank (2011) estimated that globally, the number of people with tertiary education was 338 million, with more than half (56.4%) were residents of high income countries. These countries are not only having a large pool of home grown talents, but they are also able to attract many talents from developing countries to work and stay. In regards to the international migration of these highly skilled professionals, it was estimated that about 27 million of the migrants, mostly from developing countries, are working in the OECD countries (UNDESA, 2013).

Nedeljkovic (2014) explained that the causes of brain drain are mainly due to the lack of job opportunities and research facilities for the highly skilled workers in their home countries. A promise of better quality of life in the destination countries attract these workers to migrate abroad. Meanwhile, Beine, Docquier and Rapoport (2008) stressed that the occurrence of brain drain is mainly due to the world economy which is increasingly globalised as well as the importance given to tertiary education by the developing countries. These countries continue to produce large number of professionals even though the demand for high skilled labours in the countries is limited. The excess of supply accompanied with attractive income and opportunities offered by developed countries are causing high phenomenon of brain drain in developing countries.

As the demand for skilled migrants continue to increase from mainly the developed nations, the flight of human capital from developing countries, if not tackled, may further dampen the countries effort to improve the standard of living of its people. The Economist (2015) revealed that the majority of patents applied by inventors from developing countries were done so when they have immigrated to developed countries. For example, nearly 85% of patents filed by Vietnamese inventors were done by migrants who are residing abroad. In contrast, only about eight percent of the total patents applied by researchers from Norway, a well-developed country, were done abroad.

The brain drain phenomenon is most serious in African countries. The World Bank (2011) reported that close to 40 percent of professionals in sub-Saharan Africa had left the region to work in OECD countries due to political instability and lack of proper education system. It was estimated that about 75% of the professionals in Ethiopia is living and working abroad. Another region that has recorded a relatively high rate of brain drain is Caribbean countries. In a report published by OECD-UNDESA (2013), the high rate of brain drain in Caribbean was seen in countries such as Cuba (20.2%), and Jamaica (46.3%). A much higher rate was reported in some smaller countries in the region such as Haiti and Guyana, where more than 70% of workers with post-secondary qualifications were living abroad.

If the brain drain phenomenon in the developing countries is not checked, the countries effort to improve the standard of living of its people will not be achieved. In order to reduce this phenomenon, are the existing policies effective? If not, what are the alternative approaches available to policy makers in developing countries to reduce the number of their talents leaving the countries? Due to the complexity of the migration phenomenon, the past theories or models on the causes of migration are generally focused on narrow disciplines such as economics, politics and sociology.

Arango (2004) and Castles (2000) argued that limiting the research on labour migration to such narrow discipline would be a great limitation in understanding and analysing the complex issues in international migration. Though some literatures have assessed the issue of migration based on the field of behavioural economics (De Jong, 2000; Engle, et al., 2015; Remhof, Gunkel and Schlaegel, 2014) there are various limitations in the studies. The studies either did not apply the appropriate behavioural model or failed to utilise the full components of the proposed model. This explains why there is lack of effective public policy intervention in tackling the issue of brain drain from the field of behavioural economic. Hence, the main purpose of this conceptual paper is to identify and evaluate an appropriate behavioural model that can be used to analyse the intention to migrate abroad among highly skilled workers in developing countries. This paper also seeks to provide a basic guideline for future research to

develop policy intervention for reducing the brain drain phenomenon by changing the behavioural intention towards migration of highly skilled labours.

LITERATURE REVIEW

Definitions of Migration

The definition of migration varies from country to country. International Organization for Migration (IOM, 2004) explained that the lack of a universal definition is because migration is mainly addressed only at national level. In a broader term, migration refers to movement by people across an international border, or within a State, irrespective of the length and purpose of the movement. United Nations Educational, Scientific and Cultural Organization (UNESCO, n.d.) defined migration as "*… the crossing of the boundary of a political or administrative unit for a certain minimum period of time and includes the movement of refugees, displaced persons, uprooted people as well as economic migrants*".

Since the main purpose of this paper is to develop a behavioural economic model that can be used to investigate the factors that explain the intention of highly skilled workers to migrate abroad, the type of migrant that will be focused is the long-term migrant. Long-term migrant refers to movement by a person to another country for at least a year. According to Beine et al. (2008), this type of migration could cause a serious brain drain in the country than the short-term migration. Migrants who decided to migrate for a short-term could actually bring benefits to the country. Beine et al. argued that professionals who return home after a short-term assignment abroad would bring back skills and experiences they gained from abroad. Short-term migration in fact leads to brain gain instead of brain drain.

Overview of Migration Theories

A number of theories have been developed in the last two centuries to explain the phenomenon of migration. At initial stage of theory building, the focus was mostly in the field of economics. The study of migration was gradually expanded to other field of studies such as politics, social, and psychology.

Migration Theories in the Field of Economics

Initially, the migration theories within the Economic field were developed by the Neo-classical school of taught, which viewed the decision to migrate from the macroeconomic perspectives. The first theory was introduced by Ravenstein in 1885 titled "Law of Migration" which identified low wages and unemployment as the main causes of workers migrate from one region to another (Lee 1966). After many years of gap, in 1966 Lee founded the "push-pull" model which explained that the decision to migrate was influenced by the "push" factors in the home country and the "pull" factors in the receiving country. Between these two researchers, Dual Economies Theory by Lewis (1954) explicated that the main reason for migration was due to the excess supply of labour in the sending region. During economic transition from traditional economy to modern economy, Lewis argued that there were excess labour supplies in some regions. The workers from these regions decided to migrate to other regions which promised better job opportunities.

Migration theories from the macroeconomic perspectives received criticism from other researchers who argued that the theories could not explain why only some decided to migrate from a region and not others though they were facing the same macro environment. As such, researchers like Sjaastard (1962) and Todaro (1976, 1996) justified that the decision to migrate should not be solely based on the macro factors, but also to include the Microeconomic factors as well. The two authors used the human capital approach to assess the migration decision, and introduced the individuals' expected net earnings as major influence of their decisions. According to them, the earnings were determined by the workers' education, experience and the probability of being employed. Nevertheless, the works by Sjaastard and Todaro were criticised as they have ignored other tangible and intangible costs of migration like the travelling cost, separation from family members and friends which could deter the decision to migrate (Portes, 1983).

The migration theories from the economic perspectives have no doubt established the foundation for explaining the causes of migration. The theories analysed both the macro and micro factors that influence the migration decision-making. However, the theories only considered one aspect of studies that is economics, and have largely ignored the causes of migration from other field of studies such as politics, social or psychology. Only few causes of migration – wages, net expected earnings, and unemployment rate – were identified. It would be difficult for researchers to suggest or develop intervention policies to reduce migration based on these theories alone. Since macroeconomic factors are partly depends on the external factors, it is less feasible for policy makers to design effective policies in reducing the brain drain phenomenon. Therefore, it is important to develop an understanding on the causes of migration from different perspectives – such as sociology and psychology – to design appropriate policy interventions.

Migration Theories in the Field of Sociology

From the sociology perspectives, the role of family members as well as friends, relatives and other migrants were identified as the main contributors in the migration decision-making process. Cumulative Causation (Myrdal, 1957), New Economics of Labour Migration Theory (Stark, 1991) and Migration Networks Theory (Massey, Arango, Hugo, Kouaouci, Pellegrino, & Taylor, 1998) are among the leading sociology theories in migration.

According to Myrdal (1957), when highly skilled individuals migrate from a particular area, the area is deprived of skilled workers. The implication is that productivity and wealth decline, thus affect the development in the area. Myrdal stated that it could cause unemployment and low wages there, thus drives more people from the area to migrate. However it was argued that this theory, as the Neo-classical theories, did not provide explanation on why only some individuals from a place choose to migrate but many do not.

New economic of labour migration was developed by Stark (1991) to challenge the neo-classical theory of migration, particularly its micro side analysis. Stark argued that the migration decision is primarily driven by the motivation to maximize household's utility rather than individual. Through migration, a family is able to diversify the risks of unemployment in the home country by having at least a member working abroad. Stark also claimed that due to the advanced finance and insurance market in developed countries, migrants could lower the risk of unemployment by taking appropriate insurance.

Nevertheless, the argument by Stark (1991) is less valid in explaining the phenomenon of brain drain. In some countries with low unemployment rates, such as Malaysia and Singapore, the rate of migration remain high (World Bank, 2011). Furthermore, the credit and insurance markets in these countries are considered matured and sophisticated.

According to Massey et al. (1998), intention to migrate can be influenced by the positive feedbacks from migrants or returned migrants to their family members, friends, relatives as well as others (also known as significant others) regarding migration. They are also expected to provide support such as finding employment, accommodation and moral supports to the significant others while they are abroad. However, recent studies in the area of migration view the migration networks as a conceptual framework and not a theory by itself (Cook & Sheeran, 2004; de Jong, 2000; Sheeran, 2000). According to the critics, Massey's work only added a new variable into the study of migration, but did not generate a new model or theory of migration.

Generally, the existing sociological theories explain the causes of migration at meso-level. The theories are able to explain the role of households in the home country and networks in the host countries as important determinants of migration. However, as they are viewed from the sociology perspectives, the theories focused on the role of society, rather than the individuals. The theories did not make any attempts to explain why only some individuals decide to migrate but others from the same region and similar structural background do not. Therefore, it is difficult for policy makers to identify effective intervention policy in restricting brain drain among the highly skilled talents.

In understanding the reasons why only some individuals decided to migrate and others do not, thus facilitate the development of effective intervention policies, research in the field of psychology may provide a solution. Such a study can act as compliments to the existing migration literatures on the economic and social perspectives.

Migration Theories in the Field of Psychology

Winchie (1984) was one of the few earlier studies that highlighted the importance of studying the migration behaviour from the psychological perspectives. The author argued that to understand the decision to migrate, the personality of individuals involved in the decision process should be analysed. Winchie identified five psychological factors as important determinant of migration – (1) need for achievement (2) locus of control (3) sensation seeking (4) modernity, and (5) risk taking propensity. Although the study by Winchie provided good insights on the need for analysis of migration in the psychological perspectives, the study did not attempt to develop any specific framework that could be used to analyse the causes of individual migration. Moreover, the study did not rely on any particular behavioural theory that could explain the migration phenomenon.

De Jong and Fawcett (1981) applied behavioural analysis in developing a framework that explained individuals' intention and behaviour to migrate. Using the Expectancy-Value Theory (EVT), the authors stressed that expectation of achieving individual goals through migration and the values attached to these goals are the two components that influence the intention to migrate. According to de Jong and Fawcett, the migratory behaviour of the individuals is influenced by seven general values/goals – wealth, status, comfort, stimulation, autonomy, affiliation and morality.

The application of the migration framework by de Jong and Fawcett (1981) in the past literatures was quite limited due to the limitations in the EVT. The theory did not identify the salient constructs that act as antecedents for the intention towards a behaviour. Instead, EVT only focused on the objective of individuals which is to maximize their goals. Due to this limitation, EVT could not explain why some individuals adapt certain behaviours but others do not. Therefore, the framework developed by EVT is less suitable in a study that needs to develop relevant intervention policy that either perpetuate or discourage a specific behaviour.

Using Theory of Reasoned Action (TRA), McHugh (1984) studied on how psychological factors could influence the people's intention to migrate. The author analysed the factors that influenced the intention and behaviour of 167 respondents from two counties in US – Allegheny and Champaign – to migrate to other counties within US. The study predicted positive relationships between the respondents' intention to migrate and the two constructs in TRA; attitudes toward moving and subjective norms of family members, friends and relatives. Though the framework in McHugh's study could explain the people's intention to migrate, the applicability of TRA model in the study of migration is limited. Only recently Froese, Jommersbach and Klautzsch (2013) used the TRA model to assess the factors that determine the expatriation willingness of business students from two different countries that represent two different cultures – Germany and South Korea.

As noted by the founder of the model himself (Fishbein and Ajzen, 1975), TRA is only valid if individuals have full control over their behaviour. For example, if an individual has positive attitudes towards migrating abroad and it is supported by the significant others, the individual is assumed to be able to migrate without any barriers. However in most of the cases, individuals may not have full control over his/her behaviour. Hence Ajzen (1991) decided to extend the TRA model, which led to the development of Theory of Planned Behaviour (TPB).

Health Behavioural Model (HBM) was developed by Hochbaum, Rosenstock, and Kegels in 1952 with the purpose to investigate the reasons for people reluctant to seek medical treatment for some serious diseases (Rosenstock, 1974). Groenewold, de Bruijn, & Bilsborrow (2012) applied the HBM model to assess the influence of Western African's professionals' attitudes and beliefs on their intention to migrate abroad. The study adapted a new HBM model by transposing the HBM to a psychosocial model.

The study found that the factors in the HBM framework such as perceived threat, perceived net benefits, cue to action and self-efficacy did significantly predict the respondents' intention to migrate. Nevertheless, if compared to other behavioural models such as TRA or TPB, the predictive power of HBM is relatively weak (Zimmerman & Vernberg, 1994). Moreover, Armitage and Conner (2000) argued that the six constructs in the model were poorly defined. They added that HBM is more relevant in designing intervention for individuals who seek behavioural change voluntarily. Unfortunately, it is less appropriate to apply HBM in migration study as the intervention policies are aimed at individuals who never seek behavioural change voluntarily. In the case of migration, the intervention policies should be designed to change individuals' behaviour involuntarily.

In response to criticism, Ajzen (1991) extended the TRA model that assumed individuals have the ability to perform all the intended behaviours due to their volitional control over their behaviour. In TPB model, a new variable – perceived behavioural control (PBC) – was added to measure the elements that can be controlled by individuals such as time, effort, skills and other resources which are required to perform the actual behaviour. Hence, the actual behaviour does not depend solely on the intention to perform the behaviour, but also on the individuals' capacity to carry out the actual behaviour. In summary, the TPB model assumed that the actual behaviour is determined by both the behavioural intention and PBC. As illustrated by Figure 1, the intention to perform the behaviour is in turn predicted by three cognitive factors – attitudes, subjective norms and PBC. Meanwhile, these three factors are influenced by their corresponding beliefs - behavioural beliefs, normative beliefs, and control beliefs. Each of the belief has two components - the strength of the belief and the evaluation of the outcomes.
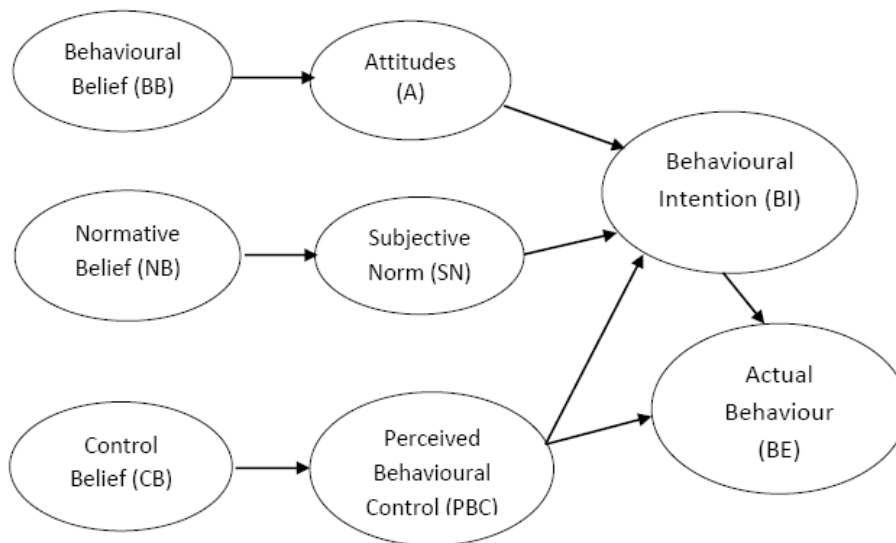
Figure 1: Theoretical Framework of Theory of Planned Behavioural Model (Ajzen, 1991)

Modelling a Conceptual Framework of Intention to Migrate Abroad

This paper has identified a number of behavioural theories and models in the field of psychology that can be used to assess the intention to migrate abroad. However most of the theories and the models have some serious limitations that might hinder their usage in the context of international migration. For example, EVT is only applicable to predict actual behaviour but not to predict the intention to perform behaviour. With such limitation, EVT could not be used to identify the salient constructs that act as antecedents for behavioural intention. In contrast, TRA and HBM were designed to predict both the behavioural intention and also the actual behaviour. Nevertheless, these models have their own limitations. TRA model assumed that individuals have full control over their behaviour, thus will be able to perform the behaviour without any barriers. However, past literatures have demonstrated that individuals

do not have full control over their behaviour. Meanwhile, HBM is criticised of its weak predictive power as well as its nature of being context-specific for health related studies.

In assessing the intention to migrate abroad, this paper proposes the use of TPB to predict and explain the behavioural intention of highly skilled labours to migrate abroad. The model could also be used to identify and develop the effective policy intervention for reducing brain drain. TPB is widely used in behavioural studies due to the many advantages the model possessed relative to other behavioural models. Among them, TPB is designed to be content-free. This implies that the model can be used to explain and predict the behavioural intention or the actual behaviour in various fields of studies (Donald, Cooper, & Conchie, 2014; Presley, Damron-Martinez, & Zhang, 2010). Unlike EVT and HBM, TPB is also less complicated. The model is parsimony in nature with three direct measures and another three indirect measures of behavioural intention. Furthermore, TPB has been widely used to develop intervention policies in either to enhance or deter a particular behaviour. A number of studies have provided evidence on the successful intervention policies based on the TPB model (Fife-Shaw, Sheeran, & Norman, 2007; Webb & Sheeran, 2006). From a meta-analysis of eighteen studies, Webb and Sheeran recognized that about 50 percent of them achieved the intended results – changes in the individuals' intentions and/or behaviour.

Another advantage of TPB over its compatriots is that it is applicable when the behavioural change is desired by third parties and not by the individuals themselves (Fishbein & Ajzen, 2010). For instance, if policy makers believe that the highly skilled labours in the country have high intention to migrate abroad, they need to develop policy intervention that could persuade the labours to change their behavioural intention and stay in the country. In contrast, HBM model is more suitable in developing intervention programs when the individuals voluntarily require some behavioural change. Using TPB model, the intervention can also be applied to a larger group of people, unlike some approaches like Cognitive Behavioural Therapy (CBT) which is only applicable to a small group of people.

Evaluation of the TPB Model in the Study of Migration

Based on the extensive review of literatures carried out for this paper, at least three studies were found to have used TPB to explain migration (De Jong, 2000; Engle et al., 2015; Remhof, et al., 2014). De Jong used the TPB to study the migration behaviour of people from rural area to urban area in Thailand. The study applied longitudinal data from Thailand National Migration Survey for 1992 and 1994. The study reported that the respondents' migratory behaviour on a temporary basis was not significantly explained by the intention to migrate. However the decision to migrate was directly influenced by their intention to migrate on a permanent basis. In turn, the intention was predicted significantly by only one of the three antecedents – attitude. The other two constructs of behavioural intention, subjective norms and perceived behavioural control, were not significant.

Both the papers by Remhof et al. (2014) and Engle et al. (2015) analysed the intention of business undergraduates to work abroad when they are offered international assignments by their future employers. Remhof et al. tested if the influence of personality traits (openness and extraversion) on the undergraduates' intention to work abroad is mediated by the TPB's cognitive factors. The study, which was conducted in Germany, concluded that TPB is a valid model in examining the factors that influence the intention to work abroad. Based on the SEM analysis, attitudes of sensation seeking and subjective norm were significantly explained the undergraduates' intention to work abroad. The other three factors - the achievement motivation, uncertainty tolerance, and self-efficacy – were not significant.

The study by Engle et al. (2015) examined the intention to work abroad by business undergraduates from five different countries with different cultures - Anglo (USA), Germanic Europe (Germany), Eastern Europe (Russia) and Middle East (Turkey). Using the TPB model, three antecedents for expatriation intention were predicted to explain the likeliness that a respondent is willing to accept a foreign assignment. Attitude towards working abroad was measured by three items related to living in different culture. In measuring the subjective norm, three groups of people which may influence the undergraduates' intention to work abroad were included. They were parents, best friends and mentor. In

the final construct, the PBC were measured by three items related to the respondents' ability to adapt to the new culture abroad.

Though the three studies managed to test the suitability of TPB in examining the intention to work abroad, there are some limitations in the method used to develop their conceptual frameworks. De Jong (2000) did not incorporate the components of salient beliefs which are supposed to measure the three indirect constructs. Meanwhile, Engle et al. (2015) and Remhof et al. (2014) have included mainly the indirect measures instead of the direct measures. Hence, the frameworks are incomplete. In order to develop policy interventions, it is best to include both the direct and indirect measures of attitudes, subjective norms and PBC. Ajzen (2002) and Montano and Kasprzyk (2002) stressed that both the direct and indirect measures should correlate significantly. The authors explained that although the direct predictors' predict the intention strongly, the indirect measures are equally important because they provide the explanations for the behaviour. The three constructs of beliefs are able to explain why some individuals perform a specific behaviour while others do not. Policy makers are expected to target these salient beliefs as an intervention to encourage or discourage certain behaviour.

Another limitation found in the study by Engle et al. (2015) and Remhof et al. (2014) was that the salient beliefs identified in the their frameworks were developed from the literatures. This is against the method suggested by Ajzen (1991) where the salient beliefs should be elicited directly from the respondents through interviews. According to Ajzen (2010), people's beliefs are temporal and vary according to different environment. In order to design appropriate intervention policies, the beliefs are important in explaining the reasons for people performing certain behaviour and shall be elicited through interviews.

Moreover the three studies did not actually assess the intention of highly skilled labours to migrate abroad. In the studies by Engle et al. (2015) and Remhof et al. (2014), the respondents were undergraduates, thus cannot be considered as professionals yet. Besides that, the studies assessed the respondents' intention to work abroad when they are offered international assignments by their future employers. Hence, their frameworks were developed with the intention to identify the factors that could encourage undergraduates to take international assignment when offered in the future. Meanwhile, the study by de Jong (2000) only assessed the internal migration in Thailand. Therefore, the findings cannot be generalized to international migration. As elaborated in the findings by a later study of de Jong et al. (1983), the variation in the internal and international migration differ.

In summary, none of three studies did actually provide any clear guideline in developing intervention policies using TPB to reduce brain drain. When using TPB to develop the intervention policies, researchers are strongly recommended to use the original model developed by Ajzen (1991). The model has to include the direct as well as the indirect measures of behavioural intention so that the salient beliefs of the respondents can be targeted in the intervention policy. Moreover, the salient beliefs should be elicited directly from the respondents and not from the literatures. In the following section, a TPB based conceptual framework is proposed for assessing the intention of highly skilled labours to migrate abroad.

CONCEPTUAL FRAMEWORK

In analysing the intention to migrate abroad, the behaviour of interest shall be defined as the *intention to migrate abroad for at least a year*. UNESCO (n.d.) defined long-term migration as staying abroad for more than one year while the short-term is for less than one year. Generally, a long-term migration is considered a more serious phenomenon of brain drain than the short-term migration. In fact, the short-term migration can be viewed as brain gain, where the worker bring back new skills and experience from abroad (Beine et al., 2006; Beine et al., 2008). Hence, this paper proposes a study on the behaviour of highly skilled labours to migrate abroad for at least a year.

In defining the time frame, Webb & Sheeran (2006) stressed that the gap between intention and the actual behaviour performed should be closer as possible. However, the minimum time frame to be used in predicting behavioural intention was not stated. This paper would like to propose that the intention

to migrate abroad is framed for the next two years. According to De Groot, Mulder and Manting (2011), most of the people who have intention to move do so within two years. Beyond two years, the people have tendency to change their minds due to a lot of uncertainty or unexpected events that change their plan. Therefore, for the purpose of this paper, a more specific definition of behaviour is proposed - *intention to migrate abroad for at least a year in the next two years.*

In using the TPB model, when a researcher is intended only to study the behavioural intention and not the actual behaviour, the framework in Figure 1 needs to be revised. The construct that measures the actual behaviour has to be removed, and the construct that measure the behavioural intention shall be the dependent variable. The revised framework is illustrated by Figure 2.
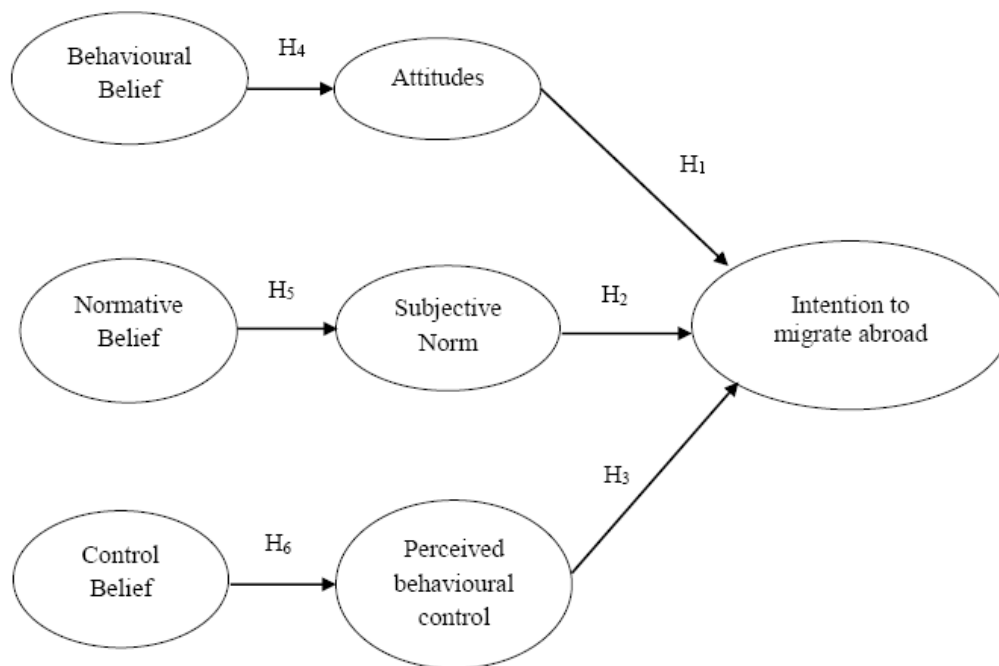
Figure 2: Proposed Conceptual Framework

The intention to migrate abroad is expected to be influenced by the three cognitive factors – attitudes, subjective norm and PBC. Attitude refers to the extent to which an individual appraise a particular behaviour – either favourable or unfavourable (Ajzen, 1991). In assessing the intention of highly skilled labours to migrate abroad, attitude can be best defined as the degree to which the highly skilled labours appraise the behaviour of migrating abroad for at least a year, favourably or otherwise. The second construct is subjective norm, which is a social factor that measures the degree to which an individual is pressured by others to perform a specific behaviour. The subjective norm can be defined as the extent to which the highly skilled labours' significant others pressure them to migrate abroad. Next, Ajzen referred to the third construct as the degree to which an individual's perceived ease of performing the behaviour. This paper proposes that PBC is measured as to what extent the highly skilled labours' perceived ease or difficulty in migrating abroad for at least a year in the next two years.

Findings in the past studies have provided ample evidence that attitudes, subjective norms and PBC have direct effects on the intention to perform a specific behaviour (e.g. see in Burkhalter, Warren, Shuk, Primavera, & Ostroff, 2009; Donald et al, 2014; Ferdous and Polonsky, 2013; Jirotmontree, 2013; Presley et al, 2010; Wu, Lai, Tong, & Tao, 2013). Therefore, the following three hypotheses are proposed for future researches to consider when analysing the intention to migrate abroad:

H_1: Highly skilled labours' positive attitudes toward migration do significantly increase their intention to migrate abroad

H_2: Subjective norm does significantly support the highly skilled labour's intention to migrate abroad

H_3: Perceived positive control over migration behaviour by the highly skilled labours do significantly influence their intention to migrate abroad

In Figure 2, the three cognitive factors are expected to be explained by the three components of beliefs – behavioural belief, normative belief and control belief. These beliefs shall be elicited from interviews with a small group of respondents. Fishbein & Ajzen (2005) that at least 80% of the salient beliefs mentioned by the respondents should be included in the final survey. In doing so, each of the belief (M_i) is represented by two statements - the strength of the belief (S_i) and the evaluation of the outcomes (E_i). The belief for each outcome is derived by multiplying the two components: $M_i = S_iE_i$.

In measuring the behavioural belief (B_i), the first statement measures the strength of that belief (b_i) while the second statement measures the respondents' evaluation regarding the belief (e_i). For example, based on an interview, if respondents state that one of the outcomes of migrating abroad is achieving higher life satisfaction, the following two statements will represent the two components of behavioural belief, b_i and e_i:

b_i I will be able to achieve higher life satisfaction from migrating abroad for at least a year in the next two years

e_i Achieving higher life satisfaction from migrating abroad for at least a year in the next two years is important for me

The behavioural belief that migration will lead to higher life satisfaction (B_i) is derived by multiplying the two components, b_ie_i ($B_i = b_ie_i$).

The second belief is normative belief, which measures an individual's belief regarding the salient people who would support or not his or her performing the behaviour. The beliefs are then weighted by the probability that the individual will comply with the wishes of these people (Ajzen, 2006). In this paper, the normative belief (N_i) is the extent to which the highly skilled labours belief that the significant others would support them of migrating abroad (n_i), weighted by the probability that the labours will comply with them (m_i). The following two statements are examples of how the strength of and the motivation to comply, say with family member, is measured:

n_i My family members would think that I should migrate abroad for at least a year in the next two years

m_i I will comply with what my family members want me to do when it comes to migration

The normative belief of family members (N_i) is derived by multiplying the two components, n_im_i ($N_i = n_im_i$).

Ajzen (2006) described the control belief as an individual's belief regarding the factors that might facilitate or hinder his planning in performing a specific behaviour. For each control belief (C_i), the strength of the control (c_i) and the individual's perceived power of ease or difficulty to carry out the behaviour (p_i) are measured. The two components shall be multiplied, c_ip_i. For example, from the interviews, if the respondents reveal that ability to adapt to new culture can act as a facilitator or barrier in their intention to migrate abroad, the following two statements shall be included:

c_1.   I am able to adapt to new culture when I migrate abroad for at least a year in the next two years

p_1.   I have complete control over the ability to adapt to new culture when I migrate abroad for at least a year in the next two years

The control belief over the ability to adapt to new culture (C_i) is derived by multiplying the two components, c_ip_i ($C_i = c_ip_i$).

As mentioned earlier, the three salient beliefs are expected to influence their correspondence cognitive factors. The findings by Han and Kim (2010) and Presley et al. (2010) revealed that people who have positive behavioural belief is expected to form positive attitude towards that behaviour. Past studies also have indicated that if an individual is closer to others who have positive thoughts regarding a specific behaviour, this will put pressure on the individual to perform the same behaviour (Green, 2012; Knabe, 2009). For instance if a highly skilled labour has parents and friends who are positive towards the

behaviour of international migration, he is more likely to migrate abroad. Next, a positive control belief regarding migrating abroad is expected to significantly increase the PBC over the said behaviour. The effect of control beliefs on PBC is evidence in the literatures. Presley et al. (2010) concluded that high cost, lack of financial aid, safety issues abroad and foreign language caused students in USA have lower control over their intention to study abroad. Based on the discussions, the following three hypotheses are formed.

H_4: *highly skilled labours' positive behavioural beliefs do significantly influence their attitudes towards migrating abroad*

H_5: *highly skilled labours' positive normative beliefs do significantly influence the subjective norms of migrating abroad*

H_6: *highly skilled labours' positive control belief do significantly influence their perceived behavioural control over migrating abroad*

Intervention policy for changing the highly skilled labours intention to migrate abroad

The above discussions show that in developing an effective intervention policy to change the highly skilled labours intention to migrate abroad, researchers should use full TPB model. The model has to include all the three cognitive factors as well as the three belief constructs. The items for the three cognitive factors can be adapted from the literatures. However, the salient beliefs should be elicited directly from the respondents through interviews and not from the literatures. In the first stage of analysis, a researcher should establish the relationship between the three cognitive factors with the intention to migrate abroad (testing the first three hypotheses). Once the significant cognitive factors are identified, in the second stage, the researcher has to identify whether these factors have significant relationship with their corresponding salient beliefs or not. For example, let's say the first two hypotheses are accepted, means that attitude (ATT) and subjective norms (SN) have significant relationship with intention to migrate abroad. Subsequently, hypotheses four and five – relationship between behavioural belief (BB) and attitude (ATT), and relationship between normative belief (NB) and subjective norms (SN) – should be tested. Since PBC is not a significant factor, hypothesis six can be ignored.

In the third stage, once the significant belief constructs are identified, the relationship between the salient beliefs within these constructs (items in the belief constructs) and the corresponding cognitive factor should be tested. For example, if only the relationship between BB and attitude ATT is significant, the relationship between each salient belief in the BB construct and the ATT construct will be tested. Let's say the BB construct is composed of three salient beliefs (BB1, BB2, and BB3), thus three additional hypotheses should be tested. The summary of the three stages in identifying the significant salient beliefs is shown in Table 1.

Table 1: Three Stages in Identifying the Significant Salient Beliefs

Stages	Relationship between variables			Hypothesis	Result
Stage 1	ATT	$\longleftrightarrow$	INTENTION	H_1	Accepted
	SN	$\longleftrightarrow$	INTENTION	H_2	Accepted
	PBC	$\longleftrightarrow$	INTENTION	H_3	Rejected
Stage 2	BB	$\longleftrightarrow$	ATT	H_4	Accepted
	NB	$\longleftrightarrow$	SN	H_5	Rejected
Stage 3	BB1	$\longleftrightarrow$	ATT	H_7	Accepted
	BB2	$\longleftrightarrow$	ATT	H_8	Rejected
	BB3	$\longleftrightarrow$	ATT	H_9	Accepted

Based on the results, policy makers should be advised to target the belief items that have significant relationship with ATT when developing the intervention program. For instance, if two (BB1 and BB3) out of three salient beliefs in BB construct are significant, policy makers should attempt to change these beliefs among the highly skilled labours. For example, if BB1 measures the belief of the skilled

labours that there is better job opportunity abroad, policy makers should attempt to change this belief. An appropriate intervention program should be developed by policy makers to influence the behavioural belief of the skilled labours in the effort to retain them in the country.

CONCLUSION

In the effort to reduce the phenomenon of brain drain, researchers are encouraged to conduct more studies in the field of behavioural economic. Studies in this field could complement existing brain drain studies from other traditional areas such as economics and sociology. This paper has reviewed a number of behavioural models which can be used to assess the intention of highly skilled labours. Among them, TPB model is identified as the most appropriate model. The three cognitive constructs can be measured directly or indirectly based on the corresponding belief constructs. Since each of the belief construct is developed by eliciting the respondents' salient beliefs regarding a specific behaviour, the model provides opportunity to policy makers to develop effective policy interventions. In the study of brain drain, policy makers could target the significant salient beliefs which cause stronger intention to migrate abroad. If an appropriate intervention program can be identified and applied, policy makers could weaken this belief, thus reduce the intention to migrate abroad. Nevertheless, this conceptual paper did not identify how the intervention program for reducing brain drain should be developed. Hence, it is proposed that future study in the area of brain drain could consider of developing and testing an effective intervention program which can alter the skilled labours intention to migrate abroad.

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MIXED-MOTIVATION FACTORS ON ACADEMIC RESEARCH COMMERCIALISATION AMONG MALAYSIAN TECHNICAL UNIVERSITIES

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Abstract

Commercialisation had become one of the main activities for academics. Besides generating income for the university, academic research commercialisation is able to boost up the nation economic gains and quality of life. Therefore, it is important to understand the motivation factors of academic researchers because they are the main player in the commercialisation activity. By understanding their motivation factors, the policy makers are able to execute right initiatives in boosting up the commercialisation activities. Literature classifies motivation factors as extrinsic, intrinsic, and prosocial; however, limited studies discussed on the mixed-motivation factors in academic research commercialisation. Thus, this study aimed to further understand the role of mixed-motivation factors among academic researchers who had successfully commercialised their research results. In achieving the study's objective, this study utilised the Self-Concordance Theory as the study's framework and applied a qualitative case study approach. The informants in the study were the academic researchers from four Malaysian technical universities. The study revealed that the academic researchers were motivated by the mixed-motivation factors in supporting their commercialisation activities. There are two groups of mixed-motivation factors that had been identified in the study, which the difference between those two is the overlapping size of the prosocial motivation factor in the Venn diagram. It shows that the prosocial motivation is either extrinsically-driven or intrinsically driven. It is hoped that, by knowing the right motivation factors for the academic researchers, the policy makers will execute the best strategy to motivate the novice or unexperienced academic researchers to commercialise their research results as to boost up the research commercialization rate in local universities.

Keywords: Academic research commercialisation, Mixed-motivation factors, Self-Concordance Theory

INTRODUCTION

The Malaysian government has taken many initiatives to improve the research commercialisation rate in the country. In 2009, for example, they enacted the Intellectual Property Law as a notable step in facilitating academic researchers to protect their inventions from being imitated by others. The gazetted law also addresses the issues of wealth distribution for the inventors and the incentives for invention disclosures. The inventors might receive up to RM10,000 for each patent granted and a lucrative percentage out of the revenues garnered from an invention, which ranges from RM250,000 to RM5 million (MOSTI, 2009). The rewarding offers are worthwhile for those scientists as a payback for their years of hard work on their inventions. At the same time, the Ministry of Higher Education (MOHE) encourages university research commercialisation activities by tabling the National Higher Education Plan, which lists targeted outcomes on research commercialisation rate and other indicators, starting from 2007 (MOHE, 2007).

However, despite the various initiatives and incentives, the desired commercialisation performance is yet to be fully achieved. For example, the first phase of the MOHE's plan (2007–2010) had targeted a university research commercialisation rate of 5% by the year 2010. However, the actual rate reviewed was only 3%. The figure was alarming as the second phase target of the plan (2011-2015) is 8% (refer to Table 1). The actual rate suggests that academic researchers might not be motivated by only the external rewards but also other factors that have not been included in the Intellectual Property Policy.

Table 1: Targeted and Actual Research Commercialisation Rate based on Malaysia Plan

Malaysia Plan	Targeted Rate	Actual Rate
Ninth Malaysia Plan (2006–2010)	5%	3%
Tenth Malaysia Plan (2011–2015)	8%	?

Source: Malaysian Economic Planning Unit, EPU (2010)

Literature on academic research commercialisation indicates various factors that motivate commercialisation. These factors are extrinsic, intrinsic, and prosocial motivation factors. Prosocial motivation is defined as doing things for others. It is a crucial component in research commercialisation activities because the research outputs should benefit the society, whose taxes paid are generally used to fund a research project (Grant & Berry, 2011; Grant, 2008; Lam, 2011; Lindenberg, 2001). However, literatures point out that previous studies tended to give more focus on extrinsic motivation factors (Baldini, Grimaldi, & Sobrero, 2007; Göktepe-Hulten & Mahagaonkar, 2010) but less on intrinsic motivation factors and even lesser on prosocial motivation. Hence, focusing on different types of motivation seems to be a good avenue for research (Lam, 2011). Thus, this study posed a question is "How did the mixed-motivation factors influence the successful academic researchers to commercialise their research results?"

LITERATURE REVIEW

Academic research commercialisation

Academic research commercialisation activities focus on the research commercialisation activities at the individual level rather than at the university level. Academic researchers are the heart of a university's research commercialisation because they are the ones who embark on a research project until the research product is successfully commercialised. Research commercialisation is the final phase in the complex innovation or technology transfer process. The number of researchers involved in a research commercialisation project is usually more than one as it entails a lot of work leading to successful commercialisation process. The intellectual property right of the invention is usually registered under the name of the institution in which the research works are carried out. As the inventor, the project leader and his or her team are entitled to get royalty for the research project they are involved in. The amount of royalty they receive is mutually agreed with the university.

The process of transferring a university's invention to the industry for further development and commercialisation is called technology transfer (AUTM, 2012). The process starts with a scientific discovery and ends with commercialisation activities (e.g., licensing, start-up formations. Academic researchers involve at all stages of the technology transfer process. The technology transfer office (TTO) intervenes only after they have disclosed their inventions. The TTO searches a potential industrial partner, and the academic researchers will support the TTO in closing the deals with the firm. The synchronisation between academic researchers and the TTO makes the research commercialisation activities become successful. Conclusively, the academic researchers' role is very important in a successful technology transfer project (Siegel, Waldman, Atwater, & Link, 2004).

Vanaelst et al. (2006) emphasised that academic researchers as the 'key supplier' or the 'agent of research commercialisation'. It is crucial to conduct an in-depth study on the role of academic researchers as they are the ones who make the tactical decisions in commercialising their research results and in leading the directions of the research results (D'Este & Patel, 2007; Jensen, Thursby, & Thursby, 2003; Link, Scott, & Siegel, 2003; Siegel, Waldman, & Link, 2003).

Academic research commercialisation in technical universities

Technical universities are universities that are technical-oriented. They focus on traditional research in engineering and machineries. They are expected to play a significant role in accelerating the country's commercialisation rate as technical courses taught in these universities have a big potential for supporting new product commercialisation. The nature of study focuses more on applied research rather than basic research (Audretsch & Lehmann, 2005a).

In Germany, technical universities are allocated more funds than other types of universities, such as comprehensive universities, to nurture and encourage spillovers from new technologies to firms as well as to support technology commercialisation into industries. For that reason, these technical universities have generally attracted more high-tech firms to be their industrial partners. The German government believes that these universities will generate and leverage the knowledge spillovers from university research better than other universities. Not only that, the technical universities also might help increase the country's performance in technology commercialisation and support its economic growth (Audretsch & Lehmann, 2005b).

Audretsch and Lehmann (2005a) compared the impact of technical universities in general on firm growth. They also studied the impact of a technical university on the firms that are located at the same vicinity as the university. Those firms exhibited a significantly greater propensity to apply for patents than the firms located at the vicinity of other types of universities. Fisch et al. (2014) compared and contrasted patenting performance of 300 universities worldwide. They utilised technical universities as the control variable. They found that the highest patent output was in chemistry while the second highest was in engineering, which are the major courses in technical universities. They concluded that technical universities had shown the good performance in research commercialisation activities across countries and across different fields of study. In Malaysia, there are four public technical universities which formed the Malaysian Technical Universities Network (MTUN). This study will focus on the successful academic researchers from these universities.

Mixed-motivation factors

Studies on the role of extrinsic motivation on academic research commercialisation are plenty (Baldini et al., 2007; Colyvas et al., 2002; Fini, Grimaldi, & Sobrero, 2009; Göktepe-Hulten & Mahagaonkar, 2010; Lach & Schankerman, 2008; Larsen, 2011; Markman et al., 2004; Owen-Smith & Powell, 2001; Thursby et al., 2001), in contrast to those that examined intrinsic motivation (Bengtsson et al., 2009; Ismail, Omar, & Majid, 2011; Lam, 2011). This present research initiates a discussion on the third type of motivation, i.e. prosocial motivation, which is widely discussed in other fields but not in research commercialisation (Lam, 2011).

Whilst previous literature discussed the three motivation factors independently, scholars argued that an individual's behaviour could be driven by more than one motivation at a time (Diefendorff & Chandler, 2010). Even though there are literatures that combine two of them (e.g., intrinsic-prosocial, or intrinsic-extrinsic motivation) (Grant, 2008; Lam, 2010), limited studies combine the three in a single study (Benedetti, 2012). Benedetti (2012) highlighted that mixed-motivations are examined in the field of organisational behaviour and human resource management. Other studies have also investigated the mixed-motivation factors in innovation and entrepreneurship (Bhaduri & Kumar, 2009; de Jong, 2006; Zbierowski, Weclawska, Tarnawa, Zadura-lichota, & Bratnicki, 2012). Because of the scarcity of research in examining mixed-motivations on research commercialisation (refer to Table 2), this study embarks on such attempt.

Table 2: Literature on Motivation Factors of Academic Research Commercialisation

Types of Motivation Studied	Area/Field of Study			
	Research Commercialisation	Organisational Behaviour	Psychology	Innovation and/or Entrepreneurship
Extrinsic Motivation	Baldini, Grimaldi, and Sobrero (2007); Baldini (2006, 2008, 2010, 2011); and D'Este and Patel (2007)	Andersen and Pallesen (2008)		
Intrinsic Motivation	-			Bird and Allen (1989)
Extrinsic-Intrinsic Motivation	Lam (2010, 2011); Jong (2006); Zbierowski et al. (2012); and Bhaduri and Kumar (2009)			Levin and Stephan (1991); and Stephan and Levin (1992)
Prosocial Motivation	-		Gagne and Deci (2005); and Sheldon and Gunz (2009)	
Intrinsic-Prosocial Motivation	-	Grant and Berry (2011); and Grant (2008)		
Extrinsic-Prosocial Motivation	-		Exley (2013); Warneken and Tomasello (2008); and Benabou and Tirole (2006)	
Extrinsic-Intrinsic-Prosocial Motivation	-	Benedetti (2012); and Diefendorff and Chandler (2010)	Forgeard and Mecklenburg (2013)	

Self-Concordance Theory

This study uses Self-Concordance Theory, an off-shoot from Self-Determination Theory (SDT), as a more suitable theory to explain the phenomenon under study. Self-concordance is defined as the degree to which a task expresses an individual's interests and values (Deci & Ryan, 2000; Sheldon & Elliot, 1999). The theory argues that individuals will put more effort and better achieve their goals when those goals are naturally aligned with the person's interests and values. Goals that are more autonomously chosen are considered to be more self-concordant (Bono & Judge, 2003; Sheldon & Houser-Marko, 2001). Thus, individuals' reasons for acting range on a continuum from complete control by reward or punishment to full integration and internalisation (Bono & Judge, 2003)

Sheldon, Ryan, Deci, and Kasser (2004) found that the type of goal (autonomous or controlled) and motivation (intrinsic and extrinsic) shows significant main effects on life satisfaction, happiness, and a positive effect at within-person and between-person levels. Highly self-concordant tasks represent the individuals' authentic interests and values and as such are integrated with the self. The individuals want to achieve the task because it helps their own long-term goals. Moreover, the motivation is expected to be relevant for long periods and receive sustained effort over time. On the contrary, if the same assigned tasks are less self-concordant for the individuals, then they experience an external locus of control; the desire to task achievement is likely to fade when obstacles are encountered (Sheldon & Elliot, 1999).

In this study, the researcher proposes that the motives for commercialising research results determine the successful of academic research commercialization activities. If the academic researchers feel that commercialising their research may help achieving their own goals, they will be more motivated to commercialise. If commercialisation produces the desired result, they will keep on commercialising

their product. For example, if an academic researcher wants to earn extra income for his/her family, he may strive in commercialising his R&D products. However, if there is no monetary incentives for him/her to so, he/she will not commercialise his/her product.

CONCEPTUAL FRAMEWORK

According to motivation theories, extrinsic and intrinsic motivations are mutually exclusive. However, the third motivation type, which is prosocial motivation, can be driven extrinsically or intrinsically. The Venn diagram is used to show the relationship between the three types of motivation. The Venn diagram comprises three overlapping circles. The overlapping interior of the circle symbolically represents the elements of the set, while the exterior represents elements that are not members of the set. The overlapping areas in this study are extrinsic-prosocial and intrinsic-prosocial motivations. For example, the first shaded overlapping area is the area in which prosocial motivation is extrinsically driven. It means the elements in that area belong to both prosocial and extrinsic motivation. The Venn diagram shows that academic researchers' motivation influences their research commercialisation activities.

Figure 1: Proposed Conceptual Framework
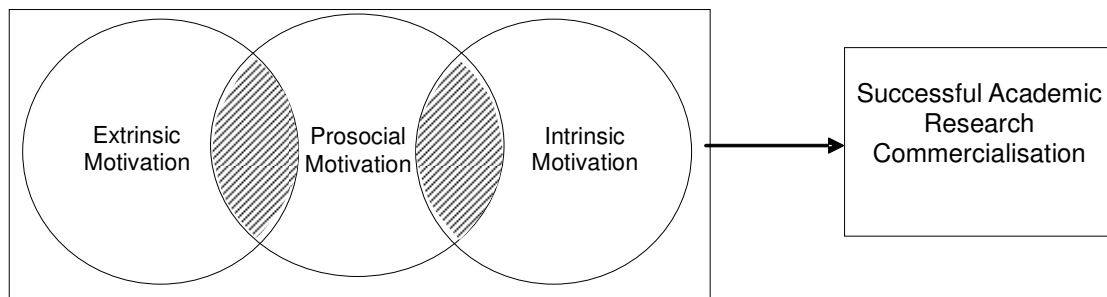
RESEARCH METHODOLOGY

Sampling Design

The cases were selected using purposive sampling technique. In this study, successful research projects at MTUN universities were the cases considered in this study. The researcher used the database from MOHE publication (RMC-MOHE, 2010) and the internal database from the Research Management Centre (or TTO) of each university to get the list of successful research projects.

There were 13 successful research projects at the time of data collection, which was November 2013. The research projects had successfully passed all phases in the research commercialisation process, from the scientific discovery to the product launching. The projects also had generated some revenue for the university. All 13 cases were included in the study. Table 3 shows the list of all 13 successful research projects by university. Pseudonyms were used to designate the university and the research projects.

Table 3: Commercialised Products and Its University

University	A	B	C	D
Research Projects	Alpha Beta Gamma	Delta Epsilon Zeta Kappa	Omicron Theta Lambda	Sigma Upsilon Omega
	3	**4**	**3**	**3**
	TOTAL		**13**	

The informants were the project leaders. However, some project leaders assigned their team member to be interviewed, and normally the member chosen was the one who could supply the right information of the research projects (refer to Nilsson, Rickne, & Bengtsson, 2010; and Bengtsson, Nilsson, & Rickne, 2009). The single case with multiple units of analysis design was used in this study. The unit of analysis is the successful research project as each project had its own challenges, merits, and limitations. Even though the same researcher had completed two different research projects, the motivation to complete each project might be different. Two research projects in this study had the same project leader but different project members.

Research Procedure

The researchers review published documents include the Malaysian plan, the government blueprints, related policy papers, newspaper archives, and other published documents. The review exposed the researcher to the details of the informants. For example, through newspaper cuttings of their success stories and their personal blogs or websites, the researcher got to know the background of the informants. Initial information about the informants was important to help the researcher probe further questions during the actual interview (Marshall & Rossman, 1989; Merriam, 2009; Patton, 1990).

After reviewing the relevant documents, the researchers arranged interview sessions with the informants. The interviews began in November 2013 and ended in January 2014. To set up a meeting, the researcher communicated with all informants via email. The contact details were obtained from the university website. Prior to the fieldwork, an interview protocol was developed and it contains semi-structured interview questions to answer the research questions. All interviews were conducted in English, but the informants had the option to answer in Malay or English language. On average, the interview session lasted about 65 minutes. The interview sessions were voice recorded and transcribed by the researcher. Email enquiries were sent to the informants if the researcher needed clarification of their responses. After case descriptions were written, the researcher emailed them to the respective informants for verification. The verification was more so important in some cases where technical jargons unfamiliar to the researcher were used. The informants responded by emailing the modifications. This approach increased the validity of the research. Besides interviewing the informants, the researcher made observations of the informant's office, took pictures, and requested personal documents to support the interview data.

DATA ANALYSIS AND FINDINGS

From the transcriptions of the interview, the researchers started to analyze using within-case analysis strategy. The analysis enabled the researcher to develop a detailed case study write-up called case study database or a thick description of the case (Creswell, 2012; Merriam, 2009). The researcher wrote the case description based on the interview transcripts. In this description, the full case was written chronologically with full information and actual names. It also highlighted the uniqueness of each case.

To find the answers to the research questions, the researcher used thematic analysis to categorise the information from the interview transcripts within a case. The researcher applied open coding process to the case. After the open coding, the axial codings were constructed as to group the

open codes into fewer numbers of codes. Then, the axial codes were categorised in the super axial codes or termed as "categories" by Merriam (2009). According to Creswell (2012), the axial codes can be as much as 25 to 30 codes while they can be categorised into smaller categories of five or six super axial codes.

Next, the researcher performed cross-case analysis to compare and contrast between the cases. The aim of the cross-case analysis is to build general explanation that fits the individual cases (Merriam, 2009; Yin, 2009). The analysis is a powerful tool to develop a new theory because it allows replication and extension among individual research projects (Eisenhardt, 1991; Yin, 2009). The analysis had brought together the findings across 13 cases. The researcher completed the cross-case analysis using Atlas.ti software for easy retrieval and to show the relationship between codes.

Atlas.ti is capable to visualize the analyzed data in order to construct the Venn diagram as in line with the study's conceptual framework. In order to develop the Venn diagram, the researcher observed carefully the codes developed in the software. The overlapping sections in the Venn diagram concern with the prosocial motivation factors, whether the factors were more extrinsically-driven or intrinsically-driven. As a result, the researcher drew the network diagram for the mixed-motivation factors for each case in order to classify the type of mixed-motivation for that case. The size of the overlapping section in the Venn diagram was determined by the arrows that showed the relationship between each motivation type. More arrows between the typology showed that the relationship between them were higher than their counterpart (Figure 2).

Figure 2: Network View Diagram in Atlas.ti Software
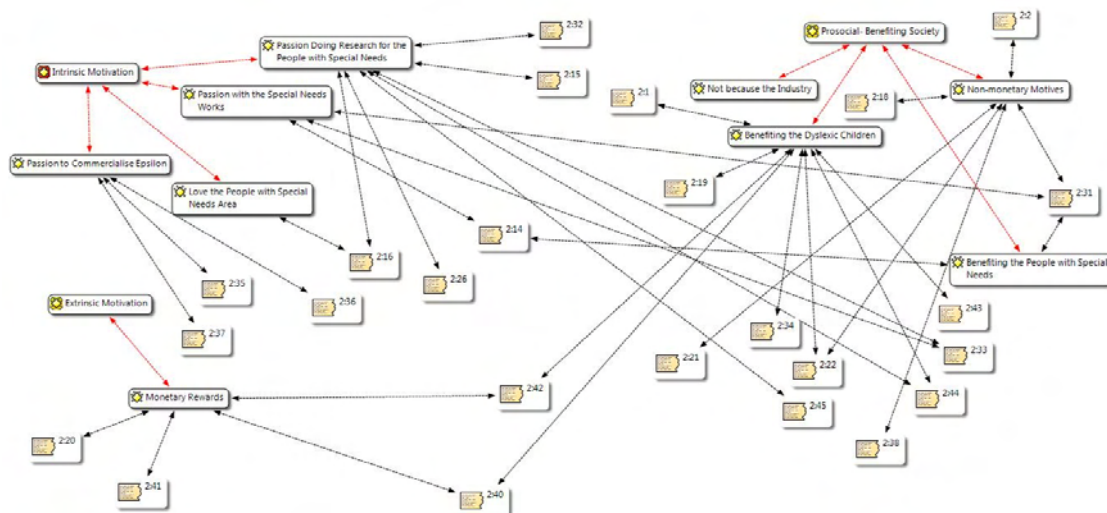
From the study, it has been discovered that the informants were motivated by all three types of motivation factors, either simultaneously or in sequence. There are two types of mixed-motivation that had been found in the study. The difference between those two types was the size of the prosocial overlapping section. The overlapping size did not indicate any major motivation factor in the research project. It was merely to depict that the prosocial motivation in the case was driven more extrinsically rather than intrinsically, and vice versa. For example, if the case fell under Type I of the mixed-motivation, it did not mean that the academic researchers were more extrinsically driven to commercialise their research result. Instead, it only showed that the prosocial factors in the project were more extrinsically driven than intrinsically driven.

Type I. In the first type of mixed-motivation factors, the extrinsic-prosocial overlapping section was bigger than the prosocial-intrinsic motivation (refer to Figure 3). It showed that the prosocial factors in

these academic researchers were more extrinsically driven. Seven cases were under this category, namely, Project Alpha, Gamma, Zeta, Kappa, Theta, Sigma, and Omega.

Figure 3: Type I Mixed-motivation Factors
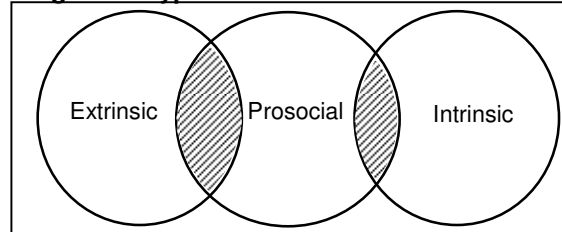
Type II. The second type of the mixed-motivation was the overlapping section of prosocial-intrinsic motivation that was bigger than the extrinsic-prosocial section (refer to Figure 4). The prosocial motivation in these cases was driven intrinsically more than extrinsically driven. There were six cases in this category, namely, Project Beta, Delta, Epsilon, Omicron, Lambda, and Upsilon.

Figure 4: Type II Mixed-motivation Factors
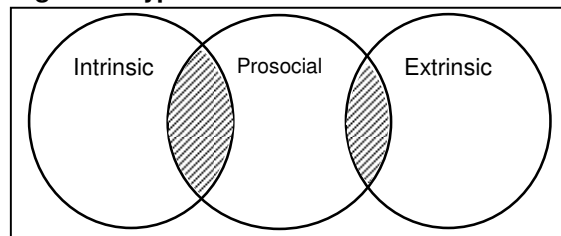
From the study, it can be concluded that all successful academic researchers were motivated by three factors. The motivation types for each case are simplified in Figure 5. The mixed-motivation factor showed the combination of motivation factors in each case. The mixed-motivation emerged either at the initial idea stage or at the later stage of the research commercialisation process. The motivation factors might also happen simultaneously or in sequence.

The result corroborated Self-Concordance Theory. Self-concordance refers to a state where a goal aligns with personal interests and values. A self-concordant individual is someone who pursues his/her life's goals. Thus, a self-concordant goal represents one's actual interests, passions, central values, and beliefs (Koestner, Lekes, Powers, & Chicoine, 2002; Sheldon et al., 2004).

From the research findings, it can be concluded that the academic research commercialisation activity was a self-concordant goal for the successful academic researchers, regardless of whether they commercialised for the sake of himself/herself or for the sake of others. The academic researchers were intrinsically-driven and had positive personal traits to commercialise their research results. Dardak (2013) argued that one of the critical success factors for successful technology transfer is passion. Passion is an intrinsically driven motivation (Lam, 2011). In this study, all the academic researchers were passionate about commercialising their research results. Besides, they also had the personal traits that kept them motivated. Because commercialisation was in accordance with their personal goals, they persevered and were determined even though it was a lengthy process. In the case of prosocial motivation, Sheldon et al. (2004) noted that when one pursues self-concordance goals, one engages in an activity regardless of whether it benefits other people or own self (refer to Figure 6). But, those who are focused on others, their tendency to commercialise was more than those who were not (Andersen & Pallesen, 2008; Grant & Berry, 2011; Grant, 2008).

Figure 5: The Mixed-motivation Types for the Cases

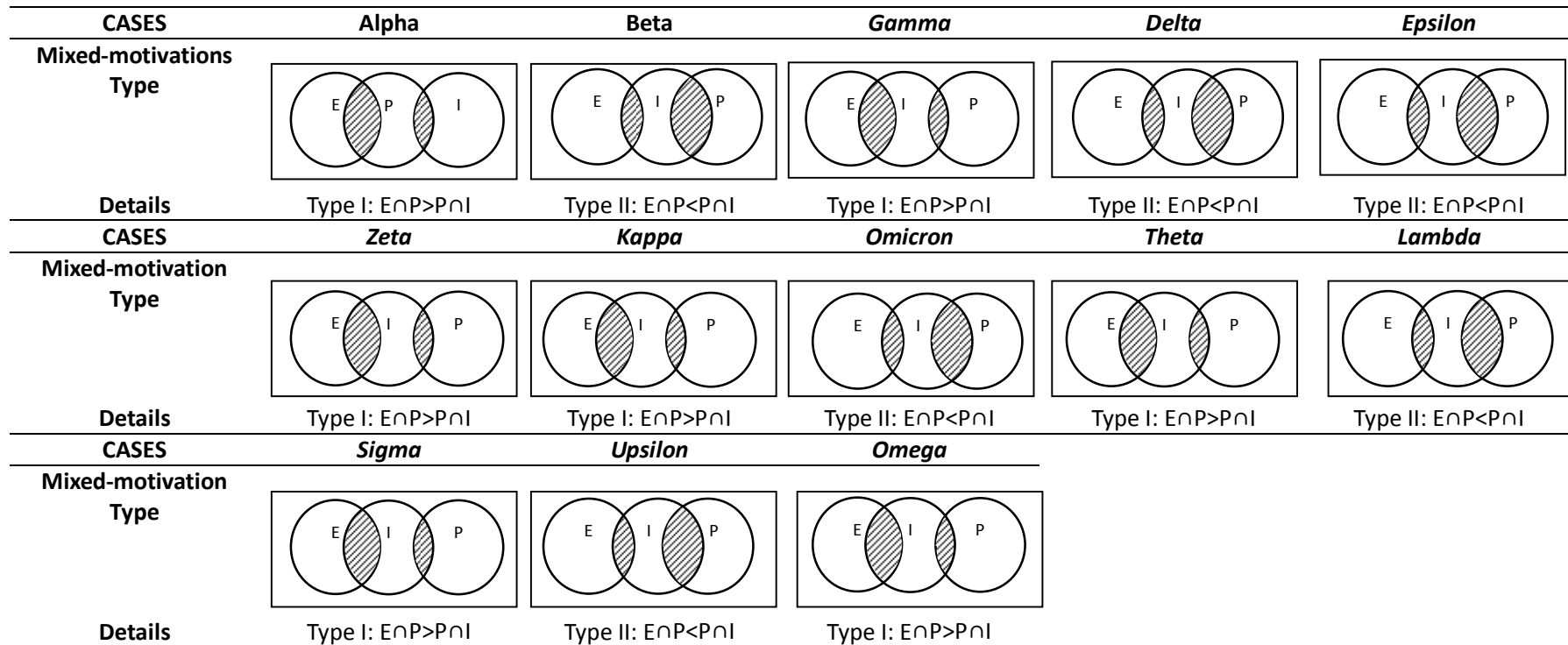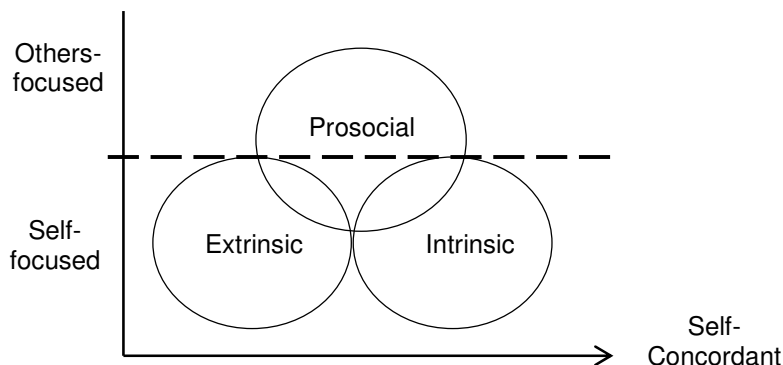| CASES	Alpha	Beta	*Gamma*	*Delta*	*Epsilon*
Mixed-motivations Type					
Details	Type I: E∩P>P∩I	Type II: E∩P<P∩I	Type I: E∩P>P∩I	Type II: E∩P<P∩I	Type II: E∩P<P∩I
CASES	*Zeta*	*Kappa*	*Omicron*	*Theta*	*Lambda*
Mixed-motivation Type					
Details	Type I: E∩P>P∩I	Type I: E∩P>P∩I	Type II: E∩P<P∩I	Type I: E∩P>P∩I	Type II: E∩P<P∩I
CASES	*Sigma*	*Upsilon*	*Omega*		
Mixed-motivation Type					
Details	Type I: E∩P>P∩I	Type II: E∩P<P∩I	Type I: E∩P>P∩I		

Figure 6: Self-concordance, the Motivations, and the Focused

It is interesting to note that the mixed-motivation factors found in the study explain that the research commercialisation activity was self-concordant with the academic researchers involved in the 13 successful research projects of MTUN universities. They believe that the activity was in line with their goals in their careers. They are self-determined to juggle with all daunting tasks in commercialising their research results. Moreover, for those who are others-focused or prosocially motivated, their tendency to commercialise was more than those who are not (Andersen & Pallesen, 2008; Grant & Berry, 2011; Grant, 2008). If the goals are non-concordant, the academic researchers would give up if any barriers or challenges came to their way along the commercialisation process. Even if the goals are achieved, the effectiveness of the goals could be lower than those who are self-concordant (Sheldon & Gunz, 2009).

CONCLUSION AND DISCUSSION

This study discussed the mixed-motivation factors in commercialisation, which is less discussed in the literature. Benedetti (2012) and Diefendorff and Chandler (2010) argued that an individual's behaviour could be driven by more than one motivation at a time. This study considered three mixed-motivation factors i.e. extrinsic, intrinsic, and prosocial. Because academic research commercialisation involves a lengthy process, this study found that the academic researchers were motivated by more than one factor at a time. The mixed-motivation was closely related to the research commercialisation process. In the early stage, the academic researchers might be motivated by one type of motivation factor but at the later stages of the process, other motivation factors come in. For example, in one case, the academic researcher was being intrinsically motivated during the scientific discovery stage, then, the extrinsic and prosocial motivations came in at the opportunity recognition stage.

Future studies may also apply other research methodologies, whether mixed-method or quantitative, to validate the present study's findings. Multiple case study method can also be used as compared to the single case study applied in this study. Besides, future studies may investigate the applicability of self-concordance theory to non-successful academic researchers or to those who are novel in commercialisation. It is because the activity is self-concordant to those who were successful but may be less or non-concordant to the non-successful academic researchers.

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EVOLUTION OF TRANSFORMATIVE SOCIAL SERVICE: A CASE STUDY OF MARA

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Abstract

How does social innovation, in the form of transformative social service, develop within a social organization? Social innovations are new ideas that are aimed at meeting social goals, which are typically diffused and mobilized by social organizations through its social services. Although a number of social organizations have progressed in Malaysia, little is known about its development as well its services, particularly those that are transformative in nature. Using the integrated lenses of strategic management, social innovation-entrepreneurship and service, this qualitative historical-processual case study gathered insights about the evolution of transformative service of Majlis Amanah Rakyat (MARA), an autonomous agency under the Malaysian Ministry of Rural and Regional Development. Data were collected through in-depth interviews of key people of MARA as well as through analyses of documents and observations. MARA's two foundational services – entrepreneurship development and education, had evolved over time in a number of stages; and been influenced by the government's policy of the moment, its heavyweight champions' support, financial situations, managerial competencies of the leaders and managers, the socio-economic conditions of the societal members, as well as the business and personal growth of the supported beneficiaries. The findings of this study is hoped to bridge the theoretical gap by linking the concept of innovation to the social venture development, as well as to overcome managerial and policy issues of promoting effective management and institutionalization of social organizations, leading to a more systemic socio-economic development and transformation of the society toward well-being.

Keywords: Social organization, social service, social innovation, social entrepreneurship, transformative service, strategic management, Majlis Amanah Rakyat, MARA

INTRODUCTION

At today's rate of increasing global economic and social crises, members of the society beg for the transformations of the economic system as well as the society themselves. Large corporations and the capitalists have been accused of being partly responsible for many shortcomings of today's economic system (Easterling, 2003; Varey, 2010). As such, there are increasing demands for the development of alternative types of organizations that can significantly contribute toward improving the well-being of the society. In order to achieve this objective, researchers posit the concept of social innovation as one of the key answers to sustainable socio-economic development (Mulgan, 2006; Mulgan et al., 2007; Westley & Antadze, 2010). Social innovations, hereby defined as new ideas that are aimed at meeting certain social goals, are typically developed and diffused by social organizations: Socially-innovative organizations that are created to meet social needs or to solve social issues (Mulgan, 2006; Mulgan et al., 2007). Social organizations, therefore, are the vehicles to drive societal transformations through its social services, particularly those that are transformative in nature. Service is transformative when it is revolutionary, innovative, and offers sustainable values in the form of equitable solutions to society's pressing needs (Nur Sa'adah & Khairul Akmaliah, 2013). These organizations can be found in various forms and driven by various sectors including the non-profit, government as well as the business and market.

Although the concept of social innovation is not new (among others, see Peter Drucker in his book *Landmarks for Tomorrow*, 1957), the understanding on the concept both in theory and practice is still marginal. In particular, little is known of the role of social organizations (as the vehicles of social innovations) in transforming the society and what is involved in the creation and development of their services. With the social sector gaining momentum globally, both as an academic inquiry and of practical interest, the understanding of the concept and its related issues is imperative. The purpose of this study is to understand the evolution of transformative social services offered by Majlis Amanah Rakyat (MARA), one of the established social organizations in Malaysia. In particular, the study seeks to understand: *a) How does a transformative social service develop within MARA?; and b) What are the factors that influence the evolution of MARA's transformative social services?*

Theoretically, the findings of this study are hoped to provide the links of the concept of innovation to entrepreneurship and social venture development that lead to socio-economic prosperity and societal well-being. Practically, the study hopes to serve as a road map for future social innovation initiatives and future social innovators. The findings are also relevant for policy makers to effectively manage and foster the growth of the social service and social business sector.

LITERATURE REVIEW

In this study, social organization is defined as innovative organization that is meant to serve or achieve certain social purpose or objective (Mulgan, 2006; Mulgan et al., 2007). This definition is rooted within social innovation perspective. Social organizations are the entities through which social innovations are created, developed and diffused – where the solutions will be finally adopted and become institutionalized in the society. The emergence of civil society movement as early as the 18th century through the works of social reformists such as Robert Owen, Karl Marx, Max Weber and others (Godin, 2012; Mulgan et al., 2007) had coined the notion of socialism or social reform, highlighting the idea of engaging the society in solving its own problems. The catchphrase 'social innovation', however, appeared much later in the 1950s (e.g., Drucker, 1957).

The field of social innovation shares common interests with other management sciences, such as entrepreneurship, management of public or non-governmental and non-profit organizations (NGOs/NPOs), as well as social issues in management (Mueller et al., 2011; Short, Moss & Lumpkin, 2009). Many scholars argued that the concept of social innovation is an extension or alternative to the concept of innovation (Godin, 2012), which by default refers to technological innovation (Godin, 2012; Rogers, 1962; 1995; Tornatzky & Fleischer, 1990). However, current innovation literature does not explicitly consider the "social" or "values" dimensions of an innovation process or outcome. In addition, although there have been some evidence that the field of social innovation research is maturing, among others with the emergence of a number of review articles and reports in recent years (e.g. Godin, 2012; Granados & Gamez, 2010; Mulgan et al., 2007), the current body of knowledge is still fragmented. Among others, the research body is still short of synergy with established theories and lacks empirical supports (Doherty, Haugh & Lyons, 2014; Nicholls, 2010; Short, Moss & Lumpkin, 2009; Trivedi & Stokols, 2011). As such, to increase the legitimacy of social innovation as an established and mature scientific phenomenon, there is a dire need for more empirical research with rigorous theory building to be conducted (Mulgan, 2006; Mulgan et al., 2007).

Transformation of society toward well-being has been identified as one important agenda in the development of service both as a science as well as in practice (Ostrom et al., 2010; Varey, 2010). The capitalist market has been criticized to be overly focused on material economic goal through the means of mass production and consumption, resulting in various social and ecological costs, among others the inequities among the rich and poor as well as rapid depletion of resources (Varey, 2010). Transformative service is a sustainable development approach that seeks to integrate and balance up the economic objectives with societal objectives. Societal well-being concerns with all levels of activities including that of the individual, community as well as activities at the macroeconomic level. Accordingly, social organization is one of the means through which these change process occur through its social innovations; with the process of change underpinned by the values of "serving" (Evans, Hanlin & Prilleltensky, 2007). Social innovations embedded with values of serving are considered transformative

and able to transform the society toward well-being. In line with theories of innovation, service innovation exists in a spectrum from incremental (lesser impact) to being revolutionary or transformative (higher impact).

The concept of transformative service served as the foundation for the identification of transformative service offered by a social organization; one that has evidence of innovative actions or methods with sustainable values as equitable solutions to society's pressing needs (Nur Sa'adah & Khairul Akmaliah, 2013). Because the objective of this study is to uncover developmental process of social services, MARA, a Malaysian social organization with transformative service was chosen as the case study. Transformative social organizations like MARA stand out from the rest and have shown some success in achieving the social objectives, that certain 'best practices' can be learned from their experience.

RESEARCH METHODOLOGY

The Qualitative Historical-processual Case Study

The research design for this study is interpretive qualitative case study. The case study methodology is chosen as it is appropriate for an in-depth investigation of a research interest (Cavana, Delahaye & Sekaran, 2001; Merriam, 2009) – the case. This study involved an extensive analysis of historical records, particularly of company documentation (Rowlinson, 2004). Although Yin (2003; 2009) draws a distinction between a historical analysis (that concerns with past data), with a case study (that concerns with contemporary data), Merriam (2009) reflects that historical study may include organizational case study design, which is a common approach in organizational research. This approach is known historical organizational case study: A study of a particular organization over time (Merriam, 2009).

Within organizational research, processual analysis is regarded as a valuable method of research, and especially useful when the research question involves issues of time, structure, context, emergence and development (Pettigrew, 1997). Processual research is necessarily qualitative (Hinings, 1997), and historical (Pettigrew, 1997) because it involves the context of transition (or change) of the past, present and the future. Drawing on these approaches, this study is designed as a qualitative historical-processual case study.

Data Collection and Analysis Procedure

In order to triangulate the data, the data were gathered through in-depth interviews of key management personnel of MARA as the representatives of the organization; in combination with observations and documents analysis of secondary data such as published company histories, annual reports, newspapers and other published sources. The interviewees were briefed on the necessary information and the nature of the study and the necessary consents were duly obtained before the study was conducted. The main interview questions include the following:

1) *What are the services offered by MARA? Which service(s) that is considered most successful/has huge impact on society?*
2) *Who are the customers/beneficiaries of MARA?*
3) *How does MARA execute its services? How are the strategies formulated?*
4) *Were there any major event/ incident/problem/trigger for a strategic/turnaround decision?*

Because it is the researcher's responsibility to perform the abstraction, for the interviews, the participants were only made to narrate the historical and contemporary accounts of the case, and not to identify the underlying meanings of the said narratives. The interviews were then recorded and duly transcribed. The data were analyzed manually using the historical-processual (Pettigrew, 1997) and thematic analysis (Merriam, 2009) approach. To ensure the validity and trustworthiness of researcher's judgments and interpretations of the case in this study, the fundamentals of case study (Eisenhardt, 1989; Merriam, 2009) and the appropriate art of interviewing (Aliah Hanim et al., 2011) were adhered to. After

the face-to face primary interviews, follow up interviews were conducted via face-to-face meetings as well as through email and phone communications. The outcomes or findings are richer as it combines the thematic findings which are typical for a qualitative analysis, as well processual and historical analysis that involves analysis of past and current situations.

THE CASE: MAJLIS AMANAH RAKYAT (MARA)

Majlis Amanah Rakyat, (acronym MARA) or the Council of Trust for the People is an autonomous agency under the purview of the Malaysian Government's Ministry of Rural and Regional Development. MARA was established on the 1st of March 1966 as a statutory body by an Act of Parliament, following a resolution of the first Bumiputra Economic Congress in 1965. At its inception, MARA's objective was stated as "to assist and promote the participation of Malays and other indigenous people in commerce and industry" (Malaysia, 1970, p.15). The term *amanah rakyat* (people's trust) was meant to emphasize the role of MARA to uphold the trust of the people to bring them welfare and well-being. The acronym 'MARA', means 'advancing' in Malay, indicating MARA's proactive role to facilitate the societal advancement (Abdul Karim et al., 2015).Throughout the years, this goal was achieved through the support of various assistance in relation to education as well as commercial and entrepreneurial activities that were provided under various programs. Fast forward to 2015, MARA has a vision to be an outstanding organization of trust in order to uphold the nation's pride. Its objective is operationalized as to spearhead the fields of entrepreneurship, education and investment in order to enhance equity holding of the Malays and other indigenous people or termed as the *bumiputras* (MARA, 2015a).

The Beginning: From RIDA to MARA

The early history of MARA began before Malaysia (then Malaya) gained independence. It began as RIDA (The Rural and Industrial Development Authority) which was established by the British rulers in 1953. The main objective of RIDA was to enhance the socio-economic condition of the dwellers of the rural areas who were mostly Malay farmers. To achieve that goal, a myriad of assistance was given to the targeted beneficiaries including the help to construct basic infrastructures such as houses (the '*rumah RIDA*') and wells ('*perigi RIDA*'). RIDA also provided financial aids as well as trainings for the Malays to facilitate various developmental projects (Abdul Karim et al., 2015; MARA, 2007; Osman-Rani, 1990; Sity Daud, 2001). Datuk Zanudin Ab. Rahim, the current Deputy Director-General (Management Services) of MARA explained the operation of RIDA at that point in time:

> RIDA, meant for rural. The idea was to solve the issues of the Malays in the rural areas, the kampongs… So there were well projects –*perigi RIDA*, and house projects, *rumah RIDA*. Those houses were prefabricated. Like how we have IBS now. The houses can be assembled and disassembled if they need to move. The houses and wells were meant for those rural people. RIDA at that time were in fact under the rural ministry.

Other than providing assistance in terms of basic infrastructures and houses for rural dwellers, at the same time RIDA also operated a training centre, RIDA Training Centre (Dewan Latehan RIDA) which was built in 1956, that conducted external professional courses, including those offered by established international bodies. In due course, RIDA Training Centre became MARA Traning Centre, which later on evolved into Universiti Teknologi MARA in 1999.

After ten years of operation, RIDA's functions became rapidly expanded and hence the government saw the needs for its restructuring (Sity Daud, 2001). As the namesake suggests, RIDA was focused explicitly on the rural setting by providing basic infrastructural assistance to rural folks. The society later, however, in the middle 1960s seemed to begin to demand for more efforts from the government to increase the participation of the Malays in economic activities. The concern was formally discussed in the first Bumiputra Economic Congress in the year 1965. The congress suggested the need for restructuring of RIDA into MARA and to redefine the functions of the new entity. The restructuring seemed to be driven by the demand of the Malays to increase their equity holding in businesses in the country (Osman-Rani, 1990). By virtue of Majlis Amanah Rakyat Act 1966, MARA was established,

replacing RIDA as the previous authority on rural development. MARA was allocated financial resources in support of its expanded vision (Abdul Karim et al., 2015; Sity Daud, 2001).

Early Developments of MARA (1960-1970)

MARA was established in 1966 under the management of the Ministry of Rural and Regional Development. Tun Abdul Razak, the then Deputy Prime Minister of the Federation of Malaya, who served as its minister since 1959. As the head of the ministry responsible for rural areas' socio-economic development, as well as the Deputy Prime Minister, Tun Abdul Razak was instrumental in the transitioning of RIDA into MARA and had been in full support of MARA's inception and of its expanded roles and functions. His conviction in 'personifying the guardian role model' of MARA is evident in many records of his writings and speeches, such as the following (Mohd Nizam, 2013):

> …Today, I am introducing a bill to replace one of the agencies, the Rural and Industrial Development Authority or RIDA, by a new organization which bears the name of MARA or Majlis Amanah Rakyat. I feel it necessary to set up a new organization because I have said earlier we have reached a new stage in the economic development of the rural areas. The change of RIDA to MARA is not in a change merely of a signboard. It is a fundamental change that will be reflected in the objectives, the tasks and the activities of MARA. RIDA had undertaken a variety of tasks since its establishment 14 years ago, from the building of rural roads, the setting up of training centres, to the granting of loans to assist mainly small businessmen. Since the creation of my Ministry some of the functions of RIDA had been undertaken directly by my Ministry…I have therefore decided that RIDA should be replaced by a new organization, MARA, which will concentrate on stimulating, facilitating and assisting the economically under-developed to participate more actively in the commerce and industry of the country…There is also another condition which I would like MARA to adhere to wherever possible. Its assistance should be given where it will have a greater impact on a large number of persons…The assistance they get will depend on the assistance they deserve. MARA must succeed. It is in our national interest to see that it succeeds and it should have the blessing of all well-meaning people in our country…
> (Tun Abdul Razak, during the moving of the Second Reading of the "MARA Bill" at Dewan Rakyat on 11 November 1965).

Other than providing assistance for business development, since 1966, MARA had began to sponsor students for pursuing tertiary studies, particularly in the fields of science andtechnology in local universities and abroad through its full scholarship program (Abdul Karim et al., 2015). Around this time too, MARA also began to plan to implement various education and training programs in business as a means to increase the number of qualified bumiputras in commerce and industry. In a review paper to a proposal prepared by MARA Training Division, it was explicitly mentioned that:

> ...[Our] Training Division Plan 1966-1970 emphasis was made initially on the expansion and further development of the MIT (i.e. Mara Institute of Technology), awards of more scholarships, the setting up of more vocational schools…[with the aim] to implement a comprehensive and realistic programme of training and education in business, the profession and technology for suitably qualified Bumiputras including students, staff and those who are already actively engaged in Commerce and Industry as part of a co-ordinated and sustained effort of MARA to promote, stimulate, facilitate and undertake economic and social development of Bumiputras, particularly in their active and fruitful participation in commerce and industry, both in quantity and quality (MARA, 1968).

Since 1960s, MARA Training Division (Malay: Bahagian Latihan MARA) was the department responsible for planning and carrying out MARA's education and training programs. According to Abdul Karim et al. (2015), many of the programs introduced by the training division back then were revolutionary and had since become the blueprint for many of the current education and training programs at MARA. The first head of this division was Mansor Othman who formerly served Shell Malaysia as a human resource executive. Upon MARA's inception in 1965, Mansor Othman was roped in to lead MARA

Training Division by the late Tun Abdul Razak, who in turn recruited a number of talents into his team such as Arshad Ayub who was formerly a rural development officer in RIDA. Arshad Ayub was appointed as the first Director of MARA Training Centre in 1965 before its transformation as MARA College a year later and as ITM in 1967. Although Mansor Othman only served MARA for a short period (he left MARA in 1969 upon his appointment as Negeri Sembilan's Chief Minister), historians noted his contributions in shaping the direction of MARA, particularly in relation to education and training (Abdul Karim et al., 2015). After Mansor Othman left MARA, his successors continued with the implementation of the planned education and training programs.

The New Economic Plan: 1970s

Tun Abdul Razak was appointed as the Prime Minister of Malaysia in 1970 and later in the same year, the New Economic Plan (NEP) was introduced with the purpose of achieving the national unity and prosperity through eradication of poverty and restructuring of the society. MARA was then positioned as one the implementing agency of NEP. In line with the introduction of NEP in 1970, MARA was given two main responsibilities: First to eradicate poverty and second, to develop the human capital (Aninah Janang, 2015; Ibrahim Ahmad, 2015). MARA's activities in initiating commercial projects through creating new companies as well as giving out loans for the people to start or sustain businesses suggest direct involvement of MARA to creating opportunities to increase equity holding of the targeted group. With regard to human capital development, in 1970s MARA began to expand its function into education advancement (Abdul Karim et al., 2015). Datuk Zanudin said:

> At that time, education was one of the main concerns for the Malays. We created MRSM starting 1974 in Seremban, a boarding school concept, to provide high quality secondary education. The MRSM schools focused on selected students, cream of the cream. We established many MRSMs across the country. Then, we faced another problem, what about those who dropped out? So we created vocational schools. So there were two lines of schooling choice. We noticed that some students were not academically inclined, but they love technical things. Earlier, we took students who had middle school certificate. Still there are so many school drop outs around. We then appealed to the government to address this problem. As a result, we created GIATMARA, which is another vocation training institute that accepts practically everyone as long as they can read and write and interested to learn. In due course, by 2015, each parliamentary district has at least one GIATMARA centre.

MARA's function in education advancement suggests the evolution of its role as a social agent. While MARA's establishment in 1966 were meant to facilitate the economic development of the targeted group, education evolved as one its core function due to the need to address the grassroot issues of the Malays lagging in science and technology disciplines, or discontinuity of education amongst Malay youths in the rural areas. In the case of the establishment of MARA Junior Science College (MRSM) for example, the issue that arose at that time was the lack of participation of Malays in the higher education and subsequently the professions related to the fields of science and mathematics/technology. This problem led to the idea of establishing high quality secondary schooling system that focused on the subjects of sciences and mathematics. In fact, this issue of the need for the emphasis on learning of sciences and mathematics from younger age was brought earlier in 1965 by Tun Abdul Razak, and was later followed up in 1968 (Mohd Nizam, 2013). Finally, MARA began to provide secondary school education through the establishment of MRSM in 1974.

One of the educational institutions established by MARA that focuses on technical education was Institute Kemahiran MARA or MARA Technical Institute (IKM). The first IKM was established in 1968 and more centres were built throughout the 1970s. It was first built in order to cater to those high school graduates who did not manage to enter universities because of low grades. The main objective of this education was to ensure that more bumiputra youths would continue to study after completing high school. At the beginning, IKM focused on offering certificate-based education, however by the 1990s, it had started to offer diploma programs in collaboration with local and international higher education institutions (Abdul Karim et al., 2015).

By middle 1970s, MARA had catered for both lines of education; purely academic education, as well as technical education and vocational trainings. Entrepreneurship development and education which has started in 1970s had formed the foundation as MARA's core business up to present time in 2015. The decade of 1970s also saw rapid expansion of MARA's education initiatives. For example, six IKM centres (of a total of 14 centres as at 2015) were built during the 1970s (Abdul Karim et al., 2015).The expansion of IKM was reported to be in line with Malaysia's move into industrialization policy. Under this policy, Malaysia shifted its focus from agricultural-based economy (Malaysia, 1966) to industrial-based economy (Malaysia, 1970), which required more skilled workers in the manufacturing.

Expansion of MARA's Services (1980s-1990s)

The fourth Malaysia Plan (1981-1985) was a continuation of the earlier second and third Malaysia plans that were set out to eradicate poverty and to restructure the society by promoting greater involvement of marginalized groups and upgrading their professionalism in the job market (Malaysia, 1981). The focus of development during this time was on balancing the socio-economic development among different regions in the country. During this period, programs from the earlier plans were refined and expanded, including increasing the employment creation and land development in achieving poverty reduction as well as identifying education and training programmes as important enablers of the employment restructuring plan. Efforts at increasing share acquisition among the marginalized groups and building commercial and industrial community were further amplified (Malaysia, 1981). Entrepreneurial development projects and programs continued to be emphasized during this period. Among others, additional MRSM and IKMs were planned to be built within five years; IKM programs will be further expanded. According to the report, all these planned programs would require significant resources, high ability to organize and results could only be achieved over a period of time (Malaysia, 1981).

The focus of the fifth Malaysia plan (RMK5) (1986-1990), which began in early 1986, was still on achieving national unity envisioned by NEP that was introduced in 1970. Based on the government's analysis, economic disparity across different races as well as between people in the rural and urban areas were still rampant (Malaysia, 1986). One of the strategies for bridging the income gap was through training more professionals from the marginalized group which comprised mainly of bumiputras. Income disparity was also apparent between certain states that were more developed compared to some states which seemed to be more marginalized including those in the east coast as well as in East Malaysia. For these states, the focus of development was on reducing poverty (Malaysia, 1986). For the period 1981-1985, through its IKM centres, MARA has contributed toward a pool of skilled and semi-skilled workforce in the country (Malaysia, 1986). In the same period, MARA has provided entrepreneurship trainings, business consultancy and advisory, giving out loans as well as providing physical infrastructures to businessmen in the form of small shops and shophouses.

Moving into Higher Technical Education: 1990s-2000s

Malaysia's national ideal 'Vision 2020' was first coined by the then Prime Minister of Malaysia Tun Dr. Mahathir Mohamed during the tabling of the sixth Malaysia plan (1991-2000), whereby Malaysia was aspired to become an industrialized nation by the year 2020 (Malaysia, 1991; EPU, 2006). In the same year, MARA established its first higher vocational institute, German-Malaysian Institute (GMI). In 1992, the institute received its first batch of students. The institute was collaboration between the governments of Malaysia and Germany through their implementing agencies MARA and Deutsche GesellschaftfürInternationaleZusammenarbeit (GIZ) GmbH. The institute offered 'twinning' programs with classes held in both countries including technical diploma, pre-university courses, and customized technical courses as well as industrial consultancy and services (GMI, 2015). Following the model of GMI, in 1995, MARA began to operate another higher vocational institute, the Malaysia-France Institute (MFI), offering diploma trainings and short courses in technical skills such as electrical and mechanical with its first student enrolment in 1996. In the same year, MARA established Malaysia-Japan Institute (MJI) in 1996 and two years later, the British-Malaysia Institute (BMI) in 1998.

In 1996, MARA began its Technical Entrepreneur Program (Program Usahawan Teknikal – PUTEK) a program started rolled out under the seventh Malaysia plan (RMK7) (1996-1999) with the

objective to develop more technical entrepreneurs (Malaysia, 1996). By 2015, the program is open for technical graduates of MARA's technical centres and institutes as well as other institutions to develop businesses based on the skills that they have. These graduates are provided with a set of support for business startup in the form of training, business advising, providing equipment rental, loan financing, progress monitoring and follow ups. These help focuses on building the foundation for starting up a business until it has some indication of surviving on its own (MARA, 2015b). Since 1996, MARA's vocational training and education had catered for three levels of education: The basic level was provided by GIATMARA, the middle level by IKM, while the higher level of training and education was provided by MARA's institutes in collaboration of foreign countries. By early 2000s, MARA has established nine of such institutes.

The main thrust of the eighth and ninth Malaysia plans (2001 through 2010) was the shift of the national growth strategy from input-based toward knowledge-based strategy, with the focus on developing the human resources (Malaysia, 2001; 2006) Accordingly, in 2000s, MARA's strategic emphasis was on education, and following the policy for knowledge based at that time, it established itself as a knowledge-based organization. This situation was described by Datuk Zanudin:

> Earlier, our rational was to emphasize on developing the society through education. We want to make MARA a knowledge-based organization. At that time, the government's policy was to push toward knowledge-based economy and society based on RMK9 (2006-2010). Now, MARA is moving toward becoming an entrepreneurship-based organization. With this focus, education should support entrepreneurship. For instance, now we give loans to students to start up their business so that they can become entrepreneurial from early on. For students studying overseas, their business networking will be good for our country; they can link their country of study with Malaysia. This we hope would help develop entrepreneurial culture among the students.

In 2001, MARA established Universiti Kuala Lumpur or UniKL, a full-fledged vocational/technical university that serves as an alternative route for tertiary education especially for graduates of vocational institutes (Abdul Karim et al., 2015). The university is an amalgamation of a number of MARA's institutes of higher education namely Malaysia France Institute (MFI), British Malaysian Institute (BMI), Malaysian Spanish Institute (MSI), Malaysian Institute of Aviation Technology (MIAT), Malaysian Institute of Marine Engineering Technology (MIMET), Malaysian Institute of Chemical Marine Engineering Technology (MICET) and Malaysian Institute of Information Technology (MIIT). The first international collaborative institute, GMI however did not form part of UniKL. In 2015, MARA is planning to upgrade the institute as another full fledge MARA's technical university.

Implementing the New Strategic Framework: 2011-2015

In 2011, MARA conducted a strategic reassessment of its mission and vision and conceived a new transformative strategic framework for the year 2011-2020. Under the transformation plan, MARA was organized into sectors based on their core businesses, namely the entrepreneurship, education and investment sectors. Another sector, the management services act as the enabler to deliver the services of MARA's core businesses. The aim was to transform MARA into an entrepreneurial-based organization that is centered on entrepreneurial mindset and culture, shared values, integrated change management and continuous monitoring (MARA, 2013). The main thrust of the transformation plan was to enhance bumiputra's involvement in innovation-based economy, based on the following strategies and objectives (MARA, 2011; 2013). With the new framework, MARA has realigned its strategic direction by focusing on innovation as the approach to realize MARA's objective as an entrepreneurial-based organization. This approach, according to Datuk Seri Mohd Shafie Apdal, who was the Minister of Rural and Regional Development at that time, was in line with the true spirit of the establishment of MARA as an agency that supports the socio-economic development of the society. In fact, at this point of time, MARA identified itself as a socio-economic engineering agency (MARA, 2011; 2013).

With the transformation plan, innovation became the foundation of all its three core businesses operations (entrepreneurship, education, investment) and its management services delivery (MARA, 2011; 2013). For its entrepreneurship sector, the transformation plan was geared toward promoting new firm creation and development through an integrated approach in facilitating all activities within the

entrepreneurship value chain, from providing business opportunities, capital, and premises, through marketing and branding. The ultimate aim was to create a pool of resilient entrepreneurs and sustainable businesses in the country, which also comprise of a number of local anchor companies that will catalyze emergent of new entrepreneurs and business growth (MARA, 2011; 2013; MARA Peneraju Transformasi, 2011).

The transformation of the education sector of MARA was aimed at developing human capital with global perspective and high integrity that earn high income. This means, the development of human capital is focused on development of values, skills, knowledge with high entrepreneurial orientation. MARA also would continue to strengthen the two streams of education, namely academic and technical/vocational education. The academic stream comprised of secondary education (MRSM) until pre-university education at Kolej MARA and semi-professional at Kolej Professional MARA and Kolej Poly-Tech MARA. The technical/vocational stream comprised of GIATMARA and IKM at certificate level, and Kolej Kemahiran Tinggi MARA, UniKL and GMI at diploma and degree levels. The goal of education service provided by MARA is in line with Malaysia's New Economic Model to become a high income nation (Malaysia, 2009; MARA, 2011; 2013).

With the 2011-2015 strategic framework, MARA aspires to remain true to its mission as a socio-economic engineering trustee agency that would champion the advancement of the society toward the global stage. This mission, according to Datuk Seri Mohd Shafie Apdal, was In term of education, by 2015, MARA has developed a full line of education system from secondary school through to tertiary level of education, both for academic line as well as the alternative technical route. Datuk Zanudin describes the evolution of MARA's core business in education, since the early 1970s:

> These are the main cores: Entrepreneurship and education. For now we have four sectors. Then we add management services as the support unit. What we have, all along, are entrepreneurship and education. Other than those two are along these lines. So it has been like that. For the education, we establish MRSM, and keep adding the numbers. We also have IKM. Bright students may enter MRSM; the less bright ones have IKM as an option. Even for school dropouts, we offer them programs by GIATMARA. For IKM/KKM, we also offer technical diplomas. In GIATMARA, we offer certificate programs. Even if they did not manage to obtain certificates, at least they got some training. We encourage them to pursue study, to complete their secondary schooling. If they do well, they may enter IKM next. And progress to UniKL or other institutions. If not academic line, they may pursue technical line.

Other than operating and managing its own higher education institutes, throughout the years, MARA continues to provide its education sponsorship programs. For the period of 1966 to 2012, MARA had sponsored over 400,000 students and had disbursed more than RM16billion worth of sponsorship (MARA, 2013). According to Abdul Karim et al. (2015), MARA's sponsorship program is in fact one of MARA's most significant service for the public since its inception, which had been innovative in its design and application. Beginning 1968, MARA had revamped its previous full scholarship program by introducing a 25 per cent 'back contribution'; students receiving the scholarship were mandated to pay back a quarter of the amount sponsored by MARA as a contribution toward MARA's education trust fund. In 1985, the scholarship program was abolished and replaced by an education 'convertible' financing program, whereby the students were given incentives in form of discounted repayment of the study loan, based on their performance in the studies. High performing students would be given option to convert the loan into partial scholarship status and given the relief of repayment ranging from 25 to 100 percent of exemption. Over the years, the incentive had proven to be effective in motivating students to perform well in their studies (Abdul Karim et al., 2015). In 2015, MARA had introduced additional study loan programs in collaboration with the local banks, giving more financing options to prospective students intending to pursue their education in local universities and overseas (MARA, 2015).

In hindsight, MARA has offered a myriad of services for entrepreneurial development, which are highly integrated and stage-based. Datuk Zanudin described the following:

We provide all kinds of services for entrepreneurs. We train them; send them for trainings and give them courses. If they need money to do business, we give out loans and financing. If they need a marketplace for business, we provide them the premise. In term of providing infrastructures for businesses, we give them in stages. That's the model that we are using since the beginning. Bazaars for small scale businesses, then move up to shopping archades, then shophouses, then complexes, up to factories and industrial areas. Then we move up to establish MARA Industrial Area. That's our support for the entrepreneurship's side.

KEY FINDINGS AND DISCUSSIONS

MARA's Social Service Offerings and Evolution

The services offered by MARA throughout the years can be broadly categorized into two: Entrepreneurship development and education. In general, entrepreneurship development services provide assistance to businessmen to conduct businesses, while education services provide education as well as technical/vocational training through its own operated schools, centres, institutes as well as through sponsoring students to pursue studies in other institutions. Both services develop over time and in stages, initially as separate services. In some point in time, the services become integrated as MARA provides additional and more comprehensive services to the public.

Entrepreneurship Development

Entrepreneurship development social service develops in stages. Upon its inception, MARA assumed RIDA's functions to provide support to the development of the rural areas, with more emphasis on development of economics activities amongst the Malays and other indigenous people, as enshrined by its charter. An example of the assistance provided by MARA toward the economic development of the society was building business premises. The first stage of assistance starts with helping small scale businessmen to start off businesses (for instance, building small stalls). Over time, the form of assistance becomes bigger with MARA adding new types of assistance, such as building bigger premises. In second stage, in addition to building small shops, bazaars and shophouses were built to cater for new and existing businesses that were growing. The next stage involved building even bigger marketplaces in form of business arcades as one-stop centres of multiple businesses. The fourth stage involved providing industrial areas and business parks of factories and shops that cater for industrial activities.

The assistance started off with smaller-scale projects before evolving into larger ones. This evolution was perhaps supported by the growth of commercial activities, in combination with the fact that MARA being allocated larger financial resources over time to facilitate bigger infrastructure projects, In addition, it is also likely that the consumers had greater purchasing powers compared to earlier time. In this particular example, *financial situation of the social organization*, *managerial competencies* of the leaders and managers in the social organizations as reflected by their abilities to plan and implement various forms of social service over a long period of time (from small shops to industrial areas), the *economic condition* of the societal members, as well as business growth of the supported entrepreneurs and increase in the numbers of entrepreneurs created contributed toward the evolution of the social service that is being provided. This shows that there are many elements that support creation and evolution of a social service including the internal and external factors.

The evolution of the form of assistance involved additions of new assistance on top of existing services. The types of the assistance became bigger as they meant to cater for bigger businesses that thrive over time, or to support new businesses where bigger marketplaces are needed. Types of assistance also vary based on the need of each business – different types of businesses would need different forms of premises or marketplaces. In other words, the assistance involve supporting both existing businesses within MARA's business community, as well other businesses that in need of assistance. This shows that MARA's social service for entrepreneurship assistance involves the building service depth (through giving more service to existing recipient) as well building service breadth (through adding new services to serve new recipients). These efforts of building service depth and breadth seem to

be in line with MARA's objective "to assist and promote the participation of Malays and other indigenous people in commerce and industry".

Education Services

Education social service also develops in stages. MARA's involvement in promoting education as a way to enhance the socio-economic status of Malays, through producing Malay graduates with expertise in business management. There was a realization since the first days of MARA that education was one of the means to achieve the socio-economic objectives of MARA. In fact, a blueprint of an education plan had been formulated as early as in 1966. This fact was corroborated with MARA transforming RIDA Training Centre into MARA Training Centre upon the latter's inception, and proceeded to augment its roles and functions until it finally became a higher education institute ten years later. In this sense, education served as the foundation of the objective of restructuring of society by way of creating a pool of skilled and professional workers that hail from the marginalized group. MARA's involvement in skilled job market contributed balancing the involvement among different races. This means that MARA's core business of education had been in focus since its early operation (with RIDA's Training Center being one the department under RIDA's organization), although this particular core education function was not made explicit in its earliest mission statement in 1966 (the objective of MARA then was to stated as "to assist and promote the participation of Malays and other indigenous people in commerce and industry"). RIDA as a social entity, since its beginning, provides dual-services of infrastructure development and education/training service.

Although MARA already had the 'grand plan' pertaining to its education service, the services developed and offered in stages, one after another, due to the circumstances, new needs or demands from the society. Even as early as 1970s, it can be observed that social intervention in the form of education service is a complex process that requires *mobilization of resources* and *values embeddedness* among the individuals and managers who are involved in the implementation. In due course, the roles of social organization may evolve For example, in the case of MARA, the first MRSM was established in 1974 as a result of the insights of the executives of MARA on the need of the Malays for high quality secondary education that focused on science and technology. The school was modeled following pre-university system through which the students could be groomed to enter university and to become the pool of eligible input into MARA's socially engineered programs. Implementing a social intervention, particularly a more radical one such as MRSM takes a longer time from ideation to implementation. For example, the time of ideation (1966) and the actual implementation of MRSM (the first MRSM established in 1974) took about 10 years.

Analysis on the IKM and GIATMARA expansion during late 1980s to middle 1990s shows the following two trends: Expansion of technical education was in line with Malaysia's move into industrialization policy which requires highly skilled workers. IKM can be considered as an innovation in the education system because it prepares for the technician group to serve the industry needs. This fact again highlights the emphasis of MARA and the government's high regard to education. By mid 1990s, following the successful establishment of GMI in 1991, MARA began to open up more institutes of higher learning in rapid succession. GMI can be considered as one of revolutionary education service provided by MARA: It was the first institute that offered 'twinning' program in collaboration with foreign educational institutions.

With UiTM no longer operated under MARA since 1976, MARA shifted its focus instead on the development of technical higher education up until the tertiary level. MARA's higher education institutes in general offer the non-conventional university courses that focused on building technical expertise. MARA's first university, UniKL was established in 2004 following the consolidation of eight of MARA's technical institutes. This service served as an alternative route for vocational school graduates to enter university, whom otherwise might not able to do so for lack of the needed academic qualification. MARA's focus on providing higher technical education iterates MARA's emphasis on inclusiveness. With the establishment of UniKL, MARA had offered a complete technical education line: It served all level of education from low level of technical education (GIATMARA, middle level (IKM) to high/tertiary level (UniKL).

Integration of Entrepreneurship Development and Education Services

Along with the expansion of MARA's education services, MARA also expanded its entrepreneurial development programs throughout the 1990s toward the new millennium. In 1996, MARA began its Technical Entrepreneur Program (Program Usahawan Teknikal – PUTEK) a program started rolled out under the seventh Malaysia plan (RMK7) with the objective to develop more technical entrepreneurs. Through PUTEK, MARA provides comprehensive support as needed by nascent entrepreneurs to survive the startup phase of their business. It provides opportunity for technical graduates to start a business to ensure success of MARA's own education program as well as graduates of other institutions. Moreover, such program encourages technical business survival.

The introduction of PUTEK program in 1996 illustrates the synergistic integration of its education side and the entrepreneurship, in which the education side provides the foundation for development of new business startups. Overall, the having PUTEK in the education and entrepreneurship ecosystem indicate MARA's comprehensive effort in ensuring that every individuals are developed into insan, in the sense that the individuals become self-sufficent and empowered and contributes to the society. This objective is in fact MARA's purpose of existence. While earlier MARA's programs of education and entrepreneurship seemed to follow its own route, from 1990s, with the introduction of PUTEK, for the time education and entrepreneurship becomes an integrative effort toward the development of human capital toward becoming role model individuals, the insan.

Based on the analysis of the case as well, technical programs, for example GIATMARA which provides basic technical training; require time to achieve legitimacy in a society that values formal education such as in Malaysia. In a newspaper article, Ali (2010) reported that GIATMARA program was no longer regarded as a 'third class' training. As such, it can be observed that while the first GIATMARA was launched in 1986, only in 2000s, it had gained acceptance. The legitimacy can be achieved through having the programs designed to match the industry demand as well as involvement of members of the community and industry. Technical programs are oriented toward serving the industry; hence the program needs to match the demand of the industry. Understanding the industry is crucial in designing relevant programs. Community and industry involvement are needed to give jobs to the skilled workers to increase the legitimacy of the programs within the society. Such programs not only give economic empowerment to the students, but directly benefit the society as the society can capitalize on the skills of the locals.

Factors That Influence the Evolution of MARA's Transformative Social Services

There are many factors that influence the phases of development of a social service including the internal and external factors. In the example of MARA's entrepreneurship development services, *financial situation of the social organization*, *managerial competencies of the leaders and managers in the social organizations* as reflected by their abilities to plan and implement various forms of social service over a long period of time (from small shops to industrial areas), *economic condition of the societal members*, as well as *business growth of the supported entrepreneurs* and *increase in the numbers of entrepreneurs created* contributed toward the evolution of the social service that is being provided.

The late Tun Abdul Razak is arguably the most instrumental figure that had brought MARA to life and later toward its development. At the time of MARA's founding, Tun Abdul Razak was the Minister of Rural and Regional Development under which MARA was founded. At the time of conception, it receives full support from policymaker through Tun Abdul Razak being the strong supporter of rural development agenda, especially because he was the Minister of Rural and Regional Development at that time. At the same time, we can infer that he had the political weight given that he was also the Deputy Prime Minister of Malaysia since 1957. Later as MARA was growing, MARA received even greater support with its champion Tun Abdul Razak helmed as the Prime Minister until late 1970s. Therefore, by the 1970s, with the appointment of Tun Razak, as the heavyweight champion of MARA, it seemed that MARA received further support from the policymaker's side.

Since the early days, there was the realization on the importance of education by both policy makers and the social agents (the employees of the social organization). There were *high competencies of the management* of the social organization and the *competencies of the social agents* in charge of the implementation in carrying the education-related projects. For example, the first director of MARA's training division Mansor Othman seemed to possess the *managerial qualities and competencies* that are needed to formulate the necessary strategy and launched the programs. This can be the result of his vast exposure in working as human resource executive in a multinational company that he was able to identify the needs of and the approaches toward development of human resource. He also seemed to have a good insight about the existing situation of the human resource in the country and ability to forecast on the future needs. The strategy that he helped formulate served as the blueprint for the implementation of many education-related social services until the present time. In addition, it seemed indicative, from the fact that he was roped into MARA by Tun Abdul Razak, that Mansor Othman received the needed support in mobilizing his blueprint especially at the initial stage. This support could be in the form of political directives as well as ample resources to mobilize the plan.

Team work support and *shared values* among organizational members is also prevalent during this time. Mansor Othman, the first head only led MARA for a short period, however, the strategies and the blueprint of the future initiatives that were established during his tenure was carried on to be implemented by his successors, who were consisted of his teammates and apprentices who shared similar values and vision as his. This shows that the team members support the continuation of the implementation of existing social initiatives. These are contributing factors toward the success of the inclusive education programs.

The formulation and planning part of a social service is also crucial in ensuring the success of its implementation and its alignment with the organization's charter. For instance, the education blueprint of MARA seemed to stand the test of time, indicating that it was beneficial to the targeted group and thus indicative of its alignment with MARA's objectives. Analysis on the process of evolution of the education social service implemented by MARA generated emergent constructs including resources, time, managerial knowledge and skills, team work, long-term thinking, values of being responsible, empathy, voluntarism, inclusiveness, collectiveness, patience, perseverance, and resilience.

The roles and functions of a social organization also evolve over time. Societal pressure, policy decision and changes in the environment contribute to the redefining of the roles and functions of a social organization. For example, at the time of its inception, the push for restructuring of RIDA came from both the internal (RIDA's expanded functions) and external factors (the demand of the Malay community). Specifically, societal pressure provides input to policy maker in decisions related to functions and roles of a social organization whereas policy maker needs input from the society in order to ensure that the operation of a social organization meets the needs of the society. In general, the functions of MARA subject to the policy of the moment. Throughout the years, although there were many national policies introduced, those policies have the same underlying goals of reducing poverty and achieving equitable holding in businesses. As long as the problems exist, and the problems are recognized in the policymaking, MARA's functions remain relevant.

CONCLUSION

In Malaysia, various policies have been introduced in order to cultivate socio-economic progress including the pro-active policies in promoting equitable economic development since its formative years. As an emerging economy permeated by its distinctive strong social values and national development aspirations, its social sector is especially instrumental in realizing the national agenda of achieving the status of high income nation and as well as achieving the societal well-being. MARA was chosen as the case of interest for this study based on its evidence of being transformative in nature and its vast potential for the future. Having grown together with Malaysia over these years, a lot can be learnt from its experience that is directly beneficial for future social undertakings. MARA's two foundational services – entrepreneurship development and education, had evolved over time in a number of stages; and had been influenced by the government's policy of the moment, its heavyweight champions' support, financial

situations, managerial competencies of the leaders and managers, the socio-economic conditions of the societal members, as well as the business and personal growth of the supported beneficiaries. These findings, that link the concept of innovation to social venture development, enrich our understanding on the concept of social innovation, particularly on its process of development. This understanding is helpful to managers and policymakers in promoting effective management and institutionalization of social organizations, leading to a more systemic socio-economic development and transformation of the society toward well-being.

On the whole, by 2015, there have been tremendous efforts by MARA's leaders, managers and employees it achieving its objective of assisting and promoting the participation of bumiputra group in the commerce and industry. Reports have also shown significant improvement of the conditions of the targeted group since 50 years ago (Aninah Janang 2015; Abdul Karim et al., 2015). However, according to Aninah Anang (2015) and Abdul Karim et al. (2015), more needs to be done as the percentage of bumiputra's take home average gross income in comparison to other groups in the society is still low. Landed properties ownership is continuously reduced amongst the disadvantaged group. Recent reports also highlighted the need to address the critical problem of the urban poor which the majority are still comprised of the Malays and other indigenous people. Bridging this socio-economic gap should be regarded as a national concern instead of a racial one, because equitable distribution of national wealth among members of the society is one of key conditions toward achieving national unity and prosperity. It can be argued that MARA's role is still relevant and definitely has to continue to exist to serve its purpose.

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LEARNING TO USE CASE STUDY METHODOLOGY IN INNOVATION PROCESS INQUIRY

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Abstract

Literature suggests the advantage of using qualitative methodology, but at the same time highlights the complexities of applying the methodology in research. However, to date there is a lack of research on the topic of learning about qualitative methodology. In this reflection, I relate my doctoral learning experience and highlight some of the significant learning stages and methods. My doctoral research process progressed through stages of socialisation and mental incubation, formalisation in the program, conducting the actual research, and achieving completion of the study. Learning of qualitative methodology in my doctoral research process involved the introduction to qualitative research concepts through course work, iterative data collection, analysis and writing, in parallel with intensive communications with the supervisory committee, study respondents, and expert peers. Self-learning through readings and reflections also contributed toward the learning process. The main recurring theme that can be derived from my reflection of learning qualitative methodology is *facilitation*, in the form of administrative, financial, learning resources, data access as well as doctoral life and well-being in general. Some of the emergent constructs in learning qualitative methodology include supervisory administrative facilitation, supervisory-directed learning, learning through interactions, issues of reticence or shyness and deference, as well as values of resourcefulness, focus, and diligence.

Keywords: Case study methodology, Doctoral, Innovation, Learning and Processual

INTRODUCTION

This article is written to describe my doctoral learning experience in the US that started in Jun 1996 and ended in December 2000. This learning process happened while I was a doctoral student at the Lally School of Management of Rensselaer Polytechnic Institute (RPI), which is located in Troy, upstate New York. The theoretical domain of my doctoral study was in the area of innovation management with its focus on Malaysian commercial banks. The study's theoretical foundation was derived from the Schumpeterian evolutionary economics (Hagedoorn 1996) and from the process theories of innovation (Wolfe 1994). The study utilised a processual case study methodology design in which two types of technological innovation adopted by selected banks were analysed. My findings generated emergent process models of service delivery technology adoption and implementation by multinational and local banks. These emergent models explain the phases in technology adoption and implementation, as well as the variables that influence them.

A processual or process-based case study design is a form of case study that focuses on processes. According to Pettigrew (1997), process is defined as a sequence of events that occur over time. This means a processual study involves analysis of a selected process of interest. The use of the processual perspective fits well within the qualitative methodology tradition because of distinctive characteristics of the methodology that enables researchers to address the question of "how" and "why". Similarly, qualitative methodology is best conducted when examining processes as researchers are able to leverage on the distinctive characteristics of qualitative methodology, which design usually involves open-ended interview questioning. The opportunity for such questioning is usually not forthcoming in a quantitative (survey-type) research methodology, which usually focuses on the "what" question. It was this logic that drove my decision to use a processual qualitative case study methodology for my doctoral research.

Using the chronological format of writing, this article relates my learning experience, written in the first person style of writing, from the time I enrolled into the Ph.D. program to the time I completed my doctoral study. The article describes the learning methods, and the types of information and the knowledge gathered through the process. It also highlights elements of values that contribute toward the completion of my doctoral research.

MY DOCTORAL LEARNING EXPERIENCE

I graduated from the International Islamic University of Malaysia (IIUM) and obtained my bachelor degree in Business Administration in May 1992, and subsequently received a job offer from a local bank. I joined the bank as a trainee officer for six months and was then posted to one of the departments in the bank's head office at Jalan Ampang, Kuala Lumpur. During that time, I applied for a tutor position in Universiti Kebangsaan Malaysia (UKM) and was called for an interview in August 1993. The interview was successful and I later joined the Faculty of Business at UKM as a tutor on 10th January 1994. The UKM tutor program offered scholarships to tutors for both masters and doctoral degrees. However it required them to complete their Ph.D. directly after graduating with their masters' degree before they could be appointed as lecturers at the university. This particular requirement was an important reminder that drove me to complete my doctoral research as soon as possible. In fact, while I was in the MBA program, my mind was focused on the need to get a placement for Ph.D. or otherwise I would face the possibility of being terminated as an employee of the university. As I was writing this, it reflected to me how I had taken this requirement so seriously to the point that I could not accept the idea of failing to complete my Ph.D.

While at UKM in the middle of 1994, I attended the preparatory post-graduate program, which was a compulsory program for all UKM tutors who planned to further their studies. In May 1994, I received an offer from RPI to join its MBA Management & Technology Program at the Lally School of Management. After I graduated from my MBA degree at the end of the spring semester of 1996, I began my Ph.D. study in the following summer semester of 1996. While my husband and I were classmates during our MBA program, he decided not to continue with the Ph.D. program and to return to Malaysia in May 1996. In the beginning of my Ph.D. program, I decided to move out from the married student housing at Georgian Terrace and stayed with a friend, Awin, at a residence hall on Burdett Avenue. At that time, Awin was a sophomore Electrical Engineering major, and she and I became housemates for the entire duration of my Ph.D. As I graduated with my doctoral degree in management, Awin completed her Masters degree in Electrical Engineering.

The doctoral program at RPI required students to attend certain coursework, sit for comprehensive exam, and finally write the dissertation. In the first semester of my Ph.D. program, I attended the required research methodology and statistics classes. I was fortunate as I graduated with an MBA from the same school and was able to obtain credit transfers from my previous MBA classes to replace those in the Ph.D. program. Therefore, I did not have to do many classes in comparison to if I was a new student. I could not recall doing much learning while attending the required classes, except that I could remember the statistics class was difficult. However, I do remember that some of my classmates had already reached an advanced stage in their writing. I, on the other hand, struggled to transform my thinking from that of the practitioner-oriented MBA thinking to the theoretical thinking required of a Ph.D. candidate. During the research methodology class, I was exposed to qualitative methodology and remembered the students utilised Miles & Huberman's (1994) book but, I could not recall other details about the class.

My doctoral research supervision was conducted by a supervisory committee comprised of a chair and three committee members. During my enrolment in the MBA program, I had taken two classes, Service Operations Management and Strategic Management of Technological Innovation, with my chair. Attending them helped in understanding the theoretical foundation for my dissertation on service innovation. In fact, the required textbook for the respective two classes, namely Fitzsimmons and Fitzsimmons (1994) and Burgelman, Maidique and Wheelwright (1996), have continued to be my references till this day. During my MBA time, I joined a class on operations management, whose instructor later became one of my committee members. This class used Noori's (1990) book as a textbook, which

was also one of the references utilised in my doctoral research. While I was in the middle of writing my Ph.D. dissertation, I also joined R&D management class, even though I had completed all my required coursework. I decided to take this class because I felt the need to increase my knowledge on the process of innovation. The class' required reading was Martin (1994), which ended up to become one of my primary sources of reference during my doctoral study.

I met my chair for the first time when I registered in his Service Operations Management class in the third semester of my MBA program. His class was a live on-campus class that was held in the Darrins Communications Centre (DCC) building, with the off-campus course audience was served through the RPI's RSVP Program. I enjoyed the class and respected the instructor, my future chair. In this class, I had presented a paper on Islamic Banking, which attracted his attention. In the subsequent semester, I took his Strategic Management of Technological Innovation class. By this point of time, I decided to have him as my chair. I had read his article on the banking industry (Morone & Berg 1993) and knew he was interested in service management. His interest matched with my working experience in the banking industry, and when I decided to approach him to be my chair in January 1996, he asked me to write five abstracts. In a few days, I came back with three abstracts and he and I quickly selected one on the topic that utilised the Delphi method.

While preparing the five abstracts and focusing my efforts on technology and banks, I came across an article by Prendergast and Marr (1994), which had an influence on the writing of the selected abstract. This abstract served as the base for me to develop my doctoral research proposal. Perhaps at that time, I had already decided that I would not use advanced statistics and that the unit of analysis of my study would not be individuals (or organisational studies), but be either managerial or organisations. While I was writing the research proposal, I became aware of the potentiality of using the case study methodology. Meanwhile, after the abstract meeting, my chair began to form my dissertation committee. He inquired my opinion on potential members and then proceeded to communicate with the relevant people. In a few days, my supervisory committee comprising of four professors was formed. During my MBA, I had taken classes with two of my committee members, and later during my Ph.D., I took one class with my fourth committee member. So by then, I knew all of them and was quite comfortable working with them.

During my proposal writing, I remembered meeting one of my committee members. He inquired about the number of banks in Malaysia, which my answer to him was thirty-seven. He then drew a 2 by 2 matrix and advised me to select two types of technology and two types of banks for my study's focus. This conversation with him established the need for me to conduct my study using the case study methodology. Later, I had a discussion with another committee member and he provided me Eisenhardt's (1989) article and suggested that I read up on Yin (1994). Ideas in Yin's book were a novelty to me which understanding of them came in later years.

During my doctoral study, I spent many hours in RPI's Folsom library, which was quite small but had nearly all the books I needed. The library had the RensSearch system that facilitated searching and checking of references. It had a list of some of the innovation classics and perusing these books had certainly helped me in my literature review progress. They included edited books by Andrew Van de Ven, Harold Angle and Scott Poole (1989), and by Tushman and Moore (1988). Van de Ven's book introduced me to the processual case study, which I adopted for my doctoral research. At that time, the Folsom library had a small café, where Awin and I often met to have vanilla or hazel nut coffee and tuna on flat bread. On most mornings, I had a cinnamon raisin bagel and cream cheese either in the Folsom library or another food kiosk in the nearby Sage building. My other favourite place of study was at the Voohees Computing Centre (VCC), a huge computer lab, which opened for 24 hours.

Once my research proposal was completed, I returned to Malaysia to collect data for six months. My respondents were top-level executives who were involved in technology adoption decisions in Malaysian commercial banks. I had worked in the banking industry for two years, from 1992 to early 1994, so I had friends working in banks. With their assistances, I was able to secure access to a number of high-level bank executives. Moreover, one of my university mates helped to introduce me to the executives of the bank where she worked. Throughout the six months, I spent many hours interviewing

these executives. My interviews were usually held at their offices and all were conducted during office hours. All interviews were tape recorded with each interview took normally more than an hour as there was so much data I needed to obtain, as my own knowledge of and my work experience in the banking industry were very limited.

Once returning to the US, I conducted many follow-up interviews via telephone in order to complete the data that I had collected through the face-to-face interviews. After they were completed, transcription on the recorded interview files was performed. I also started to write each case in chronological order on a daily basis. But on the whole, my progression was very slow, as I did not know how to perform a proper analysis. My analysis was also unfocused as I was not sure how to present my findings. I had completed the case transcribing level, however, beyond that my progress was very slow. At that time, I tried to perform the data analysis mostly by myself, without much involvement of my chair or committee members as my view of the Ph.D. program was that it should be an independent effort of the student. My reservation in obtaining assistance from them was also influenced by the progression of my friends in my batch who were quite advanced in their writing and did not need a lot of supervisory help. Moreover, I was unsure on how to approach my supervisor or committee members for specific help in conducting my data analysis. My chair was an accomplished scholar when I became his student, which in a way served as a barrier preventing me from seeking his guidance for detailed matters like data analysis and thus, his supervision remained focused on the general aspects of research.

Before I went for my MBA in the US, Dr. Hidayat, a senior colleague at UKM, who had previously studied in the same university, advised me that I should not treat my chair as a friend. I knew that I should not "cross the line" in regard to my relationship with my chair. Thus, my relationship with my chair remained on a formal basis, although he invited me and three other doctoral students to his house in the spring of 1999, when we were almost graduating. During my doctoral program, I made friends with my chair's other students and we had some social gatherings together, although most times our meetings were more social and did not involve serious discussions of our doctoral work.

My chair was an excellent administrator. He helped me through the proposal and defence examinations, gave me a lot of moral support throughout the program, and would do follow up on me when I failed to maintain communication with him for some time. I was very grateful for his continuous support and, in many times, when I faced an academic issue, I would meet with him and the problem was quickly resolved. For example, I was unable to secure another respondent firm causing me to worry. However, when I met my supervisor, he said that was the reality of research. This type of situation happened to me a number of times. He also helped me in securing a teaching assistantship when my scholarship expired in my final semester. In all, my supervisor played his role superbly. During my Ph.D. program, I did not take up any job on campus, except in my final semester when I took up a teaching assistantship for my chair's class because of my impending scholarship expiration in the following semester. I made a conscious decision not to take up any job during my study because I wanted to focus on my doctoral work and complete my study as soon as possible. I had a scholarship and also a salary to support myself, and thus did not need to work for extra money.

After I had completed my first phase of data collection, I continued to do my analysis mostly on my own until I sought help from one of my seniors, a Malaysian, who joined the doctoral program before me. His assistance on the analysis and my discussion with him helped to clarify my thoughts and fasten my progress in writing and presenting the data. It was at this point I came face to face with my weaknesses in conducting data analysis and writing my findings. Although feeling uncomfortable about these weaknesses, I knew that I had to finish my study no matter what. During these difficult times, my housemate, Awin, and my husband continued to give moral support and encouragement to continue with my writing and to complete my study. Throughout my studies, I had many get-togethers to eat and socialise with some Malaysian students who lived in the same hall and up the hill, in the married housing. Only two of these contacts however, were in the Ph.D. program; one in management, the other in engineering; the others were either in the undergraduate or masters' program, or the spouses of the students.

After several months of iterative data collection and analysis, I started to "see" my data and my study's major findings started to "emerge". However, I was not ready though for the shock that came after

the discovery of my findings. Earlier, I had questioned and criticised myself and felt that my data analysis process had been going in circles. This self-questioning and criticising continued for some time and I struggled to forego the frustration of "knowing" and finally "understanding" my research. Three months later, while previously facing many struggles and finally coming to terms with my weaknesses and frustrations about my lack of understanding, I successfully submitted my dissertation to the committee and defended it in December 1999.

The writing of cases in my dissertation was very demanding. While I did not have difficulties in writing long essays, my vocabulary was limited and my knowledge on Malaysian banking industry was limited. This hindered my ability to write a dissertation about the industry. I did many readings on the industry and trade reports to familiarise myself with the existing literature on the industry. At that time, the EBSCO database had become available in html, so I was able to read the materials online. I also purchased several theses and viewed videos of selected online classes conducted on the RPI's RSVP platform at the Folsom library, to use them as a guide for my writing. As the videos were pre-recorded classes, I could access them in my own free time. This reduced the need for me to attend many formal classes. Moreover, I utilised the service of the RPI writing centre in the Sage building as much as I could. Each session was a half-hour of English tutoring, in which I brought in my drafts and the assigned tutor would give comments on my writing.

While my dissertation defence in December 1999 went well, I later suffered from post-traumatic-stress of having to prepare and go through the defence. My mind continued to replay the events that happened over the defence session, and it took a while for me to get over this period of continuous questioning and self-criticism. One of the ways of getting over this stress was to put my energy into improving my writing. After I successfully completed my defence, I was still not satisfied with the level of writing of my dissertation. Therefore, post-defence, I spent some time editing my work. This was not required by the committee, but it was my expectation of my work. At first, I tried as much as possible to do the editing myself. Then, I sought help from one of my colleagues, who sat down with me and helped me through some of the chapters. Only once this was done did I consider my dissertation acceptable for final binding and submission to the graduate school.

STAGES OF THE DOCTORAL RESEARCH PROCESS AND LEARNING ABOUT CASE STUDY METHOD

Based on my doctoral experiences, my learning of doctoral research began in formal classes. Formal classes were my source of structured knowledge, and I usually gained my first exposure of relevant information and knowledge through them. This exposure was followed by my own self-study and reflection. Some of the classes that I took during my Ph.D. were taken out of necessity after having realised the need for certain knowledge. This highlights the importance of timely delivery of knowledge in the Ph.D. program, which means students to a certain extent are only able to identify their needs when they arise. At that point, resources must become available to support their needs. This idea of knowledge delivery at the point of need has been highlighted by Cassell, Bishop, Symon, Johnson and Buehring (2009). I also gained access to books, videos, and other resources from the library and received assistance from the writing centre. All these resources were available on campus, although I had to be aware of them.

Before my enrolment in the required coursework, I needed to set up my doctoral committee. My initial socialisation into the doctoral program had begun since my MBA days, through which I was thinking about the impending Ph.D. program and purposely looking for a potential supervisor. During this time, I got to know my chair and others who made up my committee. It was at the initial stage of entry into the doctoral program did my chair agree to supervise me and in turn, assisted me in forming the committee by communicating with the potential members.

On reflection, my doctoral journey would have significantly benefited from my understanding on the role of student versus supervisor. Perhaps information on the roles of supervisor and student was provided to the students during the orientation week of my program. However, I missed it as I did not attend activities conducted during the orientation week. Such understanding could also have been

gathered through reading books or articles, or through communicating with those who already graduated. When I started my doctoral program in the mid-1990s, there were already some discussions about these roles. However, at that time, access to and visibility of such information was not as widely accessible as it is now. While the internet was already existed, internet search engines and what was available on the internet were not as advanced as it is today. Particularly since the 2000s, there has been a surge of studies on doctoral supervision and the process of doctoral studies. For supervisors or doctoral program managers, many universities have now provided guidebooks as references on the supervisor and supervisee relationship. Therefore, both doctoral students and their supervisors now have more structured guidance in regard to their different tasks and functions. However, some of them are quite complex, involving tacit knowledge, and thus, to a certain extent, I feel that one needs to go through the personal experiences or seeking explanations to gain more understanding about effective communication and the relationships between supervisors and supervisees.

In regard to understanding the different roles of students and supervisors, good communication skills are necessary. I believe that this is one of the most important skills that I had acquired in managing relation with my supervisory committee members. I had the privilege of knowing my chair and others in the committee via classes that I took during my MBA program. Therefore, I was already quite familiar with their communication preferences and styles. I learned many theories and concepts directly from them through attending course works in which they were the instructors either during my MBA or my doctoral study. The books that they utilised in the course work became my main references, which then lead to my further readings on the topics. They also provided directions on related readings. On the whole, this collection of readings served as the foundation of my doctoral learning. Besides the need to communicate with my supervisory committee, I also had to gain the ability to communicate effectively with my study's respondents, and for this, the types of my communication style have to match with their preferences. In doing this, I required a high emotional intelligence in manoeuvring and adapting to the specific situation of the communication. In my case, intensive interaction with my respondents during data collection and analysis enabled my understanding about the industry contexts and finally the process that I studied. Therefore, interacting with respondents constitute a major form of learning during my doctoral study. This intensive interaction with respondents require close relationship with the respondents.

I also needed to understand the different types of supervisory relationship. In my case, my supervision chair was an accomplished scholar and the gap in terms of age and position between me and him were large. In this situation, my chair functioned very well administratively, and provided me with a more general supervisory guidance. In such a situation, I could depend on him to assist me on my administrative issues, but I needed to handle detailed academic matters by my own. I believe that this type of supervisory-student relationship is most appropriate for students with a high level of preparedness in the program, which means students who are able to work independently. I was already in the same school in the previous two years, thus, I needed less help in socialising into the faculty or the school system. However, I did need help in regard to doing my research. This was where I had to put most of my efforts during my doctoral program.

During my study, I had benefitted tremendously from my chair's excellent facilitation and his strategic view of the doctoral process. This capability I think was the result of his many years of experience in managing research projects, supervising research students and conducting classes. For me as a student, my chair's assistances were the greatest gift I received during my doctoral study. I could rely on his excellent administrative skills in supporting me to graduation. Particularly as I was not familiar with the administration process of the doctoral program, and thus needed help from my chair. This value of facilitation in supervision has been discussed in the literature, for example by Lee (2008). However, Lee's discussion mainly centred on facilitation of scholarly development of the students and less on the issue of strategic administrative facilitation in pushing the students to graduation.

The literature suggests five classifications of supervisory function. These include: 1) functional- the supervisor manages the doctoral research as a project; 2) enculturation- the supervisor helps students to socialise into the academic community; 3) critical thinking and 4) emancipation- the supervisor helps to develop capability in the students to think critically and to be an independent researcher, and 5) relationship development- the supervisor assists in creating a conducive learning environment for

students (Lee 2007; 2008). While the mobilisation of these roles has many positive benefits on the students, it could also have negative consequences or backfired in situations of supervisor abusing his power, or supervisor being rigid on students' creativity (Lee 2008). At the extreme end, when the role of the supervisor is absent, the literature discusses a supervisor substitute, which is referred to as surrogate supervisor. For example, Martin and Gynnild (2011) suggested the need for a surrogate supervisor in situations where supervisors are inexperienced. Green and Bowden (2012) further proposed the need for the evolution of the supervisory styles as students move through their doctoral process.

In the absence of hands-on help on my data analysis from my supervisory committee, I required support from my personal network in completing my data analysis. I sought help from a person who was knowledgeable and willing to share his knowledge in guiding me. This communication was necessary given my lack of familiarity with the use of the procedures for conducting a qualitative methodology. Otherwise, the time it took to conduct my data analysis would have been further prolonged. The literature has discussed at length on the use of social networks as support mechanisms for doctoral researchers. For example, Baker and Pifer (2011) suggested interactions with others, such as with the faculty members (supervisor and advisor), senior students and students in the same batch, or family and friends, will help to promote doctoral students' well-being and increase their academic survivability in the program. Having relationships with others also supports students' development as scholars. According to Baker and Pifer (2011), supervisors provide support for the students' general well-being, while senior students and students in the same batch, as well as those in personal relationships usually provide moral support.

I think my greatest obstacle during my doctoral program was the difficulty in acquiring the skills of academic writing. Especially in my case, I had a limited experience in the academic and industry and thus, I need to develop an understanding on the theoretical perspectives, as well as on the contexts of the study. Moreover, my study involved processual analysis requiring greater details of data in comparison to a thematic analysis type of research. Procesual analysis requires gathering of data within their contexts to enable interpretation of constructs as they occurred along the process. Given this situation, the interviews or other forms of data collection were extensive and prolonged. In terms of theoretical perspectives, I had been exposed to many innovation concepts during my MBA days. However, these were not sufficient to support the writing of my dissertation. I had to read and reflect on many readings and prepared a series of drafts. In terms of the context of study, I had to overcome the lack of insights through continuous reading about the industry. This was assisted by the availability of relevant reports and journals through the online system that I was able to access. In my case, I had been continuously writing throughout the doctoral process. The fact that I had done this was perhaps indicative of the process of writing as research, discussed by Kamler and Thomson (2014). According to Kamler and Thomson (2014), the process of writing is a part of the process of doing research because it is through writing that a researcher becomes engaged and gains further understanding of his or her phenomenon of interest and thus, writing becomes part of learning and research. This was indeed true in my experience during my doctoral research in which my continuous writing supported my learning process of the phenomenon of study.

One value that I had that I feel vital for the completion of my research was resourcefulness. An example of this behaviour is when I selected banking as the context of my study, as it was the industry that I was familiar with. Selecting the banking industry not only allowed me to leverage on my experience, but also enabled me access to people and information which I believe would not be accessible had I not had the experience of working in the industry. Being focused and diligent were other values that supported the completion of my study. My focus was afforded through being away from families, having a housemate, who continued to give moral support, and having full financial support. My diligence in completing my studies was pushed by both internal and external factors. The imminent external factor was my contract with UKM and the possibility of being terminated from the tutorship program if I fail to graduate. Internally, I was determined to complete my studies to meet my personal goals of getting a Ph.D. and becoming a lecturer.

In completing my study, I had to encounter and overcome my weaknesses. I faced the issues of shyness when seeking for help, which caused difficulty in getting the needed assistance. To a certain extent being shy can be detrimental to one's progress in his or her study. In my case, this feeling of shyness was caused by the feeling of vulnerability in facing my weaknesses and my inability to

communicate to others the help that I need. I also felt that seeking help might disturb the person who was giving the assistance. I had to overcome this hesitance so I could gain the necessary assistance to complete my study as soon as possible. In my case, the push to finish served as the main drive that overcame the negative feelings that could have adverse implications on the progress of my work.

The literature considers the condition of shyness in communication, especially as it relates to learning as issues of reticence, which refers to behaviour of an individual who prefers to be silent rather than expressing his or her thoughts during a particular meeting to avoid being mistaken for lack of knowledge about the topic. In reality, the level of reticence of individuals varies according to situation. For example, the level of reticence depends on whom the students are communicating with; the higher the level of knowledge perceived by the students of the supervisors, the higher the possibility of reticence. The issue of reticence has been discussed in several studies mostly involving teacher and student relationship in the classroom contexts. Based on his review of literature, Cheng (2000) suggests that Asian students' passiveness and reticence in situation of communication are indicative of their respect toward their teachers. The behaviour could also be induced by their societal culture that values collectivism (Cheng 2000). Based on his study, Cheng (2000) found that the use of teaching and learning methodologies, which are incompatible with students' preference or perceived to be inappropriate by students as well as the lack of proficiency in the use of language are two factors that contribute toward students' reticence and passiveness in class. Later, Chen (2003) found that reticence could occur as a result of individual shyness, thus suggesting that a shy personality contributes toward reticence. The problem of shyness could exacerbate when one faces language barriers or issues. Moreover, he found that in a collaborative environment, low affect—lack of understanding of the rules of the communication contexts, also plays a role in contributing toward reticence and shyness.

In the context of doctoral supervision involving Eastern students and Western supervisors, Cargill (1997) found that students' reticence and incidences of students taking long pause or taciturn (the need to be induced by supervisors to speak up during one-to-one discussion) are reflective of the students' respect to their supervisors or deference. However, these behaviours could result in misinterpretation by their supervisors as lack of comprehension on the discussion and reluctance to accept suggestions. These situations could lead to ineffective communications and could then hinder the development of the student-supervisor relationship and thus could affect their overall doctoral process (Cargill 1998). In another study, Cargill (2000) found that students need a clear signal for them to overcome their reluctance to speak up and to make a proper response to their supervisors' indications. This according to Cargill (2000) was part of the students strategies to be polite (or deference) to their supervisors. From these articles, we can see that the issue of deference is associated with reticence among doctoral students.

In my current work, I sometimes assume the role of "supervisor on the side" for my junior colleagues who are in the doctoral programs and other doctoral students in need. In giving assistance, I feel far from being disturbed. In fact, I welcome their questioning because it gives me the opportunity to think and exercise my expertise. Therefore, many of the assumptions that I had over not asking for help during my Ph.D. were unfounded. Most importantly however, having asked for help myself provided me with the empathy to others who ask for help. Had I never needed to ask for help, I might not have the empathy for others now. My experience underscores the importance of values of helpfulness amongst those who are knowledgeable about research, particularly about qualitative methodology in particular. I had benefited from people who are knowledgeable about research and qualitative research. In my case of doing qualitative research, receiving direct help was needed because some of the art of the research, which comprised mainly of tacit knowledge, can be transferred more efficiently through people who had experience in doing qualitative research. In receiving and giving help, there was a need for continuous communication in support of the process of one's learning the art of qualitative research from an expert.

CONCLUSION

On the whole, the doctoral process that I went through involved stages of socialisation and mental incubation of the doctoral work, formalisation in the doctoral program, introduction to the concepts

of research and qualitative methodology, instrument design, iterative data collection, data analysis and writing, iterative learning through continuous self-learning and reflection, as well as interactions with the supervisor committee, study participants, social networking, and achieving closure of doctoral study. For me, learning about doctoral research began in the MBA program and was formalised through the mandatory coursework taken earlier in the doctoral program. Beyond coursework, learning from supervisors, and self-learning and reflection were the dominant learning methods. These methods, when combined with learning through interactions with industry respondents and research experts, constitute the learning required to achieve my study's completion. Excellent administrative skills and strategic thinking of the chair helped to manage the overall process and procedures needed in pushing the doctoral research to completion. The supervisory committee also served as the main source of formal exposure on the domain area of specialisation by directing toward vital readings and references for the development of the knowledge content component of the doctoral dissertation. The committee also provided direct assistance in the research design. Industry respondents were the main source of information in developing critical insights into the contexts and phenomenon of the study, while the assistance of informed peers were most needed in the conduct of qualitative research as well as in the development as an academic writer. Internal values such as resourcefulness, focus, and diligence are vital in the completion of doctoral research, while negative perceptions or vulnerabilities related to reticence and deference could prolong the doctoral research process.

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The Importance of Internal Control in SMEs: Fraud Prevention & Detection

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Abstract

Small and medium enterprise (SMEs) is now growing rapidly and gaining a strong position in Malaysian's economy growth. The new set of data compile by the National SME Development Council 2013 has reported that the growth of SMEs in Malaysia increase in faster pace with real GDP of SME projected to expand by 5 to 6 % in 2013. Hence, it is important for SMEs council and related governments bodies to ensure that the contribution of SMEs to continue on a sustained growth path. However, this growth path can be destroyed by the increasing rate of frauds in Malaysia. As reported by Global Corruption Barometer 2010/2011, 46% of respondents agreed that the level of corruption in Malaysia has been increased and the business sector, public officials gained the third place among all institutions that has been affected by corruption. This is basically due to lack of internal control systems which unable to detect and prevent fraudulent activities within the organisation. Thus, this research aims to determine the relationship of internal control (control environment, information and communication, control activities, risk assessment and monitoring) in prevention and detection of fraud. Lastly, this study contributes in enhancing the awareness and provides a better understanding among SMEs management, SMEs Council as well as related government parties on the significance of internal control roles in reducing the risk of fraud and mismanagement in the company.

Keywords: SMEs, Internal Control, Fraud Prevention and Detection.

INTRODUCTION

Small, medium and micro enterprises (SME) had emerged as an important area of research especially when it comes to financial and business management. In Malaysia, the SMEs are essential to the economy as they are considered to be the backbone of industrial development in the country. Malaysia adopted a common definition of SMEs to facilitate identification of SMEs in the various sectors and subsectors. Due to the nature of this business which has a small amount of capital for investment purposes, it is impossible for them to invest and adopt such sophisticated internal control in monitoring their business activities. Therefore, SMEs are unable to set up a proper internal control system by including a department such as compliance or audit department which could help in monitoring, preventing and detecting any fraudulent activities occur in the business. Absence of such controls in the business could cause the rate of fraud increasing every year and especially toward SMEs which the market is growing exponentially. Most businesses are frailty in facing the losses caused by fraud and those which are less is able to absorb the losses may face bankruptcy which probably affecting the SMEs as well.

To help in preventing and detecting fraud, the internal control system plays a vital role which the process is affected by the management, the board of directors and other personnel that is designed to minimize risk exposures to an acceptable level given the company's objectives. Hopwood, Leiner & Young (2012) noted that internal control is process oriented which focus more on business processes rather than on the outcomes of the processes. The main components of effective internal control processes are the control environment, risk assessment and management, control activities, information and communication, and monitoring. Therefore, it is good that the business owner could establish a strong and efficient internal control system as well as an internal audit department to reduce the chances of fraud occur which may

cause the company a huge loss (Shanmugam et al 2012). Thus, this research will be based on the relationship of roles of internal control in preventing and detecting fraud among SMEs in Malaysia to determine the importance of the internal control system implementation towards SMEs activities.

Problem Statement

Small and medium enterprise in Malaysia is now growing fast and gaining more and more position in the economy of Malaysia. According to research done by The Department of Statistics, SME Corp Malaysia from year 2005 to the year 2010, the number of SMEs increase more than thirteen thousand in five years. However, by establishing more SMEs, the chances and rate of fraud occurred in Malaysia would also increasing. According to Global Corruption Barometer 2010/11, 46% respondents responded that the level of corruption in Malaysia has been increased and among all institutions that has been affected by corruption, the business sector and public officials gained the third place. Therefore, due to the rapid growth of SMEs and lack of studies conducted in Malaysia, it is important to attract the attention of researchers to investigate on the implementation of such internal control system in SME to prevent and detect fraud at the early stage as this type of businesses might provide major income for the country in future.

Internal control system is not easy to be implemented especially when it comes to businesses which have a limited capital and investments. It is costly and consumes a lot of resources for small and medium enterprise to implement this system in their business activities. According to COSO (1994), the complexity of cost-benefit determinations is compounded by the interrelationship of controls with business operations; where control are integrated with, or build into, management and business processes, it is difficult to isolate either their cost or benefits. This shows that, by applying the internal control system, it will bind with the company's business processes and cost incurred in that case normally won't be too costly and the advantages of having an effective internal control system are always more than the expected. For example, it provides management and the board of directors with added confidence regarding the achievement of objectives, feedback on the business activities, and helps in reducing fraud and losses. Among all benefits, the most important is having the ability to meet certain criteria required to access the capital markets, providing capital driven innovation and economic growth.

Besides that, many SMEs tends to ignore the importance of internal control system in their business because lack of compliance and enforcement in governing the SMEs to have an internal control system especially the internal audit department. This might give the employees a golden opportunity to be involved in such fraudulent activities that may be serious and harmful to the organization. Therefore, the implementation of internal control system in SME is crucial to identify whether the business can achieve its objectives and to ensure the reliability of financial reporting.

Research Questions

➢ Which of the internal control components will affect the fraud prevention and detection in SMEs the most?
➢ How the strength of internal control system will be affected?
➢ What are the ways to maintain a strong and effective internal control?

Objective of the study

The aim of this research is to study the importance of internal control in detecting and preventing fraud in SMEs. The main objectives of this research are

➢ To identify whether the components of internal control is able to prevent and detect fraud in SMEs.
➢ To identify the factor that will affect the strength of internal control in the organization.
➢ To identify ways to maintain a strong and effective internal control and to reduce the risk of fraud.

Significance of Study

Since there are minimal studies conducted on the roles of internal control in fraud prevention and detection among Malaysia's small and medium enterprises, this research would help raising the awareness from management level of the SMEs and to add more knowledge on the existing literatures on the internal control of SMEs.

Other than that, this research would like to emphasis that the price and cost that the company paid for implementing a good internal control system would benefit the company more than it thought and it is worth a lot more for the company as a long-term investment to prevent and detect fraud.

The last but not the least, this research will provide a better understanding about the importance of internal control to SMEs. A better understanding of internal control for the top management of the company will help to reduce the chance of fraud happen and reduce mismanagement and protect the credibility of the company. This research would add more knowledge on the existing literatures of roles of internal control in fraud prevention and detection among Malaysia's SMEs.

LITERATURE REVIEW

Overview of Small Medium Enterprises (SMEs)

In Malaysia, the SMEs are essential to the economy as they are considered to be the backbone of industrial development in the country. Malaysia adopted a common definition of SMEs to facilitate identification of SMEs in the various sectors and subsectors. An appropriate definition of SMEs is vital as it can give a variety of benefits to SMEs as well as facilitated the Government to formulate effective development policies and supporting agencies in nurturing the SMEs sectors (www.statistics.gov.my, 2013). An enterprise is considered an SME in each of the respective sectors based on the Annual Sales Turnover or Number of Full- Time Employees are different. For manufacturing, manufacturing-related services and Agra-based industries, small and medium enterprises are enterprises with full-time employees not exceeding 150 OR with annual sales turnover not exceeding RM25 million. For services, primary agriculture and information &communication technology (ICT) sectors, they are enterprises with full-time employees not exceeding 50 OR with annual sales turnover not exceeding RM5 million.

Small company generates most new employment; therefore the number of SMEs is increasing every year. The total number of SMEs in Malaysia as shown in the survey which was conducted by The Department of Statistics; SME Corp Malaysia in year 2005 and year 2010, there was 514,079 active establishments of SMEs in the manufacturing and services sectors out of the 552,849 companies registered with the Companies Commission of Malaysia (CCM) in year 2005 and there was 645,136 active establishments of SMEs majority were in three sectors i.e. services, manufacturing and construction out of the 662,939 total number of establishment. This shows the rapid growth and emergence of SMEs in Malaysia.

According to the survey that conducted by The Department of Statistics; SME Corp Malaysia in year 2010, the census results showed that there were 645,136 SMEs operating in Malaysia, representing 97.3 per cent of total business establishments. While the large establishments numbering 17,803 representing 2.7 per cent made up the remaining. This shows that the contribution of SMEs to the Malaysian economy is very important; they provide indirect support and income for economic growth. SMEs are also able to provide goods and services the same as large companies do albeit in smaller quantities.

Internal Control

In 1992, the Committee of Sponsoring Organizations (COSO) released its Internal Control-Integrated Framework that has gained broad acceptance and widely used around the world. COSO defines internal control as "a process, affected by an entity's board of directors, management and other personnel" (COSO, 2012). This process is designed to provide reasonable assurance regarding the achievement of objectives in the effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations.

According to University of Delaware (1971) Internal Audit, the internal control also defined as the integration of the activities, plans, attitudes, policies and efforts of the people of an organization working together to provide reasonable assurance that the organization will achieve its objectives and mission. Internal control are processes which including elements such as policies, procedures and systems that

are established, operated and monitored by officers responsible for governance and management of the public authority, to provide a reasonable assurance regarding to the achievement of the public authority's objectives. Several objectives of internal control is to be designed to ensure the effectiveness and efficiency of operations of the company, enhance the reliability of financial reporting, ensure the company is compliance with applicable law and regulations, prevention and detection of fraud and error, and also for the safeguarding of tangible and intangible assets of the company.

Internal control consists of five interrelated components; these are controlled environment, risk assessment, control activities, information and communication, and monitoring. Internal control is important for the company as it helps small business owners build effective control environment by protocols and procedures which expected to be followed by their employees in daily work duties so that it can bring order and cohesiveness to the company. The main reason for establishing an internal control system is to prevent fraud and theft.

Therefore, one of the importances of having internal control is to reduce the risk of fraud take place, which the internal controls will include control activities (both preventive and detective activities) and risk assessment which helps to reduce and uncover the fraud in the company. Moreover, the control activities of internal control system which includes segregation of duties also help ensure the duty of authorization monitored by several senior managements which can prevent misleading decision being made. The information and communication in internal control help the company manage their financial and management information and helps increase productivity and better prepare the company information for litigation needs so that a better credit rating during audit can be gained.

Another importance of having internal control is it helps companies reduce errors which can save money and protect their reputations. By having good control activities and effective monitoring system, the job done by employee will be carefully monitored and the risk of error happen can be reduced. According to Hopwood, Leiner & Young, 2012, internal control comprised of:

1)   Control Environment

Control environment is the overall atmosphere in which employees operate. It includes management philosophy and operating style, ethics and the corporate culture, clearly assigned employee responsibilities, effective and independent audit committee, effective and independent internal audit function and effective human resource policies and procedures.

2)   Risk Assessment

Every entity faces risk that must be identified, analysed, and managed to achieve its objectives. The management must design its internal control processes in light of the company's enterprise risk management (ERM) system. In the other words, management must first identify its opportunities and objectives, then define the risks for those opportunities and objectives, and finally design the internal control processes to manage the identified risks. A good ERM practices of the company is very important before the company sets an effective internal control process.

3)   Control Activities

Control activities are the procedures and policies that help to ensure that management directives are carried out and the risks are addressed. The basic accounting control activities are segregation of duties, adequate documentation and records, controlled access to assets, independent accountability checks and reviews of performance and approval and authorization.

4)   Information & Communication

Information mainly related to the accounting system, and communication relates to the flows of information through the organization. The accounting system should be well documented. Beginning with a clearly defined chart of accounts and a system of special journals and subsidiary ledgers as needed. All

transactions should be processed on a consistent basis. Moreover, all transaction and relevant activities should be properly recorded with proper audit trails.

5) Monitoring

There is not enough for the company only have better control process but without continuously monitoring and update as needed. The top of management, external and internal auditors are involved in monitoring the internal control processes to assess their reliability and effectiveness. Both external and internal auditor will use analytical tools that include reviews of documents, questionnaires, interviews, reviews of the accounts and transaction data, and tests of compliance.

Types of Frauds

Generally, fraud is commonly known as any action deliberately and dishonestly committed to obtain an advantage, which causes a loss to another party. International Auditing Standards (ISAs) defined fraud as it refers to an intentional act by one or more individuals among management, those charged with governance, employees or third parties, involving the use of deception to obtain an unjust or illegal advantage.

Fraud is a major challenge and risk facing by all the companies. Although fraud is not a subject that any company wants to deal with, the reality is most companies experience fraud to a certain degree. Every year there are huge sums of money are lost because the frequently fraud happened in the company which will widely affect the employees, stakeholders and the business performance of the company. Serious fraud cases may cause lead the company to insolvency and bankruptcy. According to Ernst & Young, "Fraud the Unmanaged Risk" 8th Global Survey 2003, it suggests that in around 85% of cases the most costly fraud is done by employees. Fraud caused by businesses themselves is also increasing and often relates to fraud perpetrated by the company's owner, management and others who are charged with monitoring and supervision. (Européens, Fédération des Experts Comptables, 2005) Because of lacking of the proper tone from the top, and didn't create and maintain a culture of honesty and ethical behaviour, the chances of fraudulent activities may occur in the company increased.

1) Revenue Cycle Fraud

The most common fraud that will take place in the company will most possibly occurs when dealing with revenue such as cash and checks. For example is basic cash skimming, advanced sales skimming, checks swapped for cash and the lapping of accounts receivable. Basic cash skimming is known as which an employee doesn't record the sales and takes the money, this usually happen when the employee avoid to give receipts to customers. Advanced sales skimming is an employee collects the money from customer but fails in recording the sale and gives the customer a forged receipt. Another fraud checks swapped for cash is an employee takes the cash from the cash drawer and replaces it with phony checks using false customer identification information so that the employer will attribute the bad check to a dishonest customer. The fraud lapping of accounts receivable involves the stealing of incoming payments by the accounts receivable clerk and also hiding the theft by manipulating the customer account records. The clerk uses the second payment to cover the first customer's stolen payment.

2) Accounts Receivables Fraud

Frauds in accounts receivable are mainly on improper credit approvals, improper credits and improper write-offs. Fraudulent credit approvals are done by a dishonest employee by granting credit accounts to fictitious customers. The employee then later will use the account to purchase a product without paying and the credit granted will be a kickback to the employees. Improper credits and improper write-offs are similar; they are carrying out by the employee to friend's accounts to either give unauthorized credit or write-off the debt of the accounts which these actions are illegal in law.

3) *Expenditure Cycle Fraud*

Expenditure cycle fraud consists of improper purchases and payments, payroll fraud, misappropriation of petty cash and theft of inventory and other assets. For improper purchases and payments to take place, the employee allows the type of purchase or payment is not consistent with the company's policy to cheat the company. Common payroll frauds are improper hiring which the employees hire their own friends or relatives who don't have proper training or hire phantom employees to cheat the salary, improper changes to employee personnel files for pay raises which the payroll clerk to give their friends pay raises and improper work-related reporting which the employees report overtime working changes that they don't work. For misappropriation of petty cash, this can be done by employees claiming for miscellaneous business-related expenses without giving proper receipt. Another expenditure cycle fraud is theft of inventory and other assets, which mean the employee uses the company assets for personal usage or own benefits.

4) *Financial Statement Fraud*

Financial statement fraud is any undisclosed intentional or grossly negligent information in any financial statement. (Hopwood, Leiner & Young, 2012) The financial statement frauds involve improper revenue recognition, overstatement of assets, understatement of expenses or liabilities, misappropriation of assets, inappropriate disclosure and other miscellaneous techniques, with overstating revenues and overstating assets being the most common type of financial statement fraud.

Fraud Triangle/Theory

Over the years, Cressey's hypothesis has become well known as "the fraud triangle". The first sides of the fraud triangle represent a pressure or motive to commit the fraudulent act, the second side represents a perceived opportunity, and the third side stands for rationalization (Wells, 2011). Pressure usually means that the employee is under financial duress such as from credit problems, substance addiction, or gambling addiction. Opportunity means that the employee is in the position to commit the crime, and rationalization means that the employee mentally justifies the crime.

Common justifications are "I was only borrowing the money" and "the company deserved what I got." (Hopwood, Leiner & Young, 2012). Albrecht et al. (2008, 2010), however, mentioned pressure or motive can be financial or non-financial and they gave examples of perceived financial pressures that can motivate fraud like; personal financial losses, falling sales, inability to compete with other companies, greed, living beyond one's means, personal debt, poor credit, the need to meet short-term credit crises, inability to meet financial forecasts, and unexpected financial needs.

They also gave examples of non-financial pressure, such as; the need to report results better than the actual performance, frustration with work, or even a challenge to beat the system. They believed that even with very strong perceived pressures, executives who believe they will be caught and punished rarely commit fraud. They also mentioned some examples of rationalizations that executives can use to commit fraud, like; "we need to keep the stock price high", all companies use aggressive accounting practices, or it is for the good of the company. As for perceived opportunities to commit fraud examples include; a weak board of directors, a lack of or circumvention of controls that prevent/detect fraudulent behaviour, failure to discipline fraud perpetrators, lack of access to information, and the lack of an audit trail. Therefore, fraud triangle will be used to analyse the possible factors of fraud happens in SMEs.

RESEARCH METHODOLOGY
Firstly the research design is relating to the decision regarding the purpose of the study, its temporal aspects and the method used for collecting data will be explained. Moreover, the theoretical framework's variables of this research will be discussed with graph provided and hypothesis development. Then is the data selection where the type of data collected, area, targeted group and sample size will be discussed. Lastly will be the sampling techniques where the population of sampling, element, sample, sampling units and the type of probability sampling of this research will be covered. Last but not least, the method of data analysis used in this research will be stated.

Research Design

This research is a descriptive study which is undertaken in order to ascertain and be able to describe the characteristics of the components of internal control toward fraud prevention and detection among Malaysia's SMEs. The researcher will be looking at the data gathered from each individual and treating each respondent's response as an individual data source. For this research to be designed, questionnaires will be used as the methods of collecting data. The questionnaire was chosen as the research instrument rather than an interview because of the location of the respondents, the cost of travel and the time that would be involved. From the previous similar research which had been done by others, the questionnaires also being used as the research instrument. Next, the time horizon for this research will be cross-sectional studies which the data will be collected from the respondents in few weeks' time.

Theoretical Framework

Independent Variables

• Control Environment
• Risk Assessment
• Control Activities
• Information and Communication
• Monitoring

Dependent Variable

Fraud Prevention and Detection in SMEs
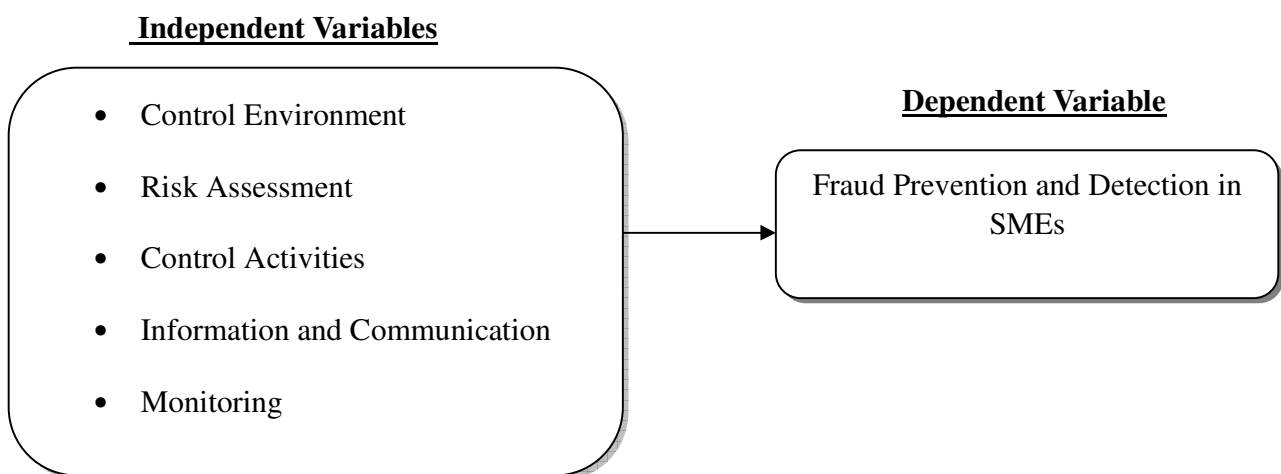
Research Hypotheses

H1: Control environment is a component that able to prevent and detect fraud in SMEs.
H2: Risk assessment is a component that would not be able to prevent and detect fraud in SMEs.
H3: Control activities are a component that able to prevent and detect fraud in SMEs.
H4: Information and communication would not be able to prevent and detect fraud in SMEs.
H5: Monitoring is a component that able to prevent and detect fraud in SMEs.

Data Collection and Analysis

Data collection can be done through the use of primary data and secondary data. Primary data is the information attained first-hand by the researcher, whereby secondary data refers to information obtained through options already existing (Serakan and Bougie, 2009). A total of 135 questionnaires had been collected from 200 questionnaires which the respondents are the SMEs' top management, professional accountants and auditors in Klang Valley. Most of the questions in the questionnaire would be structured close ended, whereas there would be some open ended questions as well. The data collected through the questionnaire would be extracted and analyzed. The results would then be presented together with the percentages and graph that would illustrate the results relate to the objectives.

FINDINGS

Control environment is the overall atmosphere that the company carries on its business. It includes the culture of the company, management philosophy and operating style. Majority of the respondents (89%) agree that the management philosophy and operating style of the company will affect the internal control

system of the company and 86% agree that it is essential for the top management of the company shows their concerns and actively pursue in the ongoing design and management of the internal control process in order to prevent and reduce fraud.

Furthermore, 52% of the respondents disagree on the statement that a company which only has an ethic code of conduct is enough to guide the company in preventing and detecting fraud. 33% thinks that for a company to has a good control environment, it should have an independent audit committee which need to work closely with the internal auditor of the company and have a good management philosophy and operating style, good ethics and corporate culture practice in the company. From the result, it shows that majority of the respondents agreed that control environment is able to help the company in preventing and detecting fraud as their responds toward the control environment are mostly positive feedback. This can be supported by the research done by (Shanmugam et al 2012), it stated that a high level of owners concern on common fraudulent activities will lead to high preventive actions to be taken. Therefore, the hypothesis (H1) is accepted which control environment is able to prevent and detect fraud in SMEs.

Next component of internal control is the risk assessment. Majority of the respondents (84%) agree that a good enterprise risk management practice in the company is crucial before the company setting up an effective internal control process. 51% thinks that the possible risk which a company may face is on employee theft that causes inventory loss. It shows that having a good risk assessment helps the company to set a strong and effective internal control in preventing and detecting fraud. As stated by Hopwood, Leiner & Young (2012), the company must first have a good ERM practice in place before it can design an effective internal control, therefore, the hypothesis (H2) is rejected which risk assessment should be able to prevent and detect fraud in SMEs.

The next component to be discussed about is the control activities. 78% of the respondents choose segregation of duties as the most important activities that help in preventing and detecting fraud and 49% agree that fail in segregating the duties will lead to collusion and fraud may take place. It can be seen that most of the respondents agree that the control activities especially segregation of duties is important to prevent and detect fraud that may take place in SMEs. This can be supported by Hopwood, Leiner & Young (2012) as the control activities are the basic foundation of internal control processes, it occurs at all levels of the organization and it encompass in almost all activities, the absence of segregation of duties may render all internal control processes useless. Therefore, the hypothesis (H3) is accepted which control activities are able to prevent and detect fraud in SMEs.

Furthermore, results on the component of information and communication shows that 75% of the respondents agree the information is mainly related to the accounting system, and communication related to the flows of information through the company. 65% agrees that proper documentation and accounting system would be the element which can help the company to maintain an efficient internal control system as well as to prevent and detect fraud. For example, the financial and non-financial data that generated from either internal or external, which are part of the information and communication component, they are needed in order to manage the business effectively, develop reliable financial statement and determine whether the company is complying with government laws and regulations Dorminey, Fleming, Kranacher, & Riley, (2012). These data should be well documented so that the company can assess the information as needed and it will be easier for the company to check if there are any irregularities. Therefore, the hypothesis (H4) is rejected which information and communication is able to prevent and detect fraud in SMEs.

Lastly, results on monitoring shows that respondents (87%) agree by having a good control process is not sufficient and the company should continuously monitor and updates their system as needed. This can be supported by Hopwood, Leiner & Young (2012). It stated that it is not enough just to have a good control processes, these processes must be continually monitored and updated as needed. Internal control monitoring is part of the general corporate governance structure and it involves the individual such as CEO, CFO, internal auditor and audit committee. These individuals are in charge or reviewing the report of internal control periodically and assess the reliability and effectiveness of internal control. Therefore, the hypothesis (H5) is accepted which monitoring able to prevent and detect fraud in SMEs.

No	Statements	Hypothesis Findings
H1	Control environment is a component that able to prevent and detect fraud in SMEs.	**Accepted**

H2	Risk assessment is a component that would not be able to prevent and detect fraud in SMEs.	**Rejected**
H3	Control activities are a component that able to prevent and detect fraud in SMEs.	**Accepted**
H4	Information and communication would not be able to prevent and detect fraud in SMEs.	**Rejected**
H5	Monitoring is a component that able to prevent and detect fraud in SMEs.	**Accepted**

Table 1: Summary of hypotheses findings

RECOMMENDATION & CONCLUSION

Although the components of internal control system are applicable to all organization especially large companies, small and medium companies may implement it in a different way as compared to large organisations. In this situation, the controls may be relatively simple, less formal and less structured, yet a small company can still affordable to have an effective internal control system in their company.

For instance the control environment is an important element for the top management of the company to get involved and actively participate the general meeting of the company to gain a better understanding of what's happening in the company. However, for small businesses, it may seem like not that useful as the business will be managed by a single owner may be only few persons. For example, small companies are ruled by a single owner who is intimately involved in business operations, therefore in this circumstance, the owner is in a position to know what to expected in the financial reports and to follow up on any significant deviations from expectations.

While for control activities, from the result of the research, it shows that segregation of duties is an important element of internal control. But in reality, small companies with limited employees often face the difficulty in fully establishing a proper separation of duties. For example, a sales transaction in large company may involve few departments for sales, credit, inventory, shipping, billing and cash receipt. In a small company, the process may only get through one or two person's hand because of the limitation of employees available. For this to be solved it is recommended the manager or the owner carefully review the reports, have detailed transactions and supporting documents, and periodically do some inventory checking. Besides, the manager or the owner should ensure that the employee who is in charge of collecting the cash or cheques is having no financial problem and their personality in working should be evaluated yearly. Since it is difficult for the small company to have strong segregation of duty and the system to use for limiting the employee's access to information of the company may seem no cost efficiency, to overcome these weaknesses, the small companies should enhance and focus more on their monitoring system to ensure the unwanted activities in the company are eliminated.

Furthermore, as discussed in the research, small companies may not be affordable in having departments such as IT department and internal auditor department. It is recommended for the small companies to outsource these departments as it will be cheaper and those outsourcing companies have more experience in either developing and maintaining the accounting system or auditing and set up an effective internal control system for the company.

Limitation

Limitation of study for this research will either affect the result of research out of expectation or lack of accuracy. In this research, there will be some difficulties in gaining an objectivity and credibility view since the questionaires are distributed randomly to SMEs' top management and also the professionals such

as accountants and auditors. Next limitation is due to the geographical area which this study is focusing more on Klang Valley for data collection.

Future Research

As this research is mainly focused on the respondents in Selangor, Malaysia, future research can be done by having respondents from other places or states within Malaysia. Besides, the respondents from different geographical location and background may have different perceptions toward the internal control system which can be reflected on the findings. In order to obtain more accurate data, it is better to include respondents from the whole country if time, cost and other factors are allowed. Other than that, the data of the future research may use other method such as interview to obtain a better result as the respondents will be more understanding on the subject studied and the answers provided will be more competent and reliable.

Furthermore, for the other future study to be carry on, the future researchers can further improve the questionnaire of this research so that it can be analyzed by using the analytical software SPSS. Besides, the future study can be more in depth, which they can identify the types of fraud in real life that can be the prevention and detection by the internal control system and ways for the company to have a better internal control system. The future researchers can critically analyze how's the current internal control of a company, and try to evaluate the internal control system of the company then come out with a better internal control system which suit the current situation of the company. Moreover, the future research such as comparing the internal control system in different business sectors can be done too.

Conclusion

This research is being conducted to identify the relationship of roles of internal control in fraud prevention and detection among Malaysia's SMEs. In addition, this research also evaluates the ability of the SMEs of having internal control system as well as internal auditor department in their company.

This research found that the five component of internal control which are control environment, risk assessment, control activities, information and communication and monitoring need to work together in order to achieve an effective and strong internal control system. Nevertheless, the result of the research shows that the SMEs should be able to maintain such basic internal control system in their company especially in monitoring and managing their activities through an independent unit such as internal audit department. Therefore, it is recommended the SMEs to outsource those departments so that it can be cost effective and the system will be more reliable as outsourcing company has more experience in designing the internal control system which is suitable for the SMEs from different sectors.

Internal control can help an entity achieve its performance and profitability objectives, and prevent loss of resources. It can help in ensuring the reliability of financial reporting. And it can help to make sure that the enterprise complies with government laws and regulations, avoiding damage to its reputation and other consequences.

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THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FIRM'S CAPITAL STRUCTURE IN MALAYSIA

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Abstract

This study attempts to examine the relationship between corporate governance mechanism (bankers on board, family-owned company, CEO duality and board size), including two control variables (firm size, and firm profitability) with capital structure (debt-equity ratio) of listed companies in Malaysia. The data are gathered from analysis of company's annual report and DataStream for a sample of 50 largest companies based on their market capitalization, from all sectors in Malaysia except financial institution and insurance companies. The time period covered is from 2009 to 2013. The study employs Multiple Regression analysis to examine relationship between four independent variables and two control variables with capital structure. This study found a significant relationship between bankers on board and CEO duality, which is the banker on board has positive relationship. For family-owned company and board size, a negative and insignificant relationship has been found in this study.The control variables included in testing all the variables are found to have effects on the results obtained. Generally, finding from this paper are align with existing literatures.

Keywords: Corporate Governance, Capital Structure, Market Capitalization

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INTRODUCTION

Capital structure is the way on how the corporations finance its assets for their operations and growth by using a mix of different sources of funds. In other words, the firm develops a strategy with the combination of short-term debt, long-term debt or equities. It is an important decision for firms to choose between shareholder's equity and debt.In corporate finance, researchers have place capital structure as one of the great concern and important issues (see for example, Hasan & Butt (2009); Huang & Song (2006) and Saad (2010)). This is because the decision making of a company is determined by the financing sources, cost and availability(Omet & Mashharawe, 2002). A fundamental understanding regarding the capital structure is essential while considering investment strategy in company, mostly on originating point and level of gearing to arrive at a conclusion. Several theories have been forwarded to simplify the variation of capital structure for companies. Nearly all the theories argued that companies choose capital structure because they can clarify better cost and benefits related to financial and equity financing of the company. By tracing back the study from the past by Modigliani and Miller (1958), they opined that it is irrelevant in determining the firm's value and its future performance by using capital structure. Due to the statement stated by Modigliani and Miller in 1958, some theories have been developed to explain the financing decision of firms. From the theories, Agency theory gained strong empirical support. The theory hypothesizes that the determinants of capital structure is from agency cost which arises from conflict of interest. Then, the firm's financial decision has continuously been one of the issues of interest in discussion of finance literature.

On the other hand, corporate governance is the mechanism that entails the processes and formation that ease the creation of shareholder value through the management of companies' affairs in order to guarantee the protection of entire stakeholders. Companies have to take good corporate governance as a consideration to get the confidence from investor and lenders. A good practice of corporate governance will influence company's strategic decision. Corporate governance is frequently related with the existence of agency problem. Additionally, the involvement of major shareholders in Malaysia's companies have allowed several shareholder to act based on their own interest and led to corporate misbehaviors (Khoo, 2003). All these negative behaviors have affected the performance of listed companies in Malaysia, and lead them to have higher amount of short-term debt and leverage (Stijn Claessens, Djankov & Colin, 2000). Corporate governance exists to mitigate the agency problem by providing essential check and balance between management and shareholders. Meanwhile, less agency conflicts for those firms with better corporate governance practices.

LITERATURE REVIEW

The practice of corporate governance among firms are differs from one country to another country because of the existence arising from economic, social and regulatory conditions between the countries (Rouf, 2011). However, the concept of corporate governance is a key factor in the way to improve the firm's value. The corporate governance specifies on how the firms are managed, controlled and guided, and how firms deals with guidance, supervision and management control. Even though, in the financial literature corporate governance is a growing area, there always have been controversies among scholars when it comes to the issues of corporate governance and firm's financing decision in capital structure. Glen, Pinto, Edisis, Griffin, and Marsden (1994) argue that in choosing between equity capital and debt, it is an important decision for the firm. Additionally, Abor and Biekpe (2005) argue that it is an essential decision for every business organization because of their objective, which is to maximize return and companies growth. In choosing a good and proper capital structure portfolio, the firms need to be careful because their decision is highly related with their objective to sustain and generate more wealth. Besides, the firm issuing either a large or small of debt can choose many varieties of capital structure.

Bankers on Board

Many previous studies argue that bankers on board (directors on the board who are bankers) can manipulate the capital structure because they are able to reduce information asymmetry between the lenders and firms. In return, allowing the firms to increase their debt because the directors who also the bankers have the benefit in accessing the information during credit concession process (J. Amaro de Matos & Mergulhao, 2011). Through the membership of the board, the bankers get important information. Since they have industry expertise, they use it to increase their lending (Dittmann, Maug, & Schneider (2009). According to Burak Güner, Malmendier, and Tate, (2008), the loan size of the firm will increase when there are a banker on the board of the company when they studied on a sample of publicly traded companies from 1998 to 2001. Based on a sample data of US firms from 2000 to 2006, Matos and Mergulhao (2011), studied the existence of bankers in board corporation. They found that the existence of a banker will increase the company's debt. Conversely, Byrd and Mizruchi (2005) investigated the impact between banker's on board and firm's debt ratio and their study reported a negative relationship. Likewise, , Kroszner and Strahan (2002) also found a negative relationship between banker-directors and leverage of the firms when they studied using a sample of Forbes companies in 1992.

Family Owned Company

A number of special benefits have been developed by family members in controlling their companies. The benefits are come from the risk because of financial distress or bankruptcy as it is always related to the change in control of company (McConaughy, 2008). According to Andres, (2008), financial distress are always related to family owners because most of them hold large ownership and not diversified. Contrarary, holding a large ownerships by the family owners make them tend to practice their own interest which most of their actions are not complying wth the interest of other shareholders. Debt plays fewer important device in disciplining the managers in family firms (Ampenberger, Achleitner, &

Kaserer, 2011), but with debt can help to discipline the family members (Setia-Atmaja, Tanewski & Skully, 2009).

CEO Duality

Abor (2007) investigated the relationship between corporate governance and firm's capital structure and found a positive and significant relationship between CEO duality, board size and board composition. Additionally, Gill, Biger, Mand, & Shah (2012) also found a positive relationship between capital structure and CEO tenure, CEO duality and board size when they studied using a sample of 600 service companies in India. On the other hand, Ganiyu and Abiodun (2012) found a negative relationship between CEO duality and capital structure. A negative relationship between CEO duality and capital structure has been reported by Bodaghi and Ahmadpour (2010) when they studied using 50 Iranian listed firms.

Board Size

According to Adams and Mehran (2003), larger board size in an organization could manage the operations of the firms more effectively because of the availability of expertise and skills in a company. In addition, Bokpin & Arko (2009) also found a positive relationship between capital structure and board size. Contrarily, Lawler & Conger (2009) argued no perfect or magical size to determine the number of board, but the good size should be driven how them can effectively work as a team. However, firm that has larger board frequently take lower leverage because they want to decrease and keep away additional risk for the investors (Yermack et al. (1997)).

Firm Size and Firm Profitability

Many previous studieshaveused firm size as a control variable and they found a positive association between firm size and capital structure. They argued that most of the large companies prefer to use debt rather than equity, compared to small companies which more likely to use equity financing (Baral, 2004; Feidakis & Rovolis, 2007; Friend & Lang 1988). For firm's profitability Modigliani and Miller (1963) argued that the interest tax shield hypothesis should expect a positive association between capital structure and firms profitability, many previous study also use it as a control variable. (see example Arping & Sautner (2010) and Shah & Khan (2007)).

In developed countries, the relationship between corporate governance and capital structure has been the subject for a broad researched area, but it is not true and same with developing country like Malaysia. A comparison on these relationships between Malaysian market (representing a developing market) and the developed markets of the western countries should provide useful additional knowledge on this still complex issue of capital structure.

CONCEPTUAL FRAMEWORK
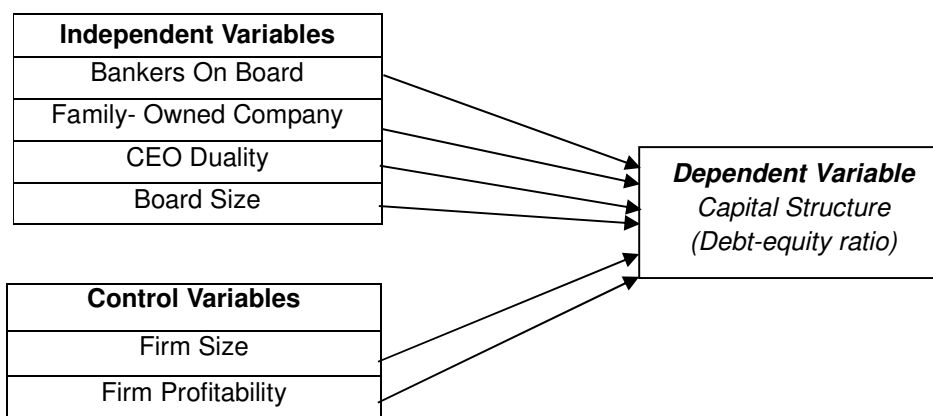
Figure 1: Proposed Conceptual Framework

Figure 1 explained the research framework used in this study which included five independent variables (bankers on board, family-owned company, CEO duality and board size) and two control variable (firm size and firm profitability) to be regress against one dependent variable which is capital structure (debt-equity ratio)

Hypothesis of the Study

H_1: There is a positive relationship between banker on board and capital structure

H_2: There is a positive relationship between family- owned company and capital structure

H_3: There is a negative relationship between CEO duality and capital structure

H_4: There is positive relationship between board size and capital structure

H_5: There is a positive relationship between firm size and capital structure

H_6: There is a positive relationship between firm profitability and capital structure

RESEARCH METHODOLOGY

In this study, hypothesis testing is conducted to explain and clarify the nature relationship between the chosen variables to represent the characteristic of corporate governance in influencing the firm's capital structure. This study uses quantitative data analysis and all the data gathered by using data collection. This present study utilized secondary data from listed companies on Bursa Malaysia formerly known as Kuala Lumpur Stock Exchange (KLSE).

Sampling Design

The annual report for the period 2009 – 2013 was analyzed in order to achieve the objective of this study. Following the previous study that investigated the large companies because large firms are diversified and having less risk for bankruptcy (Ang, Chua, & Mcconnell, 1982). Therefore, this study aims to investigate the relationship between corporate governance mechanism and capital structure of

Malaysia'stop 50 listed companies measured by market capitalization. In this study, the top 50 listed companies are included with an exception of insurance companies and financial institutions (due to their specific financial ratios (Guest, 2008). Firms with missing data are also excluded in this study.

Model specification

The general structural equation used to examine the association between corporate governance and capital structure.

DR $= \beta_0 + \beta_1 BNKR + \beta_2 FOWN + \beta_3 CEO + \beta_4 BSZE + \beta_6 FSZE + \beta_8 PROF + \varepsilon$

Where:

DR   *: Capital structure is the dependent variable and it is proxied by (DR) and it is measured by debt-equity ratio*
BNKR : Represent the bankers in the board of directors in the company. It is measure by a dummy. Assume a value of (1) if there is a banker on board and "0" otherwise.
FOWN :Measured as dummy "1" if there is a family member on board in the company and "0" otherwise
CEOD : Dummy variable and measured as "1" if a person hold both roles as CEO and chairman and "0" otherwise.
FSZE   : Natural logarithm the total of firm's assets
PROF   : Firm's profitability. It is measured by natural logarithm of Return on Asset
β_0 : Constant for intercept
ε : Error term

DATA ANALYSIS

Data collected from company's annual reports and the DataStream were run using several analysis, which are descriptive analysis, multicollinearity test, correlation analysis, and multi linear regression analysis by using Statistical Package for the Social Science version 16.0.

Finding and discussion

Table 1: Descriptive Statistic

	Minimum	Maximum	Mean	Std. Deviation
DR	0	413	56.85	61.93
BNKR	0	1	0.34	0.476
FOWN	0	1	0.06	0.238
CEOD	0	1	0.63	0.484
BSIZE	1	3	2.16	0.316
FSIZE	13	18	15.58	1.23
PROF	-3	60	11.17	9.80

Table 1 shows the summary results from the descriptive statistic analysis of the collected data in this study. Result from the table indicates that the mean value for debt-equity ratio (proxied by DR) of the selected companies, an approximate mean value is about 56.85%. On the other hand, bankers on board (BNKR), family-owned company (FOWN), CEO duality (CEOD) board size (BSIZE), firm size (FSIZE) and firms profitability (PROF) had mean value of 0.34, 0.06, 0.63, 2.16,15.58 and 11.17 respectively.

Table 2: Correlation Matrix

	DR	BNKR	FOWN	CEOD	BSIZE	FSIZE	PROF
DR	1						
BNKR	0.218	1					
FOWN	-0.133	-0.183	1				
CEOD	-0.34	0.331	-0.328	1			
BSIZE	-0.09	0.249	-0.048	0.179	1		
FSIZE	0.347	0.427	-0.255	0.186	0.077	1	
PROF	0.008	-0.226	0.024	-0.139	-0.031	-0.553	1

Results on the correlation matrix summary are revealed in Table 2. From the table, it shows that banker on board, firm size and profitability have significant relationship with debt ratio which is the dependent variable. On the other hand, a negative relationship for family-own, CEO duality, and board size are shown at -0.133, -0.34, and -0.09.

Table 3: Multicollinearity test summary

	Collinearity Statistic	
Model	**Tolerance**	**VIF**
1 (Constant)		
BNKR	0.721	1.387
FOWN	0.829	1.206
CEOD	0.799	1.252
BSIZE	0.925	1.081
FSIZE	0.561	1.783
PROF	0.673	1.486

In investigating the existence of multicollinearity between all variables, the Varian Inflation Factors (VIF) is calculated. From Table 3, the highest VIF is 1.783 which is lower than 10, a number as indicator of multicollinearity problem (Silver, 1997).

Table 4: Linear Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	t-value
1	0.448	0.201	0.181	56.051	0.844

Table 4 shows the result from regression model. R and R square (R^2) are used and presented as the explanatory model. From the table, it displays 20.1% of the independent variables used in this study are explained by the dependent variable. The other remaining 79.9% of dependent variable was explained by other factors. The 20.1% of R^2 is accepted for this corporate governance research study because most previous studies also obtained lower results (see for example Chen (2014); Chitiavi, Gerald, Ondiek, Douglas, & Christopher (2013); Germain, Galy, & Lee (2014)).

Table 5 : Regression Analysis

Model	Unstanderdized Coefficients		Standardized Coefficient	t	sig
	B	Std. Error	Beta		
1 (Constant)	-294.988	67.24		-4.387	0.000
BNKR	17.05	8.78	0.131	1.94	0.054*
FOWN	-11.50	16.39	-0.44	-0.70	0.483
CEOD	-16.69	8.20	-0.131	-2.03	0.043**
BSIZE	-9.181	11.67	-0.047	-0.78	0.432
FSIZE	22.96	3.83	0.458	5.98	0.000***
PROF	1.72	0.44	0.273	3.90	0.000 ***

Table 5 shows the results of coefficient linear regression for this study. From the table, it indicates that if the bankers on board increase by one unit, the company's debt ratio will increase by 17.05. Regarding the other variables, for family-owned company, CEO duality and board size, if they increased by one unit, the debt ratio will be decrease by -11.50, -16.699 and -9.181 respectively.

FINDING AND DISCUSSION

This study combines four corporate governance variables mechanism (bankers on board, family-owned company, CEO duality and board size) with the two control variables (firm size and firm profitability) to test the relationship with debt-equity ratio. Consequently, the regression result support the first hypothesis, and indicating that the existence of banker in a board of company will increase the firm's debt ratio. This finding is consistent with Matos & Mergulhao (2011). According to Burak Güner, Malmendier & Tate (2008), they stressed that the size of loan in the company will increase if there is a banker in the in board company because they have an expertise in banking industry thus enabling them to gain important information and increase their lending.

Second hypothesis proposed a negative relationship between family-owned companies with capital structure. Thus, this hypothesis is rejected. The negative relationship means the existence of family in the company would decrease the debt ratio. This negative result was supported by Anderson et al. (2004); Mansi & Reeb, (2003), when they revealed that lower cost of debt for family firms because of their special inducement structure thus they can reduce agency conflict between creditors and owners.

Concerning CEO duality (CEOD), it shows a negative and significant relationship with the firm's debt ratio. Therefore, the third hypothesis is accepted. Most companies in Malaysia prefer to separate the roles of CEO and chairman. The agency problem might arise if one person holds both responsibilities in making company's decision (Desender, 2009).

For board size (BSZE) the result shows a negative relationship with the capital structure. Thus, the fourth hypothesis is rejected. This result is supported by Yermack et al. (1997), when he found that firm with larger board size normally will take lower debt because they want to minimize the additional risk for investors. In addition, Berger et al. (1997) also found a negative relationship between board size and firm's debt ratio.

For the two control variables, it shows that firm size (FSZE) and firm profitability (PROF) have a positive and significant relationship with capital structure. Thus, hypothesis five and six are accepted. This finding is in line with the previous such as Baral (2004); Feidakis& Rovolis (2007) and Friend & Lang (1988). They argued that large company intends to use and issue debt compared to equity, whereas small companies prefer to use equity financing to cover their operations and growth. Meanwhile, Modigliani & Miller (1963), supported and stressed that the interest tax shield expect a positive association of profitability with debt ratio.

CONCLUSION

This study essentially investigated the relationship between corporate governance mechanisms with the capital structure decision of top 50 listed companies in Malaysia. This study came out with the following findings that are most important for scholars, investors and firms' management. The overall finding shows that banker on board and CEO duality have significant relationship with the capital structure, with bankers on board has positive and strong relationship. For the family-owned company and board size it shows a negative relationship with the debt-equity ratio. On the other hand, for control variables, firm size and firm profitability have significant and positive relationship with the capital structure. This indicated that both control variables play their roles in controlling all the variables.

This study is however limited that the sample only cover for five years data from Kuala Lumpur Stock Exchange market. Besides only four corporate governance variables tested in this study. For future research, it is recommended to have longer period of the sample year, increasing the number of companies and having different corporate governance variables.

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ADOPTION OF WEB-BASED LEANING ENVIRONMENT (WBLE) OF UTAR UNDERGRADUATE STUDENTS

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Abstract

It is common that every university will adopt e-learning environment. The most recent technology employed is web-based technology for faster and greater coverage. In Malaysia, all public universities have embraced e-learning. The most commonly practice in Malaysia is employing blended learning environment where classroom teaching is supplemented with e-learning platform. This study employs Technology Acceptance Model (TAM) with additional variable namely self-efficacy, to gauge the adoption of Web-based Learning Environment (WBLE) in Tunku Abdul Rahman University. The purpose of the study is to measure and verify the relationship between Perceived Usefulness, Ease of Use, Attitude on Technology, Self-efficacy and Subjective Norms and Actual Usage of the Technology. The study employs quantitative methods of survey questionnaires as instrument to measure the relationships of the constructs. The survey were self-administered to 300 undergraduate students at the Faculty of Business and Finance, Tunku Abdul Rahman University, Kampar, Perak. A total of 251 set of data were than analyse after data were visually screened for errors. From 251 respondents analysed, 103 respondents were male and 148 were female aged from 19 to 24 years old. They came from various programs such as Bachelor of Marketing, Bachelor of Business Studies, Bachelor of Economics, Bachelor of Banking and Finance, Bachelor of Finance, Bachelor of Financial Economics and Bachelor of Commerce and Accounting. The result showed positive and significant relationships of all the variables namely Perceived Usefulness, Ease of Use, Attitude, Self-efficacy, Subjective Norms and Actual Usage of WBLE. The research only focuses on population of Faculty of Business and Finance, Tunku Abdul Rahman University, Kampar, Perak, Malaysia. The finding made a contribution in terms of creating an understanding of the influence of adoption of UTAR WBLE as a learning tool. This study also filled the research gap on the relationship between the adoption factors and undergraduates' actual usage.

Keywords: Web-Based Learning Environment, Perceived Usefulness, Ease of Use, Self–Efficacy, Subjective Norms, Attitude, Actual Usage of WBLE.

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INTRODUCTION

The growth of information and communication technology has rapidly changing the way we do things and it has fast becoming the building blocks of modern society. Previously, when we talk about literacy, we understand it means about reading, writing and counting but with the coming age of ICT literacy encompasses of skills of using ICT as tools of communication and productivity. ICT has been used in many sectors such as transportation, accounting, finance and banking; manufacturing, education, sciences, engineering and almost all part of our daily activities.

In the field of education, ICT have undoubtedly affect the way learning and teaching as well as educational research takes places (Yusuf, 2005). According to Al-Ansari (2006), this growth of use of ICT in education has been proven by many researches to be beneficial in elevating the quality of the field. From the humble beginning of personal computers, technology in education has then evolved to CD-ROM educational software which incorporates multimedia in enhancing students' personal experience. Then, massive present was felt when computers are able to connect via internet. Information were found to be 'freely' distributed, accessed and downloaded over the broadband wires and wifi. These transformation has brought new era of teaching and learning experience and were found to have a profound effect to the concept of 'life-long learning'.

ICT has the potential to accelerate, enrich and deepen skills, motivate and engage the students, able to relate the learning and working experience and strengthen teaching and the schools to change the way they teach (Davis and Tearle, 1999, Lemke and Coughlin, 1998; Cited in Yusuf, 2005 and Ul-Amin). Conventional teaching or commonly known as "Sage at the Stage" emphasizes content where teachers teach through lectures and presentation. It is more of one-way communication where teachers know best. With the integration of information and communication technologies, both teachers and students were revitalized. It provides curricular support where teachers involved in collaborative projects and development. With the presence of technologies, Vygotsky scaffolding zone of proximal development theory, is truly be seen in practical manner. Harris (2002) and Wheeler (2001) found that innovative pedagogical usage enhance learning environment and stimulate students to be innovative.

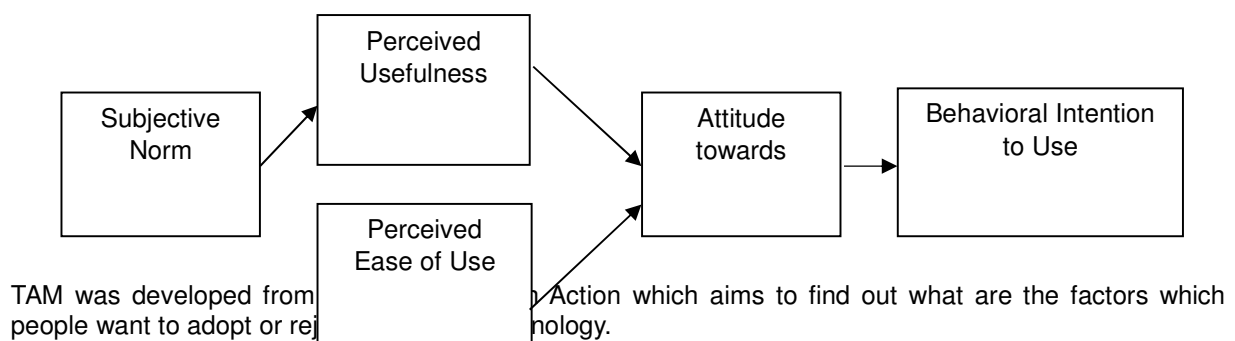## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Reeves and Jonassen (1996) found that technology influence and supports how student learn, and more and more students use computers as information and cognitive tools. ICT has made available best practices and best course materials in education. Here, ICT acts as enabler and provide opportunities to those who were unable to have the vast available resources previously. Ultimately, ICT pave the way for democratization of education.

Adoption of UTAR WBLE

Technology Acceptance Model

The research framework used is Technology Acceptance Model (Davis, 1989). The original TAM comprises of two beliefs; the perceived utilities and the perceived ease of application, which will determine the attitudes toward use or adoption of the new technology. The attitudes toward adoption or use will decide the users' behavioral intention to use the new technology. The modified model suggests that subjective norm plays a part in the perceived usefulness.

Figure 1: Theoretical Framework of Modified Technology Acceptance Model (TAM)

TAM was developed from ⟍⟋Action which aims to find out what are the factors which people want to adopt or rej⟋nology.

Ease of Use

Ease of Use or Perceived Ease of Use is defined as the degree to which students believe that the WBLE is easy to use and took less effort in learning to use them. They feel comfortable to use and navigate around WBLE.

Perceived Usefulness

One of the important components of TAM is perceived usefulness which is defined as the degree to which person's believe that technology would enhance his or her performance. In this case, the perception of the students in using WBLE will enhance their academic performance.

Attitude

Attitude of the students or attitude towards the use of WBLE is the reaction of the student towards WBLE. It showed their interest toward the use of WBLE as tool in their learning activities.

Subjective Norms

According to Fishbein and Ajzen (1975), subjective norms refers to 'perceived pressure on a person to perform a given behavior and the person's motivation to comply with those pressure'. Here this pressure can be external like friends or family members; or internal like motivation.

Self-efficacy

Self-Efficacy theory was coined by Albert Bandura (1970) which stipulates that it is an individual's self-confidence in his or her own ability to perform certain task at hand where in this case the use of computers and WBLE application. In other words, student's own efficiency to use WBLE, navigate, download materials and upload assignments and notices.

RESEARCH METHODOLOGY AND FRAMEWORK

Methodology

This study employs cross-sectional research design as the data collected at a specific point of time (Saunders, Lewis and Thornhill, 2009). Cross-sectional research is suitable to be conducted to identify whether the adoption of WBLE has any effect on the undergraduate's academic performance. Analysis is done on primary data where self-administered questionnaires were used to collect the quantitative data. The target respondents were the undergraduates from Faculty of Business and Finance. They came from various programs such as Business Administration, Marketing, Finance, Commerce and Accounting, Banking and Finance, Financial Economic, Economics and Entrepreneurship.

Population and Sample

Total number of undergraduates at Faculty of Business and finance is 6,304 students from various programs. Non-probability sampling technique was adopted as it is dependable and likely to guide to practical information about the population (Sakaran and Bougie, 2009). Self-administered survey questionnaires were distributed and collected.

An ideal sample size should respond to items ratios ranging from 5:1 to 10:1 (Hair, Anderson, Tatham and Black, 1998). Since the survey questionnaire has 30 items derived from 6 variable, the

preferred sample size falls between 150 to 300 respondents. The study distributed 320 survey questionnaires and manage to collect 251 valid responses.

Research Instrument

The dependent variable for the research is academic achievement whereas independent variables are ease of use, perceived usefulness, attitude, subjective norms, self-efficacy and frequency of use. The questions are based on Technology Acceptance Model adopted from Davis (1989). Meanwhile, the six independent variables are measured using 5 items for each respective variable. There are 30 items developed using 5 Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5).

ANALYSIS

Descriptive Analysis

Descriptive analysis describe the characteristic of data collected such as sample profile using frequency and percentages, variables using means and standard deviations (Zikmund, Babin, Carr and Griffin, 2009). To describe the data, measures of central tendency and measures of spread were used. Measure of spread uses standard deviation to summarize a group of data by describing the degree of spread of dependent and independent variable. The instrument used for this study is survey questionnaire and 300 survey questionnaires were distributed but only 251 was analysed after data cleaning process is done. Table 1 presents the demographic profile of the respondents who participated in this survey.

Table 1: Profile of Respondents

Demographic		Frequency	Percentage
Gender	Male	103	41.0
	Female	148	59.0
Age	18-19 years	60	23.9
	20-21 years	145	57.7
	22-23 years	38	15.2
	24-26 years	8	3.2
Race	Chinese	238	94.8
	Indian	8	3.2
	Malay	5	2.0
Program Bachelor of	Commerce and Accounting	34	13.5
	Marketing	109	43.4
	Business Studies	5	2.0
	Finance	5	2.0
	Economics	6	2.4
	Financial Economics	90	35.9
	Entrepreneurship	2	0.8
Year of Study	Year 1	187	74.5
	Year 2	13	5.2
	Year 3	43	17.1
	Year 4	8	3.2

Validity and Reliability

The purpose of reliability test is to measure the consistency level of data studied (Sakaran and Bougie, 2010). The study utilized Cronbach's Alpha Test and the coefficient of more than 0.7 is considered as good and reliable (Sakaran and Bougie, 2010). Apart from reliability and validity test, normality test was used to examine the distribution of data whether they are normally distributed. This test is important to ensure that the underlying assumption of multiple regression is met (Hair, Black, Babin and Anderson (2010). According to Kline (2005) the result of skewness with the range between +/- 3 and kurtosis with a range of +/- 10 indicates that the data is normally distributed.

Table 2: Mean, Standard Deviation, Skewness and Kurtosis

Statistics/	N	Mean	Std. Deviation	Skewness		Kurtosis	
Variable	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EA1	251	4.03	0.684	-0.49	0.154	0.582	0.306
EA2	251	3.85	0.758	-0.192	0.154	-0.377	0.306
EA3	251	4.04	0.709	-0.261	0.154	-0.367	0.306
EA4	250	3.96	0.775	-0.609	0.154	0.581	0.307
EA5	250	3.79	0.862	-0.607	0.154	0.768	0.307
PU1	251	3.69	0.778	-0.278	0.154	0.31	0.306
Pu2	251	3.4	0.835	-0.248	0.154	0.103	0.306
PU3	251	3.58	0.803	-0.362	0.154	0.383	0.306
PU4	250	3.4	0.836	-0.129	0.154	0.156	0.307
PU5	251	3.55	0.899	-0.283	0.154	0.053	0.306
A1	251	3.45	0.835	-0.062	0.154	-0.372	0.306
A2	251	3.16	0.878	0.191	0.154	-0.182	0.306
A3	251	3.67	0.73	-0.214	0.154	-0.139	0.306
A4	251	3.75	0.829	-0.344	0.154	-0.13	0.306
A5	251	3.71	0.774	-0.123	0.154	-0.379	0.306
SE1	251	3.61	0.773	-0.15	0.154	-0.048	0.306
SE2	251	3.69	0.788	-0.434	0.154	0.403	0.306
SE3	250	3.63	0.842	-0.144	0.154	-0.15	0.307
SE4	251	3.77	0.816	-0.307	0.154	-0.124	0.306
SE5	251	3.43	0.813	-0.03	0.154	0.157	0.306
SN1	251	3.96	0.807	-0.534	0.154	0.639	0.306
SN2	251	4.15	0.784	-0.718	0.154	0.455	0.306
SN3	251	3.71	0.815	-0.213	0.154	0.244	0.306
SN4	251	4	0.839	-0.655	0.154	0.403	0.306
SN5	251	3.97	0.912	-0.671	0.154	0.16	0.306
Au1	251	3.65	0.893	-0.407	0.154	0.081	0.306
AU2	251	3.83	0.954	-1.099	0.154	1.512	0.306
AU3	251	3.37	0.998	-0.368	0.154	-0.2	0.306

AU4	251	3.57	0.932	-0.604	0.154	0.358	0.306
AU5	251	3.47	0.896	-0.263	0.154	-0.171	0.306

The construct validity is sometimes call factorial validity. This study employs factor analysis to measure the construct validity of the instrument. Factor analysis through principal component analysis was carried out and the result is presented in Table 3.0. The result showed that all the items of the survey instrument was able to explain 66.7% from the total of six dimensions.

Table 3: Total Variance Explained/Factorial Analysis

Total Variance Explained					
		Initial Eigenvalues		Rotation Sums of Squared Loadings	
Component	Total	% of Variance	Cumulative %	% of Variance	Cumulative %
1	10.739	35.796	35.796	17.385	17.385
2	2.915	9.716	45.512	11.22	28.605
3	1.976	6.585	52.097	11.073	39.678
4	1.771	5.902	57.999	10.95	50.628
5	1.366	4.554	62.553	9.564	60.192
6	1.236	4.119	66.672	6.479	66.672

The survey instrument undergoes internal consistency measures through Cronbach's Alpha Reliability test to measure the reliability of the measurement instrument. The overall results revealed that the instrument has a high reliability at 0.935. The analysis further generated reliability test of each of the construct/dimension and the results are as follows:

Table 4: Construct's Reliability

No	Construct	Reliability Coefficient
1	Ease of Use (EU)	0.849
2	Perceived Usefulness (PU)	0.863
3	Attitude towards Technology (A)	0.843
4	Subjective Norms (SN)	0.755
5	Behavioral Intention (BI)	0.904

Based on the table above, all the constructs are reliable as all of them are above 0.70. According to Hair, Black, Tatham and Anderson (2006), the construct reliability should be 0.7 or higher to indicate adequacy.
Table 5: Pearson Correlation Coefficient among the Variables

Variable	Ease of Use	Perceived Usefulness	Attitude	Self-Efficacy	Subjective Norms	WBLE Usage
Ease of Use	1					
Perceived Usefulness	0.570**	1				
Attitude	0.496**	0.704**	1			
Self-Efficacy	0.592**	0.481**	0.527**	1		

Subjective Norms	0.504**	0.469**	0.585**	0.556**	1	
WBLE Usage	0.264**	0.430**	0.397**	0.339**	0.355**	1

** Correlation is significant at 0.01 level

Inferential Analysis (Correlation Coefficient)

Inferential analysis uses statistical test to test the hypothesis developed for this study and Pearson Correlation Coefficient was used to test the strength of relationship between two variables (Saunders et al., 2009). Table 5 above presents Pearson correlations coefficients among the variables under study. All the variable have positive relationships but the highest is between Attitude and Perceived Usefulness (0.704). All the variables are at significant level at 0.01. Ease of Use has significant correlation with Perceived Usefulness (0.570); Attitude has significant relationship with Ease of Use (0.496); Self-efficacy has significant relationship with Ease of Use (0.592), Perceived Usefulness (0.481) and Attitude (0.527); Subjective Norms has significant relationship with Ease of Use (0.504), Perceived Usefulness (0.469), Attitude (0.585) and Self-efficacy (0.556). WBLE usage also has significant relationship with Ease of Use (0.264), Perceived Usefulness (0.430), Attitude (0.397), Self-Efficacy (0.339) and Subjective Norms (0.339). However, although they were significant but the low coefficients were found between WBLE usage and various variables.

DISCUSSION

The result showed that the Technology Acceptance Model holds when it comes to adoption of web-based learning environment. Students found that WBLE is ease to use, useful and they have positive attitude towards WBLE. The results showed that it is similar to work done by Lee, Cheong and Chen (2005), where their result showed that perceived usefulness and perceived usefulness impact students adoption in using Learning Management System (LMS). In the case of self-efficacy, Venkatesh and Davis (2000) found that its act as determinants of perceived ease of use. The results showed that all the variables has significant relationship towards the use of WBLE.

Conclusion and Implication

In the context of technology adoption, this study have found significant relationships between ease of use, perceived usefulness, attitude in using technology, self-efficacy, subjective norms and actual use of WBLE. The study have demonstrated that these variable are important determinant in making adoption of technology in learning environment a successful one. Therefore it is necessary for educators and managers to make extra effort in boosting university's e-learning environment. Overlooking these factors will be detrimental to students' adoption and acceptance of web-based learning application. Although this study showed significant positive relationships of the variables but the co-efficient on the

WBLE actual usage is lower than other determinants. Even though, this study does not dealt in details of the cause, implementers should look at developing more user-friendly interfaces and easier navigational tools in WBLE. These changes can improve and encourage students to be more optimistic in making further use of such technology.

Limitations and Future Research Directions

The research was based on verifying the Technology Acceptance Model (TAM) with the additional of self-efficacy as one of the variable. TAM is based on Theory of Reason Actions which postulate that behavioural intention, spanning predictions of attitude and predictions of behaviour. It is based on previous studies but does not account for in-depth cause of the adoption of such technology. Further research should investigate other factors that might influence students in the adoption of this technology. Another flaw in this study is the concentration of just one faculty in one university. Comparative studies could be conducted to measure the differences (if any) in the future.

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Forensic Accounting Tools in Detecting & Investigating Fraud in Malaysia

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Abstract

With continuing advances of computer and Internet technology, the use of digital devices has become embedded in our business and personal lives (Rogers, 2003; Rogers & Seigfried, 2004). For example, communication using email and online chat has become ubiquitous. The rapid advancement in ecommerce and the internet have extended fraud opportunities; this is in addition of series of fraud that have been committed both in private and public sector of the economy. As new techniques of doing things are emerging so also new ideas are developed for perpetrating fraud. These in no doubt fraud are committed under the supervision of the internal auditors and external auditors, yet fraud is been committed on a daily basis especially using technology. Hence, this paper discusses four aspects of computer aided fraud detection that are of primary interest to fraud investigators and forensic accountants: Digital Ingestion Manager, EnCase, Computer Aided Audit tools and Forensic Toolkit that are used in fraud investigations. It provides an informative background and then details the current status of research in each area. It describes what is currently unknown, and it proposes future research topics.

Keywords: Forensic Accounting, Fraud Prevention and Detection.

INTRODUCTION

Fraud and white collar crime is a million dollar business which is rapidly increasing every year. Corporate is a reality which is difficult to stop, however organisations try to reduce the most by taking numerous actions.

Over last years, several organisations have spent huge amount of money in order to improve their System used for mitigating fraud. These organisations also includes accounting firms who have incurred significant amount defending their cases filed by third parties who claim that they lost their investment, reputation and trust of shareholders due to auditor's failure in identifying fraud and material misstatement. The cost of fraud will absolutely affect the profitability of victimized organisations as well as the stability of the economy. However economic crisis also leads to increase in fraud and also increases the financial reporting fraud in Order to keep the financial statements Consistent (KPMG, 2012). Large amount of funds have been Spent every year in order to mitigate and reduce the frauds. According to Glover and Aono (2010) a result shows that "In USA, FBI alone spends over $86 million annually or approximately 24% of its budget to combat fraud".

Even though, employment fraud percentage is higher than management fraud but management fraud costs large amount of money. Recent well known corporate fraud scandals such as Enron, WorldCom, Tyco, etc. have increased concern about management frauds as it wiped out billions of dollars of shareholders, result in reducing the confidence of investors in financial markets (Peterson and Buckhoff, 2004). The WorldCom fraud scandal can be a good example of management fraud in which about S3.8 billion for line costs (current expenses) were transferred in capital expenditures. By this transferring, WorldCom increased both its net income and its assets and remains undetected as the capitalized assets were depreciated. Elter, when the fraud was detected it leads the company to bankrupt and a loss of more than billions of dollars.

With the spotlight on the accounting profession, a new market with a new breed of accountant's forensic accountants has emerged. With the current economic downturn, we have seen an increased demand for forensic accounting services as the public deals with financial collapses, increased white collar crime and growing occurrences of occupational fraud. According to a survey occupational fraud losses cost organisations $994 billion annually. (ACFE, 2008)

Background of the Study

It has been argued in a recent study that fraud is the number one enemy of the business world (Hamilton and Gabriel, 2012). There is no company or nation that is immune to fraud and it is found in all human endeavors Nwankwo (1991).

Computer crime and computer related incidents continue their prevalence and frequency (CERT, 2003, 2006) and result in billions of dollars in losses (Singleton et al., 2006), which introduces the urgency to build a suitable workforce to contain, prevent and prosecute these crimes, frauds, and attacks by effectively conducting digital investigations (Yasinsac, Erbacher, Marks, Pollitt, & Sommer, 2003). However, computer and Internet technologies are very complex and dynamic, which require digital forensic practitioners to have appropriate knowledge and a wide set of skills (Carlton, 2007; Yasinsac et al., 2003).

According to KPMG Fraud Survey 2004 it stated that most of the (62%) of respondents felt that fraud is a main problem for Malaysian business generally (KPMG Forensic Malaysia, 2005). The Fraud Survey done by KPMG 2004 which surveyed 130 listed companies showed that 83 % of respondents admitted they had experienced fraud, an increase of 33 % from 2002. The survey cited secret commission or kickbacks, lapping (involves withholding cash receipts) and kiting (to mistake account) and false invoicing as the three most common types of fraud experienced by businesses in Malaysia.(KPMG Forensic Malaysia, 2008).

Problem Statement

With continuing advances of computer and Internet technology, the use of digital devices has become embedded in our business and personal lives (Rogers, 2003; Rogers & Seigfried, 2004). For example, communication using email and online chat has become ubiquitous. Businesses and organisations use computer systems and the Internet for e-commerce, business communication, and internal management. Society is very dependent on computers and Internet technologies such that the Internet infrastructure has become the foundation of communications, banking, healthcare, transportation, warfare, etc. (Berghel, 2003; Huebner, Ben, & Ruan, 2008; NIPC, 2003). With the high impact on our society, the computing infrastructure has become the target of criminals, fraudsters, and terrorisms (Berghel, 2003; Huebner et al., 2008; NIPC, 2003; Wolf, 2009). In recent years, many criminals employ computers and computer programs to commit sophisticated financial frauds (Singleton, Singleton, Bologna, & Lindquist, 2006).

The rapid advancement in e-commerce and the internet have extended fraud opportunities; this is in addition of series of fraud that have been committed both in private and public sector of the economy. As new techniques of doing things are emerging so also new ideas are developed for perpetrating fraud. These in no doubt fraud are committed under the supervision of the internal auditors and external auditors, yet fraud is been committed on a daily basis.

It is in the light of this that the researcher has undertaken this research to see if forensic accounting tools can be a useful measures in investigating and detecting fraud. Therefore the main purpose of this study is to see how effective forensic accounting tools can help in fraud investigation and detection.

The study on automated tools of forensic accounting tools is so far limited & scarce on this particular area until now the world is conversing to technology there is a need to carry out a research about these new tools.

Objective of the study

The main objective are as following
To identify the tools used in fraud detection and investigation.
To examine the relationship between types of tools used in detecting and investigating fraud.
To recommend the appropriate tools used in detecting fraud by forensic accountants.

Research Questions

Identify the tools used in detection and investigation of fraud?
What are the relationship of the tools used in detecting and investigating fraud?
What are the most appropriate tools to be used in detecting & investigation by forensic accountants?

Scope of study

This research will lead to the awareness and acceptance level of forensic accountants. Furthermore, the result of this research would give understanding of the role of forensic accountants. This study hopes to reduce fraud practices happening in Malaysia by using advanced tools to detect fraud.

1.7 Limitations of the Study

The limitation of this research is mainly about time limitation the second thing is difficulties in collecting primary data and also secondary data. The first limitation of this research will be conducting in eight months; therefore less information will be collected in this time line. The second limitation is the difficulty in gathering primary data because there are few forensic accountants in Malaysia so it would be extremely hard for the researcher to conduct an interview with forensic accountants. Another limitation that was faced by the researcher was collection of secondary data. As the forensic accounting is not an old and experienced field so it was difficult because very limited information on digital tools is available to be used by the researcher.

If we look upon the different categories of fraud, it is a vast term in real. There are hundreds of ways to mitigate fraud and preventing it but the branch that researcher has selected to detect and investigate fraud in corporate sector of Malaysia is by using Forensic Accounting tools. This is a term which is unheard by many people around us but it one of the most effective tools to detect fraud and interrogate its roots. Forensic accounting is an IT term collaborated with Assurance and Auditing with accounting. Forensic accountants are there to help us always for being secure from all IT based business frauds. Although there is scope of Forensic Accounting but only in some of the developed countries and very limited. The researcher has spent his efforts in determining some of the tools that are being used by forensic accountants but failed to succeed fully because of the limited resources and data available on this research and other major factor is the time constraint.

1.9 Conclusion

In this chapter, the research paper clearly illustrates the problem of the study, together with the set of objectives. Moreover, it also provides a brief history about fraud and different types of fraud.
Chapter 2: Literature Review

Overview of fraud

Fraud is basically an act by which person deceive its organisation or other individual intentionally, whether in monetary or non-monetary terms, for own benefits. It can be committed by several ways such as stealing cash or any other assets, manipulating the inventories, misstating the financial statement, identity theft, etc.

"The use of one's occupation for personal enrichment through the deliberate misuse or misapplication of employing organisation's resources or assets" Association of Certified Fraud Examiners (ACFE, 2014).

According to KPMG survey report of Malaysia in 2009, 66% of the respondents that fraud is a major problem in Malaysia which is 4% more than the result in 2004. However, the survey also tells that 30% of these frauds were detected by internal audit reviews which were in 2004. This shows the importance of internal auditors and effectiveness of analytical review procedures in terms of detecting fraud.

2.4 Fraud Detection and Investigation Methods:

Fraud detection generally involves activities and actions taken to determine whether or not it is likely that fraud is occurring. It allows companies to identify suspicious or predications of fraud, and to discover a fraud that has been or is being committed. Detection does not include investigation procedures which is taken to determine motive, purpose, reason but begins by identifying symptoms, indicators, or red flags which provides indication for the occurrence of fraud. Moreover, there are three primary ways to detect fraud: (l) by accident, (2) by installing hotlines and whistle blower systems and encourage employees and others to report any suspicious activity they see, and (3) by examining transaction records, accounts, documents and other anomalies that could indicate fraud (Zimbleman and Albrecht 2012). Previous survey shows that from these three primary ways, of fraudulent activities are detected by 'accident' which suggests that many of the frauds might remain undetected. However, management and internal control should improve in order to detect frauds rather than detecting it accidently.

Preventing fraud is the most effective way to reduce losses and cost of fraud because once a fraud is committed, it can be detected but losses cannot be easily recovered (Singleton and Singleton 2010). Fraud prevention involves two elements (l) creating and maintaining a culture of honesty and high ethics and (2) assessing the risks for fraud and developing response to mitigate the risk and eliminate the opportunities of fraud. (Zimbleman and Albrecht 2012).

2.5 FRAUD INVESTIGATION STEPS

There is a common tendency to interpret a successful investigation as one in which the fraud is detected, but for this to be achieved certain steps are usually involved in investigation and they include; planning, data/Evidence collection, evaluation of evidence and report writing (Ekeigwe, 2010).

2.5.1 Planning: This ensures that a guide of what needs to be done is put to place. It is the foremost step to be taken if a substantial result is required for it is the processes by which an organisation solves problem of determining its relationship with its environment (Anyaogu, 2011).

2.5.2 Data/Evidence collection: In order to present the formation obtained, the evidence collected needs to be evaluated using different methods, including automated tools so that an easy conclusion can be made (Driven, 2008).

2.5.3 Evaluation of Evidence: In order to present the formation obtained, the evidence collected needs to be evaluated using different method, including automated tools so that an easy conclusion can be made (Driven, 2008).

2.5.4 Report Writing: If the investigation confirms that fraud has been perpetrated or attempted, a formal report has to be written on the outcome of the investigation for presentation to senior management with a copy of it presented to anti-fraud officer (Driven, 2008).
Document Management Tools

2.7.1 Digital Investigation Manager (D.I.M):

This is a digital evidence tracker software used in digital investigations. It was designed and developed to be used as digital evidence process support during computer forensic and incident response operations. (Accountant search, 2011). It allows the investigation process to be organized on a case basis as each

case may contain one or more hosts (i.e. workstation, laptop, etc.), which in turn may be associated with one or more items of evidence obtained through the forensic acquisition process. This forensic acquisition process include media (hard disk, floppy disk, flash card zip drive etc.), network dump and log file. Special detailed forms are usually complied for each of these host or media when they are acquired.
Also, the digital investigative manager application allows users to catalogue all pertinent information gathered during investigation and to make reports from those evidence gathered. This application is usually available in three (3) versions namely, standalone version, workgroup version and enterprise version (Forensic Focus, 2011).

Digital Investigation Manager offers a variety of data security and team coordination options. The former, which for simplicity's sake we will term "backup options", allow the user to create a copy of local data in a centralized archive. This has a dual purpose: the user is assured of having a copy of the work performed; and a central historical record is maintained of all cases involving a particular investigator. The backup option requires a properly configured back-end database server. Supervisors may access the back end for itemized queries (Forensic Focus 2011).

2.7.2 Encase:

This is a complete forensic toolkit that covers much of the work that the ITM (information technology management) forensic analysis carry out. It is designed as "a computer forensic product produced by guidance software used to analyse digital media in civil or criminal investigations, network investigations, data compliance and electronic discovery".
Encase contains tools for several areas of the digital forensic process, acquisition, analysis and reporting.it is usually available to law enforcement agencies and corporations, for it has been used successfully in various court systems around the world. It is also generally considered as the de factor standard for criminal digital forensic evidence collection as it is globally recognized as a world leader in digital forensic, cyber security and e-discovery. (Oliver and Shenoi, 2006).
The two (2) major attributes that make Encase software unique are the breadth of operating system and file system are separate, but they have a deep relationship on how information is stored and how the host operating system operates system that exists, there are number of different file system which the host operating system could utilize and the ability to deeply analyse a broad range of operating system and file system is a critical component of an enterprise investigation. (Guidance, 2014).
Digital investigators need a solution that easily captures relevant data to support an investigation or compliance requirement and features sophisticated technical analysis capabilities for finding buried and/or hidden data. EnCase Forensic is a powerful investigation platform that collects digital data, performs analysis, reports on findings and preserves them in a court validated, forensically sound format (Guidance, 2014).

Analytical Tool

2.10 Computer Aided Audit Tools (CAAT):

It is also known as Computer Assisted Audit Tools and Techniques (CAATTs), it is growing field within the financial audit professions and a practice of using computer to automate or simplified the process by extracting data, analysing data and identifying exceptions that relate to fund. CAAT tools have a significant advantage over manual data testing techniques and they include; ACL Audit, Command language, IDEA Analysis, Wiz Rule etc. With these tools, forensic accountant can review, test and analyse the entire population of data which is not usually possible with the manual or traditional audit techniques (ACFE, 2009).
Data Mining Software is a tool that provides models of database for the purpose of determining patterns and relationships among the data. This tool is an outgrowth of the development of expert systems. Computer-based data analysis tools can prove to be invaluable in searching for possible fraud. From the analysis of data, the fraud examiner can develop fraud profiles from the patterns existing within the database. Through identifying and understanding these patterns, the examiner may uncover fraudulent activity. The use of this software also provides the opportunity to set up automatic red flags that will reveal discrepancies in data that should be uniform (Ekeigwe, 2010).

Also, it tends to enhance the productivity of forensic accountant, as it enable them make informed discussion to qualify the impact of financial statement errors by analysing them through CAAT, for CAAT gives a high level of comfort to the senior management about the overall quality of data within the organisation (Just answer, 2011).

Investigation Tools

2.9 Forensic Toolkit (FTK):

The access data forensic toolkit (FTK) is another component forensic toolkit that is recognized as one of the leading forensic tools to perform e-mail analysis, as it can easily locate deleted e-mails. It includes a standalone disk imaging program called FTK imager. This FTK imager is a simple but concise tool that saves an image of a hard disk in one file or in segments which may later be reconstructed (Access data 2011).
Also known as FTK, this application enables you to perform complete and thorough computer forensic examinations. FTK features powerful filtering and search functionality, and is recognized by law enforcement and corporate security professionals as the leading forensic tool for e-mail analysis (Access data, 2011).

Forensic toolkit advances the investigation by giving more time, power, and insight to each cases. FTK provides you the following advantages: simple users' interface, fast searching, EFS decryption, bookmarking, reporting, and password dictionary creation

After you complete the case investigation, you can create a report that summarizes the relevant evidence of the case. FTK provides a thorough report wizard that allows customization of reports, including the placement of one's own logo on the title page. The final report is in HTML format and is viewable in a standard Web browser. You can create a section in the report that lists file properties for different file types in selected categories (Access data, 2011).

It can add files such as supplementary reports, search warrant information, and photos of the crime scene to the report. You can also add the case log to the report. The case log documents activities and events that occur in the case during investigation and analysis. Included files only require that the applications to view them must be installed on the computer the report is being viewed (Access data, 2011).

Chapter 3: Research Methodology

This chapter describes how the study is designed and how will be conducted. It explains the sampling techniques and procedures adopted the data collection techniques, location of the study, research design, and finally data analysis.

3.1 Introduction

This chapter will cover conceptual framework, sampling and distribution, data collection techniques, methods of data analysis, population size and expected number of respondents used for this research. The main source of information will be mainly through qualitative data which includes questionnaires.
3.2 Research Design

Churchill (1996) defines research design as simply a framework or plan for a study used as guide in collecting and analysing data. It is a blueprint that is followed in completing the study. The research designed ensures that the study will be relevant to the problem and will use economic procedures. This study will use the case study design to obtain the necessary information both qualitative and quantitative data, case study design will be employed to collect both primary and secondary data; the researcher opted for case study design due to its ability to provide in depth insight of the issue being studied and because he is confident to collect reliable information at the required time. The research is based on primary source which are questionnaires and secondary sources which are books, accounting standards, journals and websites. Data will be collected through questionnaires.

A total of 100 questionnaires will be prepared and distributed to individuals who are familiar with accounting tools in detecting fraud and IT back ground in security users and professionals in accounting field. Out of 100 questionnaires, it is expected to have 50 respondents. Questionnaires will be a mixture of both open and closed ended questions. The number of closed ended questions will be greater than open ended questions. The questionnaires will be sent by e-mail to the corresponding companies. Non probability sampling will be used due to lack of time to carry out a deeper research and moreover, this type of sampling is cheaper and easier to conduct compared to probability sampling method. Furthermore, SPSS will be used for data collection, analysis and reporting.

3.3 Theoretical framework/model

Whether evaluating a qualitative or a quantitative study, it is prudent to look for a framework, which will guide this study. The below defines the relationship between two variables. The relationship between independent variable and the dependent variable shows how the tools help to detect & investigate frauds.
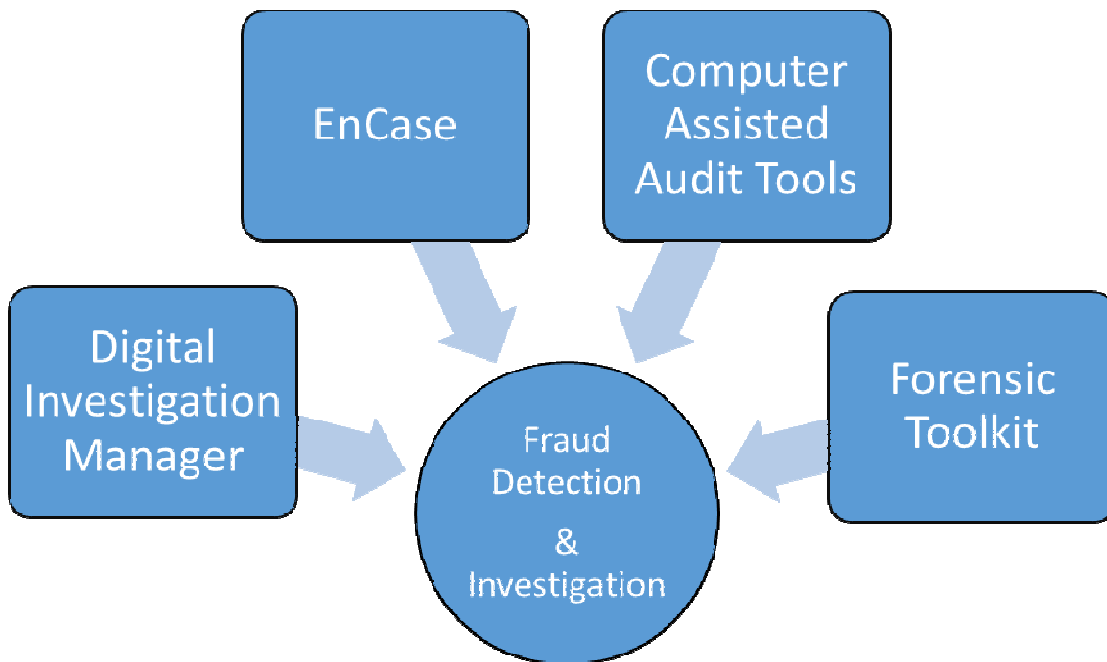
3.4 Research Hypothesis

Null hypothesis (H_0): Digital investigation manager is able to assist the investigator in managing their documents while carrying out their investigation on fraud.
Alternative Hypothesis (H_1): Digital investigation manager is not able to assist the investigator in managing their documents & creating reports while carrying out their investigation on fraud.

Null hypothesis (H_0): EnCase is able to assist the investigator in managing their documents & creating reports while carrying out their investigation on fraud.
Alternative Hypothesis (H_1): Encase is not able to assist the investigator in managing their documents & creating reports while carrying out their investigation on fraud.

Null hypothesis (H_0): Computer Assisted Audit Tools is used as an analytical tool to detect & investigate fraud.
Alternative Hypothesis (H_1): Computer Assisted Audit Tools is not used as an analytical tool to detect and investigate fraud.

Null hypothesis (H_0): Forensic tool kit is used to detect and investigate fraud.
Alternative Hypothesis (H_1): Forensic tool kit is not used to detect and investigate fraud.

3.5 Data Collection

Data collection can be done through the use of primary data and secondary data. Primary data is the information attained first-hand by the researcher, whereby secondary data refers to information obtained through options already existing (Serakan and Bougie, 2009).

This research will be conducted by using primary data as well as secondary data. The data for this research is intended to be gathered regarding forensic accounting tools used in detecting and investigating fraud.

3.6   Sample Size

A total of 100 questionnaires will be prepared and distributed among the accountants, auditors and students specialized in IT security. Malaysia (Internal and External Auditors). Most of the questions in the questionnaire would be structured close ended, whereas there would be some open ended questions as well.

3.7   Data Analysis

The data collected through the questionnaire would be extracted and analyzed. The results would then be presented together with the percentages and graph that would illustrate the results relate to the objectives.

3.9 Conclusion

To put it in a nut shell, the general proposal report examined effective (knowledge, skills and independent) of the forensic accountants tools on how these tools helps to detect, and investigate this kind of fraud in an organisation, the research is conducted in examining organisations where by its easier to obtain information on this matter and in most developing countries corporate fraud has been occurring mostly in public sectors compared to private sectors. In general the research has relatively come to conclusion by discussing three Chapters and each chapter is discussed deeply with contents and also the use of past researches that have been done with other people around the world which has been helpful in getting the information and eventually be able to conduct and write this report.

Chapter 5 Findings

5.1 Introduction

In this chapter, the researcher will interpret the findings from the primary and secondary data, i.e. the questionnaires and the journals which have been collected. The aim of this chapter is to compare and match the findings from both sources of data. Moreover, in order to solve the objectivity of the research, this chapter will also provide a better understanding of the research objectives.

5.2 Respondent's Segment

According to the analysis conducted the age group of 26-35 was found out to be a core audience group which is comparatively high among all other age groups. The main reason of this is that, majority of respondents were auditors, academicians & accountants who are mostly between the age of 26-35 and above 40. Such respondents are expert in providing clear picture, and appropriate responds due to their vast knowledge and understandings on the topic. The respondents also include student mostly from the age between 18-25 most of them are either have I.T back ground or doing their forensic in accounting degree.

Variables	Definition
DV_D & I F	Dependent Variable – Detection and Investigation of fraud
IV_DIM	Independent Variable – Digital Investigation Manager
IV_EC	Independent Variable – EnCase
IV_CAAT	Independent Variable – Computer Aided audit tool
IV_FTK	Independent Variable – Forensic Toolkit

The main objective of this research was to identify the tools used in fraud detection and investigation, examine the relationship between these tools and to recommend which tool is suitable among them.
Based on table, it can be seen that each independent variable are correlated to the dependent variable). For the test, the two-tailed significant level applied at 1% ($p < 0.01$).

5.3.2 Digital Investigation Manager:

H0: Digital investigation manager is able to assist the investigator in managing their documents while carrying out their investigation on fraud – ACCEPTED

5.3   Research   Objective   &   Hypothesis:

Correlations

		D & IF	DIM	EC	CAAT	FTK
D & IF	Pearson Correlation	1	.615**	.762**	.531**	.856**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	84	84	84	84	84
DIM	Pearson Correlation	.615**	1	.456*	.233**	.264**
	Sig. (2-tailed)	.000		.011	.006	.004
	N	84	84	84	84	84
EC	Pearson Correlation	.762**	.456*	1	.211*	.367
	Sig. (2-tailed)	.000	.011		.012	004
	N	84	84	84	84	84
CAAT	Pearson Correlation	.531**	.233**	.211*	1	.521
	Sig. (2-tailed)	.000	.006	.012		.000
	N	84	84	84	84	84
FTK	Pearson Correlation	.856**	.264**	.367**	.521**	1
	Sig. (2-tailed)	.000	.004	.001	.000	
	N	84	84	84	84	84

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Table :Pearson Correlation Analysis

The research analysis shows that 43% out of 84 respondents have the same opinion as the researcher. According to them digital investigation manager helps to assist the investigator in managing the documents in the investigation and also create reports at the end. So majority of the primary respondents accepted this hypothesis. "The digital investigative manager application allows users to catalogue all pertinent information gathered during investigation and to make reports from those evidence gathered" (Forensic Focus, 2011).

Digital Investigation manager was found correlated to fraud detection & investigation as it has p value of 0.000 in which $p < 0.05$ and correlation value of 0.615. Consequently, the evidence to support the dispute is sufficient and that there is a strong positive correlation between Digital investigation manager and fraud investigation. The positive value of 0.616 indicates that there is a positive and strong relationship between Digital investigation tool and fraud investigation and detection.

It allows the investigation process to be organized on a case basis as each case may contain one or more hosts (i.e. workstation, laptop, etc.), which in turn may be associated with one or more items of evidence obtained through the forensic acquisition process. This forensic acquisition process include media (hard disk, floppy disk, flash card zip drive etc.), network dump and log file. Special detailed forms are usually complied for each of these host or media when they are acquired. So on the basis of the primary and secondary evidences the hypothesis of the researcher is accepted.

5.3.3 EnCase:

(H_0): EnCase is able to assist the investigator in managing their documents & creating reports while carrying out their investigation on fraud – ACCEPTED.

As mentioned earlier in chapter 2 (literature review), ". EnCase Forensic is a powerful investigation platform that collects digital data, performs analysis, reports on findings and preserves them in a court validated, forensically sound format." (Oliver and Shenoi, 2006).

The p value for correlation between EnCase and fraud detection and investigation is 0.000. Thus, there is sufficient evidence to prove that encase was correlated to (fraud detection and investigation). It also shows that the coefficient correlation value is 0.762 which means that there is a positive & strong relationship between encase and fraud detection and investigation.

Based on the analysis in chapter 4, the researcher asked the respondent on their opinion whether encase could help to assist it in managing the data and even create reports. Most of the responded agreed (50%), strongly agreed (27.4%) that it helps in assisting the forensic accountant. Encase contains tools for several areas of the digital forensic process, acquisition, analysis and reporting.it is usually available to law enforcement agencies and corporations, for it has been used successfully in various court systems around the world.

This clearly shows that that there is a relationship between the finding of literature review and data analysis. Hence the hypothesis is accepted.

5.3.4 Computer Assisted Audit Tools

(H_0): Computer Assisted Audit Tools is used as an analytical tool to detect & investigate fraud– ACCEPTED.

The research analysis shows that 36.9% of the respondent rated Computer assisted tools and techniques the highest rank (5) for investigating fraud by simplifying the process of extracting data, analysing data and identifying exceptions that relate to fund. The result further shows that 27.4% of the respondent rated the software 4 because they believe that by using this analytical tool it would help to detect fraud. CAAT tools have a significant advantage over manual data testing techniques and they include; ACL Audit, Command language, IDEA Analysis, WizRule etc. With these tools, forensic accountant can review, test

and analyse the entire population of data which is not usually possible with the manual or traditional audit techniques (ACFE 2009).

Computer aided audit tool was found to correlate to fraud investigation as it has p value of 0.000 in which $p < 0.05$. Therefore, the evidence support the dispute is sufficient and that there is a correlation between computers aided audit tool and (fraud detection & investigation). Besides, the value of coefficient correlation is 0.531 which is positive. It means that the relationship between computer aided audit tool and (fraud detection & investigation) decision making are positive and strongly correlated.

This result is supported by Mehra (2011), who carried out a research on how CAATs can be used to detect fraud in journal entries and other areas which included the review of unusual transactions, payroll cycle, and procurement cycle. He concluded that used to address the risk of fraud in all these areas and also detect potentially fraudulent activities from the analysis of data, the fraud examiner can develop fraud profiles from the patterns existing within the database. Through identifying and understanding these patterns, the examiner may uncover fraudulent activity. The use of this software also provides the opportunity to set up automatic red flags that will reveal discrepancies in data that should be uniform (Ekeigwe, 2010). CAAT enable forensic accountant to test large amount of data quickly and accurately and therefore provide red flags if fraud is taking place or not. It also enables forensic accountant to test the accounting systems and its records (e.g. disk files) at its source location rather than testing the printouts of what they believe to be a copy of those records. It is likely to be cost effective way of obtaining evidence year after year provided that the client does not change the accounting system regularly.

5.3.5 Forensic Toolkit

(H₀): Forensic Toolkit is used to detect & investigate fraud – ACCEPTED.

The research analysis shows that the majority of the respondent have the same opinion about this research question as the researcher about 45.3% of them rated it the highest that is 5 and 34.5% of them rated it 4 which shows that the respondent believe that forensic tool kit help the forensic accountant to carry out investigation on fraud. Forensic Toolkit advances your investigation by giving you more time, power, and insight to each cases. FTK provides you the following advantages. FTK allows you to view e-mail in a user-friendly HTML. The Known File Filter (KFF) is an FTK utility that compares file hashes of your evidence against a database of hashes from files known to be irrelevant. The end result of a successful investigation In FTK is a list of bookmarked data to be used as evidence. A bookmark contains a group of files that you want to reference in your case. Bookmarks help organize the case evidence by grouping related or similar files. FTK provides a thorough report wizard that allows customization of reports, including the placement of one's own logo on the title page.

Correlation between forensic toolkit and (fraud detection & investigation) has the p value of 0.000 which provides evidence to support that that there is a correlation between forensic toolkit & (fraud investigation and detection). Additionally, the positive value of coefficient correlation that is 0.856 has shown that the relationship between forensic toolkit and (fraud detection & investigation) decision making are positive and very strongly correlated.

"Forensic toolkit that is recognized as one of the leading forensic tools to perform e-mail analysis, as it can easily locate deleted e-mails. Also known as FTK, this application enables you to perform complete and thorough computer forensic examinations. FTK features powerful filtering and search functionality, and is recognized by law enforcement and corporate security professionals as the leading forensic tool for e-mail analysis" (Access data 2011).

5.4 Summary

The findings indicate that the objectives of the research, as well as the answers procured for the research questions, are in line with the theoretical framework that the study was based on. The objectives of the study were met as the research was developed to identify the factors in enhancing audit quality toward minimizing corporate frauds. The research questionnaire not only proves the variables and meets the

objectives in accordance with the problem statement but also gives a light on various different techniques and procedures that auditors can use in order to prevent and detect corporate frauds.

No	Statements	Hypothesis Findings
$H0_1$	Digital investigation manager is able to assist the investigator in managing their documents while carrying out their investigation on fraud.	Accepted
$H0_2$	EnCase is able to assist the investigator in managing their documents & creating reports while carrying out their investigation on fraud.	Accepted
$H0_3$	Computer Assisted Audit Tools is used as an analytical tool to detect & investigate fraud.	Accepted
$H0_4$	Forensic Toolkit is used to detect & investigate fraud.	Accepted

Chapter 6: Recommendation & Conclusion

6.1 Recommendation
The research noted some problems which might be solved from the following suggestions. An aspect within computer forensics that is often overlooked is the reporting phase of an investigation. We find that the ability of the forensic tool to report, and assist the forensic accountant in the investigation, is just as important as the tools' ability to view the contents off storage media. As mentioned in the background, storage device capacities are increasing at alarming rates. This implies that the search area that must be covered by the forensic accountant is also increasing. Therefore, comprehensive reports of all activities undertaken by a computer forensic software during an investigation would contribute positively to an investigation. It is the researcher suggestion that reporting functionality be added to those tools lacking such reporting functionality and improved in the tools currently supporting this functionality.
Within the tools that supported imaging, we found that the process was consistently carried out successfully. Specifically, it's recently stated that the imaging functionality within the Encase tool was flawless. This statement can be accepted without hesitation since Encase is considered an industry leader in the forensics software market. It should also be noted that the integrity of image files were always verified by the hashing functions supported within that imaging tool.
I would recommend that encase and forensic toolkit to be the recommended tools to assist forensic accountant in carrying out their investigation. They are the best tools available in the market and encase has the function to generate reports and is compatible with forensic toolkit.

6.2 Limitation

Each research has its own limitations. The limitation of this research is mainly about time limitation. The second limitation of this research is difficulties in collecting the secondary data. As forensic accounting is not an old and experienced field so it was difficult task for the researcher to collect information on digital tools.

6.3 Future Research

Future researchers are welcomed to use this study as a reference on the study related with new tools used to detect fraud detection and investigation. There are various fraud tools to be used as variables for new research; therefore, this study can only be a reference to future research. This is advisable for future research to conduct new research using Bedford's law, ACL or data mining

6.4 Conclusion

Computer aided fraud detection is a new field for accounting researchers. In this research we discussed some of the forensic software tools that forensic accountant uses during their investigations. Four of these tools were evaluated with respect to their functionalities and effectiveness within the forensic investigation methodology. Finally, a discussion about these tools was given. It is very important that forensic accountant are able to stay ahead of cyber-criminals through the use of forensic tools that allow them to reliably carry out their tasks within an investigation. The researcher believe that if the suggested improvements to these tools are further researched, prosecutions of cyber-crimes will definitely increase.

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Educator Characteristics in Improving Quality of Teaching: A Comparison between Accounting and Non-Accounting Educators

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Abstract

The main purpose of this study was to determine the factors influence in quality of teaching. This study also was to examine the relationship between factors influence and quality of teaching. Besides that, the difference perceptions between accounting and non-accounting lecturers towards quality of teaching also have been examined. The motivations of this study was teaching method, peer observation, communication skills and professional development as independent variables. Quality of teaching was a dependent variable as to measure how efficient the lecturers in conducting their class discussion and ensure students' understanding on subject taught. This study was targeted lecturers at FBF, UTAR Perak Campus as they are conducting lecture and tutorial class. Social cognitive theory was used in this study to support the motivations of quality of teaching. One hundred and eleven (111) sets of questionnaire were collected from lecturers. Data collection was analysed by using descriptive analysis, reliability test, validity test, Pearson Correlation Analysis, Multiple Linear Regression Analysis, One-Way Analysis of Variable and open-ended question. The findings showed that teaching method, peer observation, communication skills and professional development (independent variables) have positive significant relationship with quality of teaching (dependent variable). However, there is no difference perception between accounting and non-accounting lecturers towards quality of teaching. Lastly, this study helps future researchers to explore more factors to motivate quality of teaching.

Keywords: quality of teaching, social cognitive theory, non-accounting lecturers, accounting lecturers.

INTRODUCTION

Teaching is one of the lecturer's responsibilities to develop students' behaviour in education (Vin-Mbah, 2012). According to Biggs and Tang (2003), good lecturers possess teaching competencies such as managing educational technology and questioning skills. However, Ayers (2001) argued that teaching demands thoughtfulness. He expressed thoughtfulness requires time and focus in order to look at teaching conditions and challenge received. Hence, the lecturer will always seek for better teaching practices (Ayers, 2001). Furthermore, Su and Wood (2012) stated that pedagogy is important to be understood in order to develop good teaching.

Hollins (2011) stated that knowledge and skills are important in improving quality of teaching. He added, the quality can be seen from prior knowledge, teaching experience and the way the lecturer conduct the classroom. In addition, Rosendo-Rioos, Messia-de-la-Cerda and Laguna-Sanchez (2013) mentioned that specific plan and right strategic decision are required in order to achieve quality of teaching in universities. They also explained that quality of teaching includes teaching design, teaching process and students' results which to show students' success in the subject taken. Furthermore, Wang, Lin, Spalding, Klecka and Odell (2011) mentioned that teaching reform, government policy and teaching standards would influence in improving quality of teaching at universities.

This study focused on quality of teaching in a private university. Universiti Tunku Abdul Rahman (UTAR) Perak Campus is chosen to determine factors that influence the quality of teaching amongst accounting and non-accounting lecturers at Faculty of Business and Finance (FBF). According to Rowley (1995), the mechanisms to ensure quality of teaching varies from one university to another university. Therefore, the issues become high priority in universities (McKay and Kember, 1999). They said universities are establishing and strengthening their measurement to monitor and improve quality of teaching. For the purpose of this research, quality of teaching is influence by teaching method, peer observation, communication skills and professional development.

Every year, the number of accounting and non-accounting students at FBF in UTAR Perak Campus increases. Due to that, teaching workloads for each of the lecturer and the number of tutorial groups has to be increased. Therefore, some of the lecturers would receive two subjects in one semester. As a result, the lecturers are required to perform extra duties in the process of handling two subjects and several tutorial classes. This could affect lecturers' teaching performance, hence disrupting the improvement of teaching process. Besides that, the number of teaching hours also increased due to extra subjects given. This could impede their capabilities of participating in variety of research work, develop teaching skills and attending training. The lecturer would spend most of the time in preparing teaching workloads and entertaining students during consultation hours. In consequence to that, they do not have the time to increase their knowledge and competencies to perform better.

In addition, the large number of students allocated in one class is beyond lecturers' control. The lecturer could not monitor every single student's learning process except those who are actively participating in the class discussion. It is the lecturer's responsibility to ensure that their students understood what have been taught in the classroom. Therefore, communication between lecturers and students must be very strong so that lecturers would be able to identify and tell the difference between highest performing and poorly performing students in each classroom. Since the classrooms filled with a large number of students, the universities must provide a high quality of teaching (Biggs & Tang, 2003). The students must understand all subjects taken in every semester. It is students' responsibility to learn, understand the subject matters and know how to solve it (Loeb et al., 2007). It is hard to capture what the lecturer is talking about if the students do not pay attention in the classroom. Due to that, the students need to put more effort in order to learn any new subjects and try to understand it. However, when the students failed to understand the subjects, they would be in despair. Due to this situation, the students turned lazy, stress and effortless to develop themselves. Besides that, academic performance will deteriorate and soon after that they will decide to change to another course. Hence, the problems stated above could influence the quality of teaching in higher education institution.

The objectives are to determine the factors such as teaching method, peer observation, communications skills and professional development that influence quality of teaching, to examine the relationship between factors influence and quality of teaching and to examine the difference perceptions of accounting and non-accounting lecturers towards quality of teaching factors. In this regards, this study would make an important contribution to improve teaching as it determines several teaching factors to refine teaching approaches. Also, it would provide accounting and non-accounting lecturers effective characteristics that could improve their teaching quality. In addition, this study would assist lecturers to practices the strategies which give more impact to enhance students' academic performance and assist students to understand better of the subject matter.

LITERATURE REVIEW
Teaching method
Barwani et al. (2012) suggested one teaching strategy for teachers to organize teaching material effectively. They investigated characteristics for effective teaching in education schools in Oman. Sulkowski and Deakin (2009) suggested teaching method could be suited the needs of culturally diverse groups. They examined student's behavior towards cultural conceptualization and the tactics to enhance teaching in a multinational classroom. Lam and Zhao (1998) identified teaching method as lecture, tutorial and project work that has been practiced in university. They identified appropriate teaching methods and evaluated the effectiveness in achieving educational objectives. Baruch (2006) suggested role-play as

one of teaching method that could be applied for effective treatment for different subjects and situations. He asserted on how the lecturers' role could improve teaching effectiveness. Werth (2009) suggested teaching method as problem-based learning (PBL) that could help students in developing problem-solving, critical thinking and self-directed learning skills in order to obtain knowledge in various subject matters. He examined effectiveness of PBL in developing knowledge of specific subject.

Peer observation

Sullivan et al. (2012) described peer observation of teaching process as very useful and relevant to teaching practice. They stated that it is an opportunity for teachers to discuss their teaching and to have constructive feedback. Arnodah (2013) mentioned that peer observation of teaching process would be developed but the process is vague. She aimed to assess the awareness among teachers' strategies for peer evaluation. Blackmore (2005) referred the process of peer review and defined it as the evaluation of teaching performance by peer observation. She aimed to provide a best practice framework for peer review through teaching observation as a method of appraising teaching performance. Kohut et al. (2007) stated that classroom observations are intended for reviewing the teaching process. They compare perceptions of observers and observees regarding the process of peer observation would improve teaching effectiveness. Hammersley-Fletcher and Orsmond (2005) saw peer observation as a mechanism to improve quality of teaching in higher education. They addressed questions about effectiveness process of reflective practices and methods that would improve quality of teaching. Bell and Mladenovic (2008) mentioned peer observation practice would give opportunity for tutors to learn about teaching by observing others and providing valued feedback with supportive and non-judgmental manner. They described peer observation exercises used in teaching development program and reports the effectiveness of this exercise.

Communication skills

Sabie and Androniceanu (2012), communication cannot be avoided and a favor from other people is needed to assist lecturer-student in accomplishing the objectives. They applied an instrument to measure student communication satisfaction in class by using information and communication technology (ICT) for improving lecturer-student communication. Voss and Gruber (2006) mentioned that communication may attract people to spread positive words to their friends. They developed a deeper understanding of the teaching qualities of effective lecturers that students desired. Ihmeideh, Al-Omari and Al-Dababneh (2010) explained that lecturer should develop communication skills level in order to be a successful professional academician. They examined the students'-lecturers' attitudes toward communication skills. Yesil (2010) defined communication as an ability to convey feelings and thoughts to others by using empathy and respect effectively with body-language and unmasked. She examined relation between teacher candidates' communication skills and attitudes towards their teaching profession.

Professional development

Ifanti and Fotopoulopou (2011), professional development is crucial in teaching process where the teachers need to strengthen their knowledge in order to accomplish their educational duties. They explored the notions of teachers' professional development by investigating the views of in-service primary teachers in Greece. Yurtsever (2013) focused on teachers' professional development from two perspectives such as traditional and constructivist models of professional development. She explained that traditional model is a knowledge transmission involved one way and in a top-down process. Meanwhile, constructivist model is a bottom-up process that involved collaborative and individual in gathering knowledge. She aimed to see characteristics of language teachers and their professional development. Duta and Rafaila (2014) explained professional development as an effort to understand teachers' knowledge transformation into teaching practice for students' learning growth. They aimed the importance of lifelong learning for professional development of university teaching staff and concerning the teaching skills. Vries et al. (2013) defined continuous professional development (CPD) in education as a job-embedded and career-long process with a learner-focused perspective. They explored the relationships between teachers' beliefs about teaching and their participation in CPD. Sohail et al. (2003) mentioned continuous training was to ensure staffs were continuously being informed of current status of

the procedures. They investigated quality system in order to review implementation process and evaluate effectiveness of the system.

Quality of teaching

According to Malaysia Education Blueprint 2013–2025, quality of teacher should be focused in expressing quality of teaching. The blueprint examined the challenges faced by lecturers in terms of professional development and performance management. Ghonji, Khoshnodifar, Hosseini and Mazloumzadeh (2014) mentioned that comprehensive program could be developed in order to improve quality of teaching. They investigated the factors influence quality of teaching that could improve teaching in higher education. Roman (2014) defined quality of teaching as a strategy devise for developing better teachers. She focused on quality of teaching improvement as motivating factors that lead to better teaching and reviewed factors that lead to low level of students' participation in class discussion. Chien (2007) stated that quality of teaching is not only depends on lecturers' responsibility but it also related to students and administrative departments. He adopted eleven steps of "improvement decision model" such as instructors' experience, factors for learning satisfaction, teaching quality management cycle and so on to improve quality of teaching and enhance learning satisfaction. Buabeng-Andoh (2012) mentioned successful integration of ICT into teaching process was influenced by teachers' used of technology facilities in conducting the classroom. He highlighted the factors that positively or negatively influence attitude of teachers on technology facility and intentions to use the technology in their classroom.

CONCEPTUAL FRAMEWORK

This study employs social cognitive theory (SCT) as a theoretical framework. Fritscher (2009) highlighted SCT as variation on cognitive theory that addresses the effects on people behaviour. Hence, Bullough Jr., Young, Hall, Draper and Smith (2008) stated that cognitive frameworks are needed for lecturers' growth and their teaching successful. Furthermore, Werth (2009) expressed SCT as lecturer's responsibility to impart knowledge to students in a logical, clear and understandable manner. According to Sincero (2011), SCT consists of three variables such as behavioural, environmental (extrinsic) and personal (intrinsic). The relationship between these three variables is shown in a diagram below.
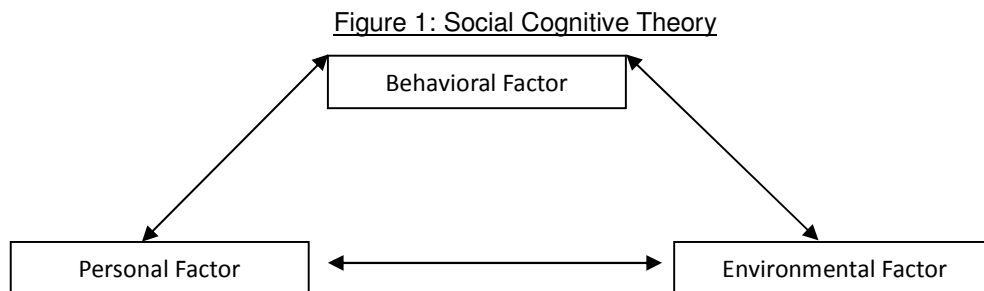
Figure 1: Social Cognitive Theory

Figure 1 showed social cognitive theory adopted from Zimmerman (1989). He explained that SCT could be used for teaching development. There are some studies applied this theory such as Pajares (2002); Sullivan (2003); Carillo (2010); Sincero (2011); Gruber (2012). Besides that, Bigge and Shermis (2004) applied SCT in order to predict people behavior. On the other hand, Borg (2003) used the term of teacher cognition as refer to cognitive teaching dimension on what lecturers know, believe and think. Furthermore, Werth (2009) expressed SCT as lecturer's responsibility to impart knowledge to students in a logical, clear and understandable manner. Therefore, SCT became an aid for students to understand the knowledge contents taught by their lecturers (Gruber, 2012).

In this study, SCT would be used as the independent variables such as teaching method, peer observation, communication skills and professional development are related to lecturers' behaviour and

their personal characteristics that influence by environmental factors. Therefore, SCT became an aid for students to understand the knowledge contents taught by their lecturers (Gruber, 2012). Also, SCT could be used for teaching development (Zimmerman, 1989).

Figure 2: The conceptual framework

| Teaching method |
| Peer observation |
| Communication skills |
| Professional development |

→ | Quality of teaching |
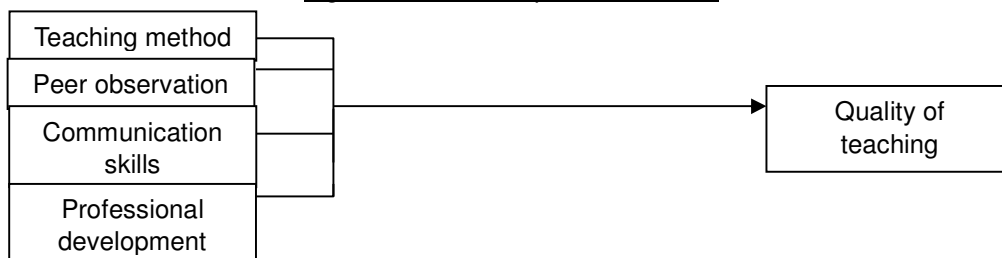
Previous study such as Barwani et al. (2012) discovered that there was significantly strong interpersonal relationship between teaching strategies and academic characteristic. Also, Werth (2009) found that PBLE was significant in order to obtain knowledge and develop problem-solving skills. However, Sulkowski and Deakin (2009); Baruch (2006); Lam and Zhao (1998) argued that effectiveness of teaching methods were difficult to found as students' acceptance on teaching methods are in different ways.

In addition, there is no specific policy in what teaching method must be applied in the classroom. The lecturers are free to use any kinds of teaching method that suitable to the subject taught.

Based on the above discussion, hypothesis is developed as:

H1: There is a positive significant relationship between teaching method and quality of teaching

Sullivan et al. (2012) mentioned that implementation of peer observation of teaching could be effective for teaching development and quality of teaching improvement. Besides that, Bell and Mladenovic (2008) revealed that valuable feedback from peers could be used in order to change the teaching practices. On the other hand, Kohut et al. (2007); Hammersley-Fletcher and Orsmond (2005) found that the lecturers needed the flexible peer observation instruments in order to accommodate their teaching styles and to develop peer observation process. Furthermore, Blackmore (2005) emphasized peer review could improve quality of teaching by accepting the criticism and not considered as being threated. However, Arnodah (2013) stressed that though Peer Teacher Evaluation has been practiced but the objective of performing the evaluation was not clear.

According to Teaching Observation Guidelines, UTAR (2011), implementation of teaching observation would be held for new lecturers without experience and those with low teaching performance. The teaching observation is not to judge lecturers' knowledge, teaching abilities and styles. It is to know what lecturers and students do and say when a class discussion takes place.

Therefore, the following hypothesis is proposed as:

H2: There is a positive significant relationship between peer observation and quality of teaching

Previous study such as Sabie and Androniceanu (2012); Voss and Gruber (2006) found communication skills helped lecturer to improve their communication with students and have a positive impact on students' attentiveness. Also, Yesil (2010) found a significant relationship between communication skills and teaching profession attitudes. However, Ihmeideh et al. (2010) revealed that no significant differences between teachers-students from childhood and educational sciences college in their negative and positive attitudes towards communication skills.

In addition, there is no specific regulation regarding communication skills that could be applied in classroom. As lecturers, they should know how to communicate in order to attract their students to be interested in the subject taught. Also, communication is important for lecturers to know their students level of understanding during class discussion.

Therefore, it suggests the following hypothesis is developed as:

H3: There is a positive significant relationship between communication skills and quality of teaching

Duta and Rafaila (2014) considered professional development as a lifelong learning in knowledge society. According to Ifanti and Fotopoulopou (2011), lecturers have an integrated view of professional development and closely related to teaching profession in attempts to improve quality of teaching. In addition, Vries et al. (2013) found there were significant relationships between student-oriented beliefs on CPD activities but there were no significant correlations for subject-matter-oriented beliefs on CPD activities. Besides that, Sohail et al. (2003) stated development programme would improve professionalism level. However, Yurtsever (2013) argued that traditional model in professional development activities were to be rejected.

According to Malaysia Education Blueprint 2013–2025, ongoing training is essential for quality of teaching. In addition, ongoing training activities would improve lecturers' skills and up-date with latest development in pedagogy. Meanwhile, Policy on staff Development, UTAR (2014) mentioned that university would provide appropriate training for lecturers to improve their teaching process. Therefore, lecturer could learn and develop their teaching skills and future career development.

Therefore, the following hypothesis is proposed as:

H4: There is a positive significant relationship between professional development and quality of teaching

This current study examined the perception between accounting and non-accounting lecturers towards quality of teaching. Based on a variety of inter-departmental respondents such as from the department of commerce and accountancy, business, economics, entrepreneurship, finance and marketing, there could be various results and different perception towards each of the independent variables.

Peltonen (2008) stated that is important for entrepreneurship lecturers to be more entrepreneurial in order to improve teaching. She also stated that professional development would improve competencies of entrepreneurship lecturers. However, she mentioned that entrepreneurship lecturers were less interested in applying entrepreneurial teaching methods.

On the other hand, Stout and Wygal (2010) emphasized best practices in order to improve teaching. However, there were negative perceptions from students reported that unprepared accounting lecturers would lead to unconcerned about teaching process. Also, they found that there were negative perceptions towards failure of accounting lecturers in communicating with their students in classroom.

Based on the discussion above, it would suggest the following hypothesis is proposed as:

H5: There is a difference between accounting and non-accounting lecturers on quality of teaching

RESEARCH METHODOLOGY

Quantitative study approach was used to examine the objectives where the data collected was to generate numerical information. Hence, descriptive study was employed in order to examine the factors influence in improving quality of teaching by comparing accounting and non-accounting lecturers. Therefore, this study was conducted by using primary data to collect the data information. The data was collected through self-administered questionnaire distributed by hand to accounting and non-accounting lecturers at FBF in UTAR Perak Campus. A self-administered questionnaire was developed for this study in order to examine the influencing factors such as teaching method, peer observation, communication skills and professional development in improving quality of teaching.

Sampling Design

The total of population for this study was approximately one hundred and sixty five (165) accounting and non-accounting lecturers. However, only one hundred and twenty five (125) lecturers were selected for this study as they are the sample respondent in order to measure the quality of teaching. From a sample respondent, only one hundred and eleven (111) lecturers were successful collected and useable to conduct this study.

Measurement for Teaching Method

According to previous study, teaching method is a factor in order to measure quality of teaching improvement. There were several teaching method could be used in classroom to enhance teaching process (Vin-Mbah, 2012). Therefore, in this current study, the variable of teaching method consists of eight items which adopted from Barwani et al. (2012); Lam and Zhao (1998).

Measurement for Peer Observation

Previous study has been discussed that peer observation would be one of the factors to measure quality of teaching improvement. Sullivan et al. (2012) stated that value of feedback from peer could be considered in order to improve teaching skills. Therefore, this variable consists of eight items which adopted from Sullivan et al. (2012); Arnodah (2013); Blackmore (2005); Kohut et al. (2007).

Measurement for Communication Skills

From the previous study, effective communication would improve quality of teaching. Sabie and Androniceanu (2012) explained communication could be seen the ways of lecturer convey the knowledge to their students in classroom. Therefore, this variable consists of eight items which adopted from Sabie and Androniceanu (2012); Voss and Gruber (2006).

Measurement for Professional Development

Based on previous study in Ifanti and Fotopoulopou (2011), professional development was important for lecturers to strengthen their knowledge in order to deliver the contents and achieved the subject objectives. Therefore, eight items were adopted from the study of Vries et al. (2013) and Sohail et al. (2003) to measure this variable.

Measurement for Quality of Teaching

Based on previous studies, quality of teaching was influenced by some factors such as lesson plan, teaching skills, teaching activities and communications skills. Therefore, to measure quality of teaching improvement for this study, this variable indicated four items which adopted from Wongsurawat (2011); Kohut et al. (2007); Sabie and Androniceanu (2012); Vries et al. (2013).

In this study, Pearson correlation coefficient analysis has been used to examine the relationship between the four independent variables (teaching method, peer observation, communication skills and professional development) with one dependent variable (quality of teaching). This analysis implemented to measure whether correlation coefficient is statistical significant. Therefore, Pearson correlation coefficient analysis has been conducted to determine factors that influence quality of teaching. In addition, multiple linear regression analysis has been conducted to examine the relationship between factors influence and quality of teaching. This analysis also has been implemented to test the hypotheses. Besides that, one-way analysis of variance (ANOVA) was used to indicate the difference perceptions between accounting and non-accounting lecturers. Furthermore, an open-ended question also has been asked to respondents in providing one suggestion deemed most pertinent on improving teaching quality.

RESULTS AND DISCUSSION

The Factors Influence Quality of Teaching

As shown in Table 1, the results showed that there was positive relationship between dependent variable (quality of teaching) and independent variables (teaching method, peer observation, communication skills and professional development). The value of correlation coefficient for teaching method was 0.488 (p-value < 0.01); peer observation was 0.434 (p-value < 0.01); communication skills was 0.568 (p-value <0.01); and professional development was 0.601 (p-value < 0.01), In addition, there

was no multicollinearity problem existed in current study as the correlation coefficient for all variables were below 0.7.

Table 1: Pearson Correlation Coefficient

		IV 1	IV 2	IV 3	IV 4	DV
IV 1	Pearson Correlation Sig.	1				
IV 2	Pearson Correlation Sig.	0.240* <0.05	1			
IV 3	Pearson Correlation Sig.	0.382** <0.01	0.464** <0.01	1		
IV 4	Pearson Correlation Sig.	0.527** <0.01	0.247** <0.01	0.483** <0.01	1	
DV	Pearson Correlation Sig.	0.488** <0.01	0.434** <0.01	0.568** <0.01	0.601** <0.01	1

Note: * Correlation is significant at the 0.05 level (2-tailed)
      ** Correlation is significant at the 0.01 level (2-tailed)
N = 111
IV 1 = Teaching Method
IV 2 = Peer Observation
IV 3 = Communication Skills
IV 4 = Professional Development
DV = Quality of Teaching

The Relationship between Factors Influence and Quality of Teaching

According to Table 2, all variables have p-value less than 0.05. This implies that all the independent variables can be used to examine the quality of teaching (dependent variable). This can be explained that quality of teaching will increase by 12.8%, 14.8%, 20.9% and 28.5% respectively for every increase in teaching method, peer observation, communication skills and professional development.

Table 2: Coefficient

Variable	Parameter Estimate	T – Value	Pr > |t|	Tolerance	Variance Inflation
Intercept	1.063	3.515	0.001	-	-
Teaching Method	0.128	2.014	0.046	0.697	1.434
Communication Skills	0.148	2.523	0.013	0.780	1.282
Peer Observation	0.209	2.908	0.004	0.629	1.589
Professional Development	0.285	4.063	<0.01	0.629	1.589

The Difference Perceptions between Accounting and Non-accounting Lecturers Towards Quality of Teaching Factors

The respondents have been grouped as accounting (32 lecturers) and non-accounting (79 lecturers). The accounting group is from Commerce and Accountancy department. The non-accounting

group are from various departments such as Business, Economics, Entrepreneurship, Finance and Marketing. Table 3 showed there is no statistically significant difference between groups as the value was above 0.05 which represented as 0.191. Hence, there are no differences perceptions of lecturers towards quality of teaching among the six departments at the FBF, UTAR.

Table 3: ANOVA

	Sum of squares	Df	Mean square	F	Significant
Between Groups	1.047	5	0.209	1.515	0.191
Within Groups	14.514	105	0.138		
Total	15.561	110			

CONCLUSION

There were three objectives has been achieved in this study. The objectives were to determine the factors influence in quality of teaching, to examine the relationship between factors influence and quality of teaching and to examine the difference perceptions of accounting and non-accounting lecturers towards quality of teaching factors. This study showed positive relationship between dependent variable (quality of teaching) and independent variables (teaching method, peer observation, communication skills and professional development). Hence, all independent variables could be used to examine dependent variable. This study found that teaching method has a positive relationship between quality of teaching as it is consistent with the past studies discussed by Barwani et al. (2012) and Werth, (2009). There was a positive relationship between peer observation and quality of teaching as it can be proof by past studies conducted by Sullivan et al. (2012); Bell and Mladenovic (2008); Kohut et al. (2007); Blackmore (2005); Hammersley-Fletcher and Orsmond (2005). In addition, communication skills and quality of teaching had a positive relationship as it was consistent with the past studies conducted by Sabie and Androniceanu (2012); Yesil (2010); Voss and Gruber (2006). Also, professional development had a positive relationship with quality of teaching as it was consistent with previous study from Duta and Rafaila (2014); Vries et al. (2013); Ifanti and Fotopoulopou (2011); Sohail et al. (2003). Meanwhile, there was no difference between accounting and non-accounting lecturers towards quality of teaching.

This study provided perception of lecturers on how to improve quality of teaching. Besides that, this study also showed that cognitive theory is useful in improving teaching and for better students' understanding of knowledge contents. Future researchers could apply this theory to conduct research on improving quality of teaching. It was suggested that this study should cover the entire university in order to know the overall lecturers performance in improving quality of teaching at UTAR Perak Campus. Future researchers are permissible to adopt this study in conducting their research by expanding the range of target respondents to have more effective research study. Future researchers also could conduct their research in other universities.

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CONSUMERS' KNOWLEDGE ON GOODS AND SERVICE TAX SYSTEM: A SURVEY IN PERAK STATE

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Abstract

An initial discussion started back in year 1988 by the Malaysian government to introduce Goods and Service Tax (GST) in the country. Finally after much delay, on 1 April 2015, GST was implemented in Malaysia in replacing the Sales and Services Tax (SST). The implementation of GST in Malaysia is expected to assist the country to overcome the increasing budget deficit since 1999. The GST system is expected to be more effective and efficient in collecting indirect tax. Before the implementation of GST, a huge amount of RM17 million were spent by the Malaysian government in providing the public with GST knowledge through workshops, seminars, public meetings, talks, briefings and printouts. According to past literature, consumers' knowledge and level of acceptance towards GST has a positive and significant relationship. Hence, with greater consumers' knowledge, consumers' acceptance towards GST will be improved. The objective of this study is to assess the consumers' knowledge on the GST system after four months of implementation. Data were collected through a questionnaire which was designed to assess the knowledge level of consumers on GST. A total of 400 questionnaires were collected in Perak state using convenience sampling method. Descriptive statistical analysis was performed and the result showed that the surveyed respondents possess moderate to high level of knowledge towards GST system. The findings of this study conclude that the awareness campaigns carried out by the government are effective towards consumers' GST education and the amount spent on this campaign has been proficiently used.

Keywords: Goods and service tax, consumer knowledge, consumer awareness, government publicity

INTRODUCTION

Goods and Service Tax (GST), also known as value added tax (VAT) is a form of multiple consumption stage tax (Moomal & Zakaria, 2014). GST has been implemented over 160 countries, including the European Union and Asian countries (Royal Malaysian Customs Department, 2012). In Malaysia, GST has replaced the Sales and Service Tax (SST) and is expected to overcome the weakness of the current taxation system. For instance, GST is able to eliminate the double taxation issue in SST.

GST is preferred as it is capable to provide income consistency and it has the ability to strengthen the country's economic growth. According to Royal Malaysian Customs Department (2012), in comparison to SST, GST is a better tax system. In terms of effectiveness and efficiency in collecting tax revenue, GST is transparent. Taxes will be fair among all businesses involved in the country and this will enhance the level of competitiveness in the global market.

Background

According to Moomal and Zakaria (2014), the implementation of GST was initially discussed in year 1988. However, the plan in implementing GST was then deferred due to the current taxation system which had been successfully operated for several decades. Subsequently, the implementation of GST was once again announced in budget 2005 with the intention of replacing SST in year 2007 (Mansor & Ilias, 2013). However, on 22 February 2006, the Malaysian Government decided to postpone the GST implementation to a later date (Mansor & Ilias, 2013). The decision to postpone was made due to the fact that government required traders to make necessary preparation on setting up the computing system and provide appropriate training to their staffs who involved in GST system development. Furthermore, collection of views from various relevant parties and further research was crucial before GST implementation could be announced.

According to the Federal Government Budget 2015 reported by Ministry of Finance Malaysia, indirect tax (17.6%) represents the third largest revenue source for Malaysian Government. Income tax (46.9%) remains as the main revenue source, while the non-tax revenue (19.1%) is the second largest revenue source for Malaysian Government. Due to the raising of subsidy bills, and the impact of the economic downturn during 1997 to 1999, the budget deficit has reached unsustainable levels (Narayanan, 2007). In actual fact, Malaysia had been experiencing difficulties in managing the deficit budget since year 1970 to present (with the exception of five good years from 1993 to 1997) (Narayanan, 2014). The global economic crisis which stroke Malaysia between year 2008 and 2009 has brought a profound impact to Malaysia economy. According to Narayanan (2007), the Growth Domestic Product (GDP) for 2008 and 2009 were only 5% and 3.5% respectively. Despite the economic crisis were over, Malaysia deficit budget persisted. Since GST is a better tax collection system, its implementation would benefit the country and hopefully solve the deficit budget. Choong and Lai (2006) highlighted that GST is not an additional tax imposed to consumer. It merely replaced the current SST system. However, since GST is more effective and efficient in the collection of indirect tax compared to SST, such move is essential to the nation. As explained by Prime Minister Datuk Seri Najib Razak, the implementation of GST would provide the country with sustainable national revenue without resorting to international loans (Syed Umar, 2013). Finally, Malaysian government has decided to replace SST with GST starting from 1 April 2015.

Problem statement

GST implementation represents part of the government's tax reform agenda to improve their capability, effectiveness and transparency of tax administration and management. Thereafter, Malaysian government has placed in a lot of contribution and effort in providing sufficient education and clear explanation to consumers on how GST system could benefit them in various aspects in the long-run. The awareness of GST need to be clear in order to increase Malaysians' confidence that the tax collected from GST will be well managed and be used in their best interest. Consequently, many initiatives were taken by the Malaysian government to improve the public awareness and knowledge towards GST system. On top of that, funds were also been allocated by the Malaysian government to educate businesses and staff, in order to allow a smooth transition from SST to GST. According to forecast budget 2014 announced by Prime Minister and Minister of Finance Datuk Seri Najib Tun Razak at the Dewan Rakyat, GST training grant of RM100 million were allocated to the business sectors in allowing them to send their employees for GST training in year 2013 and 2014 (Bank Negara Malaysia, 2013). In addition, financial assistance of RM150 million were provided to SMEs in year 2014 and 2015 for the purchase of accounting software (Bank Negara Malaysia, 2013). As for the public, RM17 million were allocated and spent in providing the public with workshops, seminars, public meetings, talks, briefings and printouts (Ibrahim, 2014; and Free Malaysia Today, 2015).

Research gap

A study was conducted by Shamsuddin, Ruslan, Halim, Zahari and Fazi (2014) which concluded that GST awareness would improve Malaysian perception and acceptance towards GST. Hence, the study prompted the relevant authorities to carry out awareness campaigns on GST system to the public

through advertisement in television, radio, billboard and even social network. However, Moomal and Zakaria (2014) commented that there are currently no studies conducted in evaluating the outcome of the intensive awareness campaigns carried out. Thus, this study would fill up the gap of knowing the consumer awareness on GST after 4 months of implementation.

Objective of the study

Under GST system, there are three types of supplies of goods and services, namely: standard-rated supplies, zero-rated supplies and exempt supplies (Mansor & Ilias, 2013). As explained by Royal Malaysian Customs Department (2012), standard-rated supplies are defined as goods and services which are subject to standard rate and the GST registered person is eligible to claim input tax credit on his business input in making taxable supplies. Zero-rated supplies are defined as those taxable supplies which are subjected to zero rate. Businesses are eligible to claim input tax credit. Items fall under the GST (Exempt Supply) Order 2014 and 2015 are exempted from GST. Businesses are then not eligible to claim input tax credit.The objective of this study is to quickly investigate the Perak State consumers' knowledge level on the newly implemented GST system including the various components of the GST system like standard-rated supplies, zero-rated supplies and exempt supplies.

Significance of the study

This study would help the government to evaluate the outcome of the intensive awareness campaigns carried out to the consumers through workshops, seminars, public meetings, talks, briefings and printouts after 4 months of implementation and to develop their future strategy towards building up the confidence of the consumers.

RESEARCH METHODOLOGY

Research Design

In order to study the consumer awareness, this study used the quantitative and cross sectional method. According to Bahrick, Bahrick, and Wittlenger (1975), cross sectional study observes one phenomenon in a short period of time. Mann (2003) observed that this method is cheap and quick. This survey has been done to know the awareness of the consumers about the newly introduced GST. Large quantity of data can be collected in a short time with a lower cost in the survey research method (Kaiser, 2011).

Population

The target population for this study consists of all consumers aged above 18 living in all towns (including Ipoh, Kampar, Setiawan, Teluk Intan, Taiping and Tapah) of Perak State, Malaysia.   Since there is large number of consumers in Perak State, there is no sampling frame available for this study.

Sampling

As sampling facilitates generalization of results to a larger population, sampling is needed to conduct a research (Ahmad & Taylor, 2009). According to Kitchenham and Pfleeger (2002), the researchers can reduce administrative costs and have ability to administer controlled follow-up procedures through sampling procedures. As there is no sampling frame available, this study used non-probability sampling method, which is cost and time efficient. Huysamen (1993) also emphasized that non-probability sampling is suitable for survey research. In order to get the data from a large population, convenience sampling method, which is an easy method, has been used. Cope (2003) suggested that convenience sampling is economical, convenient, simple and less time consuming. A sample size of 300 is considered as good (Comrey & Lee, 1992). Hence, 402 questionnaires were distributed to the consumers of Perak State who have consented to take part in the survey. The filled up questionnaires were collected back immediately by the researchers. A total of 400 questionnaires were fully completed and had been utilized in the statistical analysis.

Research Instrument

This study used self-administrated questionnaires as they are time and cost-efficient. Kaiser (2011) mentioned that questionnaires allow easier coding and data analysis for the researchers. Questionnaires had been delivered personally by hand to the consumers. The respondents had completed the questionnaires in the presence of researchers and the completed questionnaires had been collected back immediately.

Constructs Measurement

There were three sections in the questionnaire.

In Section A, the demographic profile of the respondents was presented by using nominal and ordinal scale as scale of measurement.

In Section B, questions related to some of the provisions of the newly introduced GST were included. There were totally 42 questions in Section A and Section B together. Most of the questions in Section B contained 'yes'" or 'No' answer to make it easy for the respondents to answer the questions.

DATA ANALYSIS

Demographic Profile of Respondents

A total of 400 questionnaires were distributed and collected from consumers staying in Perak state. Table 1 below shows the descriptive statistics of the demographic profiles of respondents:

Table 1: Demographic Profiles of Respondents

Demographic Factors	Category	Frequency	Percentage
Gender	Male	184	46.0
	Female	216	54.0
Age	18-21 years old	38	9.5
	22-30 years old	188	47.0
	31-40 years old	83	20.8
	41-55 years old	64	16.0
	56 years old and above	27	6.7
Marital Status	Single	236	59.0
	Married	157	39.2
	Separated and divorced	7	1.8
Ethic Group	Malay	102	25.5
	Chinese	244	61.0
	Indian	46	11.5
	Others	8	2.0
Education Level	SPM/STPM (high school)	111	27.8
	Diploma	47	11.8
	Degree	160	40.0
	Post-graduate	82	20.4
Income Level (RM monthly)	RM2,000 and below	216	54.0
	RM2,001-RM5,000	143	35.8
	RM5,001-RM8,000	36	9.0
	RM8,001 and above	5	1.2

Section B of the questionnaire includes thirty six questions in assessing the level of consumers' knowledge on GST system in Malaysia. Respondents' awareness were assessed through the 'Yes' or 'No' questions. Based on the percentage scores of the correct answers, the level of consumers' knowledge was then been divided into four levels:

(a) High (with percentage scores of 75 to 100)
(b) Moderate (with percentage scores of 50 to 74)
(c) Low (with percentage scores of 30 to 49)
(d) Poor (with percentage scores below 30)

Table 2 below shows the descriptive analysis results on respondents' knowledge towards GST system in Malaysia. The general awareness of consumers is high. 79.5% of the consumers surveyed are aware that there are three types of supplies of goods and services, namely: standard-rated supply, exempt supply and zero-rated supply. A huge majority of the consumers surveyed (94.8%) knows the GST rate is 6%.

One of the integral parts of the questionnaire is a list of twenty-six individual items, consists of a mix of standard-rated supplies, exempt supplies and zero-rated supplies. The purpose is to assess consumers' knowledge in differentiating items which should and should not be charged 6% GST by the merchandisers. Out of the twenty-six items listed, ten items are subjected to GST while the remaining sixteen items are not subjected to GST. The items listed are commonly used household items, such as, groceries, clothing, transportation and etc. As shown in Table 2, only three out of the twenty-six items are commonly answered wrongly by the respondents. The three items were medical fees from clinic visitation, laboratory test on blood glucose and cooking gas (liquefied petroleum gas) 12kg cylinder. All these three items are not subjected to GST, however, majority of the respondents had mistook that GST will be charged onto these three items. Nevertheless, majority of the questions (i.e., thirteen out of twenty-six items) were having percentage scores of 50 to 74. Hence, the findings of this study suggest that the level of knowledge on consumers surveyed is moderately high.

A high percentage (79.5%) of the respondents has the knowledge that only registered businesses are allowed to collect GST from consumers. On top of that, 98% of the respondents are aware of their rights in filing complaints on GST related matters; however, only 19.5% of the respondents get the channel in filing the complaints correctly. The rightful channel in filing GST related complaints are Royal Malaysian Customs Department (RMCD) and Ministry of Domestic Trade, Co-operatives and Consumerism (MDTCC). Nevertheless, 25.8% and 24.3% of the respondents has obtained one of the channels in filing GST related complaints correctly. Hence, it is worth noting that overall, 69.6% of the respondents will be filing GST related complaints in one of the correct channels (i.e. either RMCD or MDTCC). In another word, consumers' knowledge level in filling complaints at correct channel is moderate.

Lastly, the questionnaire assessed the respondents in their knowledge on tax invoice. 90.8% of the respondents are aware that a printed tax invoice must be present when a merchandiser is collecting the GST. However, only 46% of the respondents are able to spot that the simplified tax invoice provided in the questionnaire is invalid. In another word, 54% of the respondents have mistaken the invalid simplified tax invoice as valid. The confusion on the simplified tax invoice could be resulted due to multiple formats approved by Royal Malaysian Customs Department. On the other hand, 85.8% of the respondents are able to identify a valid full tax invoice as valid.

Overall, the level of consumers' knowledge on GST system in Perak state, Malaysia is considered to be between moderate and high level.

Table 2: Descriptive Analysis on Respondents' Knowledge

Item	Category	Frequency	Percentage	Level of Knowledge
Knowledge on the 3 types of supplies of goods and services	Yes No	318 82	79.5 20.5	High
Percentage of GST charges	5% 6% 8% 10%	17 379 2 2	4.2 94.8 0.5 0.5	High
Percentage scores on the correct answer obtained from respondents on the twenty-six items	High (75-100) Moderate (50-74) Low (30-49)	10 13 3	38.5 50.0 11.5	Moderate
Knowledge on only registered businesses are allowed to collect GST	Yes No	318 82	79.5 20.5	High
Knowledge on the consumers' rights to file complaints on matters related to GST	Yes No	392 8	98.0 2.0	High
Channel to complain on GST related matters	RMCD[a] IRB[b] MDTCC[c] RMCD & MDTCC Other wrong answers	103 17 97 78 105	25.8 4.2 24.3 19.5 26.2	Moderate
Knowledge on the requirement of printed tax invoice for GST collection	Yes No	363 37	90.8 9.2	High
Ability in identifying a valid simplified tax invoice	Yes No	184 216	46.0 54.0	Low
Ability in identifying a valid full tax invoice	Yes No	343 57	85.8 14.2	High

[a]RMCD represents Royal Malaysian Customs Department.
[b] IRB represents Inland Revenue Board Malaysia.
[c] MDTCC represents Ministry of Domestic Trade, Co-operatives and Consumerism.

DISCUSSION AND CONCLUSION

Before the implementation of GST on 1 April 2015, significant efforts had been exerted by the Malaysian government in educating the public with GST system knowledge. A total of RM17 million had been spent by the government in order to carry out awareness campaign to public through workshops, seminars, public meetings, talks, briefings and printouts. The objective of this study is to assess consumers' knowledge on GST system in answering the call of past literatures. The findings of this study suggest that the knowledge level of consumers on GST system is moderately high. The findings implied the awareness campaign carried out by the Malaysian government had been effective in raising public's knowledge on GST system. As supported by past studies, tax awareness is positively correlated to tax acceptance (Shamsuddin et al., 2014). Hence, it can also be concluded that the respondents who possessed good understanding on GST system will have high level of acceptance on GST system. Lastly, this study would like to suggest to Royal Malaysian Customs Department in standardising the format of

simplified tax invoice, so that consumers will not be confused over multiple approved formats for simplified tax invoice.

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LEVERAGE AND AGENCY COST: MALAYSIAN CONSTRUCTION LISTED COMPANIES

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Abstract

This study examines the relationship between company leverage and the agency cost among listed Construction companies in Malaysia for the year 2007 to 2012. Capturing the effect on agency cost, this study will only focus on the large size companies with total assets more than RM300 million. There are two measures of leverage applied in this study namely Debt ratio (DR) and Debt to Equity ratio (DE). The result shows that when the company assets is finance by debt, the debtholders are more concern on their interest and principal payment, hence it will restrict company from using funds to monitor agency problem. Contradict, the increase in the company cost to monitor agency problem positively affected from the company debt relative to equity. The result also revealed that, when the company profits increase, the cost to monitor agency problem tend to rise. However, dividend shows insignificant relationship towards agency cost for Construction companies.

Keywords: Agency cost, leverage, profitability, construction companies

INTRODUCTION

Ever since the agency cost was introduced, it has drawn enormous attention in the corporate world. Agency cost arises due to the conflict of interest and compensation between shareholder and management. It has caused a flak in the industry as it incurred enormous cost to company. The cost are believed to tremble company's performance as it could be used for investment for future development. It is believed that agency cost would impede leverage and increase yield spread (Leland, 1998). The cost itself not only threatens its existence but also its market competitiveness in the long run.

Recent evidence has proved that equity-based compensation helps to align management and shareholder's interest (Ertugrul & Hegde, 2008). However, there is little empirical finding on capital structure and agency cost. Formation of capital structure might posed an impact toward management's strategies. Indeed, Leland (1998) posits that shareholders will choose to reduce value of other claimant such as debtholders in the view that they will influence company decision making.

In addition, Hirthand and Uhrig-Hombrug (2010) postulate that higher leverage leads to a positive increment in agency conflict and cost. It is because debtholder keen to participate and distort investment policy adopted by the management. Company will incur greater agency cost to calm management-shareholder conflict. Conversely, Morellec, Nikolow and Schurhoff (2012) claimed that company could have adopted a high leverage in its capital structure as long as debt increases shareholder wealth. This shows that there is an ambiguity between leverage and agency cost.

The objective of this study is to examine the impact of leverage on the agency cost of the construction companies listed on the Bursa Malaysia. This paper would also address other variables that are responsible for the changes in the agency cost of this sector.

LITERATURE REVIEW

Leverage and Agency Cost

Li and Cui (2003) test the impact of capital structure on agency costs. They argued in their research that the debt decreases the agency cost as the creditors of the firm are more concerned about the principal payments and the interest. These creditors more often monitor the activities of the manager to protect firms from bankrupt. This reduces the agency cost of the firms. Consistently, Berger and Bonaccorsi di patti (2006), reported the results were consistent with the agency cost hypothesis that increase leverage may reduce agency cost but results did not show any significant proof that excessive increase in leverage may increase agency cost.

Zhang and Li (2008) explored the impact of leverage on agency cost for 323 UK firms. Using multivariate and univariate, their results confirm that agency cost is negatively related to leverage. However, when capital structure is also composed of sufficient high level of leverage, results of univariate analysis also showed opposite (positive) but non-significant relationship between leverage and agency cost. As debt increases, the monitoring cost of organization decreases because managers are more vigilant as the result of monitoring by banks (Mustapha & Ahmad, 2011). The authors studied the effect of debt financing of an organization on its monitoring cost in Malaysian organization. Moreover, as debt financing increases the cost of external audit increases as compare to internal audit. This finding suggests that lenders require an independent third to verify the financial to ensure that management is following debt covenant.

Increases debt in a business reduces agency cost by restricting discretionary cash flow available to managers and through increased monitoring by debt-holders has promoted some further metrics (Banchit et al., 2013). This finding support by Nazir and Saita (2013) which also test the impact of financial leverage on agency cost using data of 265 non-financial companies listed on Karachi stock exchange during the period of 2004-2009. The results show that total, short term, long term and contractual debt ratios are negatively related with agency cost.

The duration of the debt contract also serves as a tool that can be used to mitigate the agency costs. In other words, debt maturity plays an important role reducing the problem. The longer the duration of the loan, the more opportunities the shareholders have to profit at the expense of debt holders (Hussain et al., 2015). Besides, Johnson (2003) shows that agency costs are smallest for short term debt.

According to agency theory, the higher debt ratio decreases agency cost by aligning the interests of managers and shareholders. In sum, proving that there is negative relationship between leverage and agency cost.

Dividend and Agency Cost

Agency costs may also be mitigated through dividend policy. The payment of dividends will reduce the discretionary funds available to managers for perquisite consumption and investment opportunities that require managers to seek financing in capital markets. Hence, shareholders can use dividend policy to encourage managers to look after their owners' best interests; where higher payouts provide more monitoring by the capital markets and more managerial discipline (Basith, 2013). Agency costs matter for dividend policy also sheds light on whether dividends are used to increase or decrease agency costs. The evidence suggests that majority stockholders use high payout to mitigate conflicts with minority stockholders rather than to opportunistically exploit them by low payout (Cheffins, 2006).

According to Bhattacharya (1979), Rozeff (1982) and Jensen (1986), lower dividends do not just reduce taxes, but may also increase agency costs. That is, companies with serious agency problems may

be reluctant to cut dividends despite the large tax cost. Hence, the relationship between dividends and taxes depends on how stockholders use dividends to reduce agency costs. On the other hand, state-controlled firms are believed to pay high cash dividends in order to limit the managerial entrenchment behavior and reduce agency costs (Xu, Xin & Chen, 2006). While DeAngelo et al. (2004) supports the hypothesis that firms pay dividend to mitigate the agency costs associated with the high cash, low debt capital structures that would eventually result if they didn't.

As referring to agency theory, dividends help to overcome the agency problem stemming from the separation of ownership and control in a firm with diffused ownership (Jensen and Meckling, 1976; Rozeff, 1982; Easterbrook, 1984; Jensen, 1986). However, as agency costs falls, cash dividends become less desirable as a tool for further reducing agency costs, and thus dividends tend to decrease (Sujata, 2006). This finding is consistent with Nagar (2011) by proving that holding companies are not set up to reduce the tax cost of dividends, and the dividends they receive are not driven by the role of dividends as mitigators of agency costs. Thus, payout from the holding company has less of a role in reducing agency costs.

Profitability and Agency Cost

Agency cost could be reduced if a company is able to control the funds available to the manager (Jensen & Meckling, 1976). Jensen (1986) found that the probability of managers wasting the companies' fund for unprofitable projects could be reduced if companies return the excess cash to the shareholders. High agency cost is mainly observed in companies with high free cash flow and weak investment opportunities. The evidence suggests that strong CEO power allows the CEO to act in manners advantageous to himself but not necessarily to the shareholders, thereby worsening the agency conflict (Bebchuk et al., 2011). Shareholders would also be interested in reducing the agency conflict that gives rise to the under-investment problem. This can be done by including some form of equity as a compensation package to the management. Datta et. al. (2001) show that managers that have some form of ownership tend to be involved in risk-increasing acquisitions that would benefit shareholders as the increased risks would usually be accompanied by an increase in returns.

CONCEPTUAL FRAMEWORK
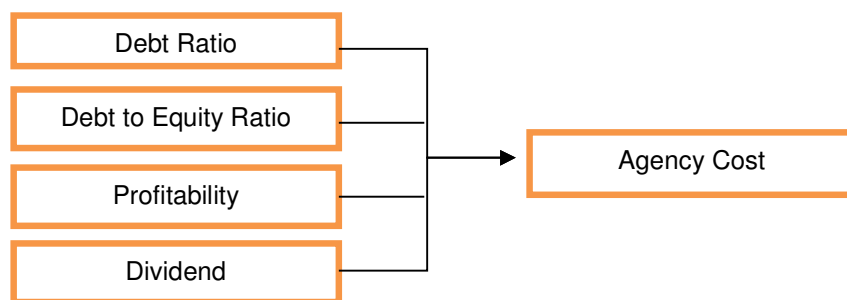
Figure 1: Proposed Conceptual Framework

This study examines the relationship between company leverage and the agency cost among listed Construction companies in Malaysia for the year 2007 to 2012. In this study, the dependent variable is agency cost while the independent variables are debt ratio, debt to equity ratio, profitability and dividend.

RESEARCH METHODOLOGY

Sampling Design

Sampling size can be defined as the number of observations in a population used to conduct research. From the original sample of 105, only 53 companies chosen since this study only focused on

company with the total assets more than RM300 million for the year 2007 until 2012. Therefore, the total observation that used to determine the relationship between explanatory variables and explained variable is 318 observations which are consistent with the Central Limit Theorem of study by Gujarati and Porter (2009). This study mainly examines large size company since higher agency cost faced by large companies (Florackis and Ozkan, 2009).

Research Procedure

The data for this study is obtained from Datastream for the year 2007 until 2012. This database is used to collect the information regarding Agency Cost (AC), Debt Ratio (DR), Debt to Equity Ratio (DE), Dividend Yield (DY) and Return on Equity (ROE). Panel data analysis is employed in order to examine the relationship between agency cost and leverage on 53 Construction companies (318 observations). The empirical model used in this study can be described as follows:

$$AC_i = \beta_0 + \beta_1 DR + \beta_2 DE + \beta_3 DY + \beta_4 ROE + \varepsilon_{it}$$

Where; β_0 = constant term; *AC* = Agency Cost for firm I; *DR* = Debt Ratio; *DE* = Debt to Equity Ratio; *DY* = Dividend Yield; *ROE* = Return on Equity.

Asset Turnover is used as a proxy for agency cost. The measurement used in this study is similar with Florackis and Ozkan (2009) who reported the higher the sales generated from the assets show the sign of low agency cost of the company. There are two measurement used in this study to examine the effect of leverage towards agency costs. First, debt ratio is measured as total debt to total assets ratio as suggested by Byrd and Mizruchi (2005) and Nazir, Nawaz and Gilani (2010). Second, leverage is also measured by debt to equity ratio consistent with previous researches such as Gaver and Gaver, (1993) and Kallapur and Trombley (1999). As for control variables, dividend yield is measured using dividend per share divided by average market price per share (Gul, 1999; Sulong & Mat Nor, 2008). Return on Equity is used to measure the company profitability which derived based on net income divided by total shareholder's equity (Skinner, 2008; Chay & Suh, 2009).

DATA ANALYSIS

Descriptive Statistic

Table 4.1: The result of descriptive statistic for the year 2007 - 2012

Variables	Mean	Median	Maximum	Minimum
AC	60.96	53.00	2.10	0.20
DR	23.18	23.00	79.00	0.00
DE	78.96	49.00	455.5	-64.00
DY	2.51	0.20	42.00	0.00
ROE	-0.78	0.70	221.0	-158.4

AC = Agency Cost for firm I; *DR* = Debt Ratio; *DE* = Debt to Equity Ratio; *DY* = Dividend Yield; *ROE* = Return on Equity.

Descriptive statistics of the variables used in the analysis is shown in Table 1. The statistics revealed that the mean (median) of agency cost among listed construction firms in Malaysia for the period of 2007 to 2012 is 60.96% (53%). It implied that, on average the firms only used 60.96% of its assets in generating revenue. Overall (median), 23.18% (23%) of a company's assets were financed by debt. The average (median) fraction of 78.97% (49%) of the company's capitals were funded by total debt with the remaining capitals were belong to shareholders' equity. In addition, average 2.51% the company's pay dividend each year relative to each share price. Besides, as a firm reported negative net income, study

also presented that in average (median), -0.78% (0.7%) of the company's financial losses being generated with the money invested by the shareholders.

Regression Result

Table 2: The relationship between leverage and agency costs

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DR	-0.661	0.154	-4.299	0.000
DE	0.052	0.024	2.161	0.032
DY	0.200	0.341	0.587	0.557
ROE	0.143	0.066	2.162	0.032
C	0.718	0.035	20.32	0.000
R-squared	0.84			
Adj R-squared	0.81			
F-statistic	24.43***			
Durbin-Watson stat	1.51			
Hausman Test	14.95***			

AC = Agency Cost for firm I; DR = Debt Ratio; DE = Debt to Equity Ratio; DY = Dividend Yield; ROE = Return on Equity.
***, **, * indicate significance at the 1%, 5 % and 10% levels*

Panel fixed and random effects models are used to validate the result of Table 2. The computed Hausman test with chi square of 14.95 significant at 1%, favours the use of fixed effects model. The R^2 of 84% shows the changes in the agency cost of the Malaysian construction companies is explained by the four variables which include debt ratio, debt to equity ratio, dividend yield, and profitability. The regression result reported F-statistic is significant at 1 percent level.

CONCLUSION AND DISCUSSION

This study examines the relationship between the company leverage and agency cost among listed construction companies in Malaysia for the year 2007 to 2012. This paper employed two measurement of leverage namely debt ratio and debt to equity ratio. Both methods show significant towards agency cost with different sign of coefficient.

The result showed that debt ratio is negatively significant towards agency cost at 1% with coefficient of -0.66%. When companies increase their level of debt to finance the total asset, the agency cost facing by them then to decrease. It shows that the debtholders prefer to use their right to secure the cash (interest and principal) instead of use it to minimize the conflict between manager and shareholders. The result reported is consistent with prior authors (e.g., Li & Cui, 2003; Berger and Bonaccorsi di patti, 2006). Meanwhile, debt to equity ratio and return on equity revealed a positive and significant at 5% to influence on agency costs. Debtholders of highly levered companies put more concern on monitoring the managers to make sure their capital invested is not wasted for unprofitable investment, hence agency cost increase. The cost of monitoring the conflict between manager and shareholders raise when profit of company boost up. Since this study applied return on equity as measurement of company profit, it showed that the profitability generated by managers is belongs to shareholders. Hence, it could make manager not satisfied and cost is needed to monitors it. Dividend yield showed positively insignificant on agency cost. It showed that the agency cost on the Malaysian Construction companies cannot be minimizing by distributing the dividend. The result is contradict with the finding of Sujata (2006), Nagar (2011) and Basith (2013).

In conclusion, based on 53 Malaysian Construction companies with total assets more than RM300 million, debt ratio showed negatively significant while debt to equity ratio is positively significant

on agency cost. Dividend yield is not significant to be used to reduce the agency problem between manager and shareholders.

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Factors Influencing the Actual Usage of Social Media among Undergraduate Students at UTAR, Perak Campus

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Abstract

The main purpose of this study was to determine the factors influence in actual usage of social media. This study also was to examine the relationship between factors influence and actual usage of social media. The household income, perceived usefulness and perceived ease of use were independent variables for our study. Actual usage of social media was dependent variable as to measure undergraduate students' capabilities in using the social media in their studies. Therefore, this study was targeted undergraduate students at UTAR, Perak Campus. In addition, Technology Acceptance Model (TAM) has been proven to be a theoretical model in helping to explain actual usage of social media. Two hundred and eighty nine (289) sets of survey questionnaires were collected from students. Data collection was analysed by using descriptive analysis, reliability test, Pearson Correlation Coefficient Analysis and Multiple Linear Regression Analysis. As a consequence, the result found that perceived usefulness (PU) and perceived ease of use (PEOU) have positive significant relationship with actual usage of social media (AU). However, household income (HI) showed contrastable result.

Keywords: household income (HI), perceived usefulness (PU), perceived ease of use (PEOU), actual usage (AU), TAM Model.

INTRODUCTION

Recently, social media has become tremendously and important for social networking. Social media is a tool to demonstrate the information and knowledge to others. Awareness to use the social media could enable users enhancing the communication sharing. According to Kaplan and Haenlein (2010), social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0. Social media has allowed the creation and exchange of User Generated Content. Web 2.0 was first used in 2004 to describe a new way in which software developers and end-users to utilize the World Wide Web (www).It is a platform whereby content and applications are no longer created and published by individuals. While, User Generated Content (UGC) is the sum of all ways in which people make use of social media. Hence, social media as a profile based podium which allows users to involve in visiting, viewing and interacting the viewpoints and opinions among the members through social and personal encounters. (B.Mathhew, 2007). Therefore, people believe that latest media technology will fulfil their psychological and social needs.

A 2013 Pew Internet reported that youth ages 12-17 that are living in lower-income and lower-education households are still somewhat less likely to use the internet in any capacity either mobile or wired. However, those who fall into lower socioeconomic groups are just as likely and in some cases more likely than those living in higher income and more highly educated households to use their cell phone as a

primary point of access. Thus, household income will jeopardize the actual usage of social media. Moreover, various individualistic and demographic factors have been shown related to the internet usage in various cultures and countries (Mark & Ganzach, 2014). Junco R, Merson D and Salter D.W (2010) stated that income was also an expected predictor of differences in ownership and use. They also mentioned that in addressing the needs of college students from diverse social strata, higher-education administrators may look for ways to "level the playing field". That's mean, education institution could offer subsidize plan to students in order to purchase a cell phones who cannot afford them, through partnership programs with service providers. Therefore, subsidize plan could enable students enhancing the actual usage of social media as a platform to communicate. Indeed, more new research is important to elucidate and elaborate on the issues as little is known about how students from diverse backgrounds respond within the different contexts in which these technologies are being deployed. Conceivably, diverse backgrounds can be treated as significant study.

According to Malaysia Social Media Statistic (2014), actual usage of social media was heavily used in Malaysia. The statistics showed that social media use in Malaysia was 55% and have jumped to 8th place compared to other countries. People believe the usage of social media as a good communication platform to share information for free. Moreover, the usage of social media in Malaysia is grown very fast due to the ease of Internet connection especially in the urban area. This group of people are focused to social interaction and tend to share everything to the public. They also emphasized the ease of Internet connection to fulfil their interest. Therefore, external factors such as household income could embrace the actual usage of social media. People could spend extra budget for Internet connection to use the social media application such as Facebook. The actual usage of social media such as Facebook is the most visited social media website in Malaysia. There was 10.4 million Facebook users in Malaysia included 3.5 million youth aged between 18 and 24. They are busy to update status without meeting their friend face to face. Hence, undergraduate students are chosen for this study to determine the factors influence in the actual usage of social media. Beside, to examine the relationship of household income (HI), perceived usefulness (PU) and perceived ease of use (PEOU) to the actual usage of social media.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was originally proposed by Davis (1986) as an adaption of Theory Reasoned Action (TRA) that has been proven to be a theoretical model in helping to explain and predict user behavior of information technology. There are two factors that are relevant in computer use behaviors such as perceived usefulness (PU) and perceived ease of use (PEOU). A key purpose of TAM is to provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intentions. According to TAM, PU and PEOU were the most important determinants of actual system use. Figure 1 showed TAM was adopted from Davis (1989). He explained on how PU and PEOU have been influenced by external variables. The attitude was concerned with the user's evaluation of the desirability of employing a particular information system application. Also, behavioral intention was the measure of the likelihood of a person employing the application.
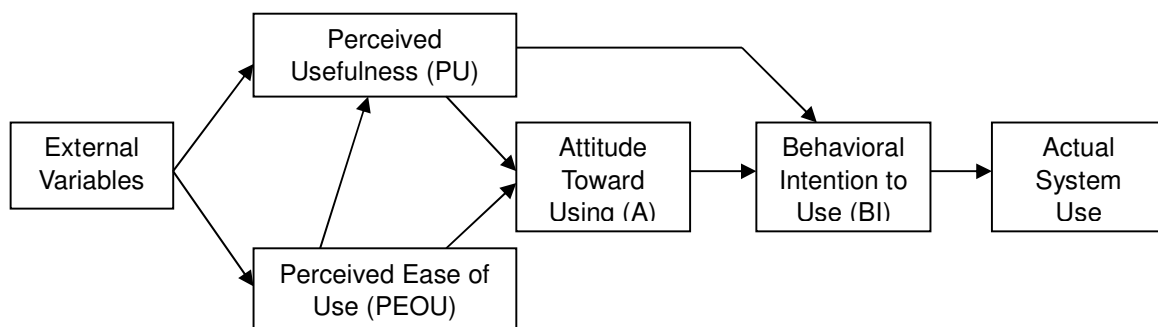

Figure 1: Technology Acceptance Model

According to Chen, Li and Li (2011), TAM is differed from TRA in two aspects. First, TAM introduced two new constructs perceived usefulness (the belief that using an application will increase one's performance) and perceived ease of use (the belief that one's use of an application will be free of effort). In TAM, both PU and PEOU could predict an individual's attitude concerning the use of an application. Second, TAM did not included subjective norm as a determinant of intention. TRA and Theory of Planned Behavior (TPB) have the capability to explore the system usage by incorporating subjective norms and perceived behavioral controls with attitudes toward using technology. However, TAM is more appropriate to be applied in online contexts because of (1) TAM is specific on information system usage for applying the concepts of ease of use and usefulness, (2) TAM is more parsimonious and (3) TAM is more robust in various information system applications.

As a result, various studies conducted by researchers tried to modify the TAM by adding new variables into it. Chau (1996) reviewed TAM by included two types of perceived usefulness as near-term and long-term. He found that perceived near-term usefulness had the most significant influence on the behavioral intention to use a technology while perceived long-term usefulness also exerted a positive even though lesser impact. Besides that, Chau and Hu (2001) compared three models which are TAM, TPB and a decomposed TPB model that is potentially adequate in the targeted healthcare professional setting in Hong Kong. They indicated that TAM was superior to TPB in explaining the physicians' intention to use telemedicine technology. However, Sun and Zhang (2003) revealed that voluntariness can be factor in determining the behavioral intention to use. Meanwhile, Pituch and Lee (2006) added system and learner characteristics as external variables that were hypothesized to impact perceived usefulness, perceived ease of use and use of an e-learning system. After conducting a structural equation modeling technique with LISREL, they concluded that system characteristics were important determinants to perceived usefulness, perceived ease of use and use of an e-learning system. Hence, they stated that the theoretical model based on TAM was well supported.

Household Income (HI)

Income was an expected predictor that could influence the actual usage of social media among the undergraduate students. In many fundamental ways, digital inequalities could be considered to be a result of the larger income divide in society. Although many students owned a computer, some students were not. Hence, they must use the computer in campus labs which results in a different user experience that may have implications for technology skills (Hargittai, 2008). Besides that, Junco et al. (2010) on the predictors of digital inequality proved that differences were found in cell phone ownership and use by income background. They found that students with lowest household income (< $9,999 per year) owned a cell phone were one third of a student from the median household income. While, students with total household income between $100,000 to $149,000 were more than three times as likely to own one as those from the median household income. However, they stated that cell phone used has shown a difference where the highest household income was positively predictive of both talking on the cell phone and texting.

On the other hand, income was associated differentially with certain beliefs about the internet and beliefs mediate consumer attitudes toward the usage of the internet (Porter & Donthu, 2006). They indicated that lower income consumers were the consumers who are most concerned about cost where their perception that cost is high relative to perceived usefulness. Furthermore, their results also showed that lower income users do not perceived the internet as useful. This also supported by Jansen (2010) as there are key differences between those who live in household making $75,000 or more relative to those in lower income household. He found that some 95% of Americans who live in household earning $75,000 or more a year use the internet at least occasionally and compared with 70% of those living in household earning less than $75,000. Even among those who use the internet, the well off are more likely than those with less income to use technology. In this current study, household income was adopted to determine how difference in household income could influence students in using social media at university.

Perceived usefulness (PU)

Rauniar, Rawski, Yang and Johnson (2014) defined PU as social media user believes that using the social media site could help them to meet the related goal-driven needs. They mentioned that social media campaign will be more successful if the user could identify the information needs and shared among the network users. On the other hand, Borrero, Yousafzai, Javed and Page (2014) described PU as individuals believe that using social networking sites (SNS) would enhance their chances to attain instrumental outcomes related to the social movement. They said that SNS have utility in mediating social interactions, make new contacts and gather as much as information about the social movement that may lead in influencing their intentions to use the SNS. Besides that, Shittu, Basha, AbdulRahman and Ahmad (2011) identified belief, attitude and intention to have link with PU. They explained that student attitude could predict their intention either to use social software or not in their studies. According to Pinho and Soares (2011), PU was referred to the users' belief on adoption of technology would contribute to a better performance. They interested to note that PU has more influence on attitude to use social networks as a way for students to express their personality. However, Glass and Li (2010) argued that social influence such as subjective norm and critical mass would be stronger than PU in the level of using technology. They emphasized on getting expert people in adopting technology in the beginning of their tasks. In this current study, PU was adopted in order to know whether the usage of social media could help them in improving their knowledge and able to share it with friends.

Ease of use (PEOU)

Rauniar et al. (2014) defined PEOU as the degree to which the social media site is free of effort. They suggested that simple to use and easy to interact are important features for social media adoption as the user could easily create an account and start using the network services. In addition, they also mentioned PEOU could help the user to accomplish their social media needs. Other researchers defined PEOU as the degree to which a person believes that the use of SNS for expressive participation in social movements will be free of effort (Borrero et al., 2014). They revealed that students' perception of the ease of use of SNS would facilitate their intention to use SNS. Furthermore, Shittu et al. (2011) observed PEOU as the ability to navigate and evaluate the content of SNS with or without any influence be it social or any other influence. They also revealed that PEOU is the stronger predictor of student attitude to the use of social software. In addition, Pinho and Soares (2011) showed the effort of user needs in using computer technology. They justified PEOU would contributes in saving effort due to ease of use that may enable the user to accomplish more tasks. However, Glass and Li (2010) described instant messaging (IM) was significant inroads in performing works. They perceived IM would be easier to use and could be useful in doing their tasks. In this current study, PEOU was adopted to examine the degree of students' stress-free in order to get connected with the social media without internet connection interruption.

Actual Usage of Social Media (AU)

Social Media refers to the means of interactions among people in which they create, share, and exchange information and ideas in virtual communities and networks. According to Rauniar et al. (2014), social media is about gathering information and sharing user-generated information with the social network or social community of a user. Social media provide the gateway for an enterprise's employees, managers, customers and all of its trusted trading partners included suppliers and retailers to access data applications and all necessary information they needed (Bakri & Kisswani, 2014). Actual usage of social media is referring to the actual use of information technology by a person. Kaplan and Haenlein (2010) classified social media into blogs (Open Diary, Technirati and LiveJournal), social networking sites (Facebook, MySpace, Google), virtual social worlds (Second Life), collaborative projects (Wikipedia), communities (YouTube and Flicker) and virtual game worlds (World of Warcraft). Nowadays, the usage of social media is growing in popularity especially among young adults. Lenhart, Purcell, Smith and Zickuhr (2010) found that 72% of all college students have a social media profile with 45% of college students using a social media site at least once a day. Furthermore, Sago (2013) investigated factors impacting the adoption and frequency of use of various social media services including Facebook, Twitter, Pinterest, and Google+ among undergraduate university students between 18 to 23 years old. He found that there is a positive relationship between the perceived usefulness, enjoyment and perceived ease of use of the

social media services and the frequency of use among 18 to 23 year old university students. It also has been supported by Calisir, Atahan and Saracoglu (2013) where the result shown the intention to use the social media is a determinant of actual usage. PU, PEOU and perceived enjoyment are important as a determinant of intention to employ the social media. They also found that perceived enjoyment has a significant effect on perceived usefulness.

On the other hand, a medication research by McGowan, Wasko, Vartabedian, Miller, Freiherr and Abdolrasulnia (2012) indicated the main factors that influencing a physician's usage of social media is to share medical knowledge with other physicians were PU and PEOU. They stated that respondents who had positive attitudes toward the use of social media were more likely to use social media and to share medical information with other physicians through social media. However, they found that neither age nor gender had a significant impact on adoption or usage of social media. Suksa-ngiam & Chaiyasoonthorn (2013) revealed social media adoption by Thai students shows differently where behavioural intention of people is determined mainly by PEOU and subjective norm rather than PU. Besides that, research by Glass and Li (2010) indicated that social influence such as subjective norm and critical mass were more important that PU and PEOU in distinguishing between the non-users and users of social media in implementing their works. On the basis of evidence from past research, our current study would examine the relationship between HI, PU and PEOU with actual usage of social media among undergraduate students in order to know the degree of frequent using the social media in their studies at university.

CONCEPTUAL FRAMEWORK
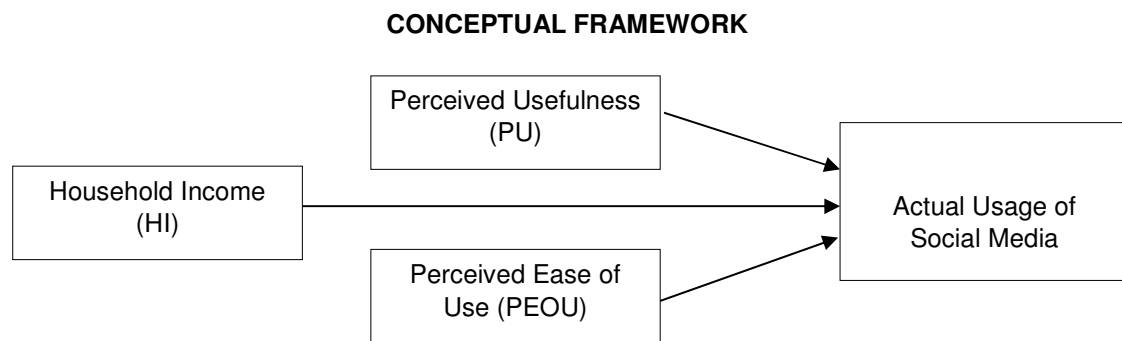
Figure 2: Developed for research

HYPOTHESE DEVELOPMENT

The hypotheses formulated after review of the literature are given below:

RQ1 - Does household income have any relationship towards actual usage of social media?

   H_1 - There is significant relationship between household income and actual usage of social media.
   H_2 - There is no relationship between household income and actual usage of social media.

RQ2 - Does perceived usefulness (PU) have any relationship towards actual usage of social media?

   H_1 - There is significant relationship between perceived usefulness and actual usage of social media.
   H_2 - There is no relationship between perceived usefulness and actual usage of social media
RQ3 - Does perceived ease of use (PEOU) have any relationship towards actual usage of social media?

   H_1 - There is significant relationship between perceived ease of use and actual usage of social media

H_2 - There is no relationship between perceived ease of use and actual usage of social media

RESEARCH METHODOLOGY

This current study employed quantitative approach to examine the research objectives. It was conducted by using primary data to collect data information. Hence, the data was collected through survey questionnaire that was distributed to undergraduate students in UTAR, Perak campus. The survey questionnaire was divided into two sections namely Section A – Demographic data and Section B consists of statement regarding the variable under study. The response of the statements are in the form of Likert Scale of between strongly disagree (1) to strong agree (5). The survey questionnaire was developed for this current study is to examine the factors such as household income, perceived usefulness and perceived ease of use that influence actual usage of social media.

Sampling Design

There are about three hundred (300) surveys were distributed to undergraduate students. However, only two hundred and eighty nine (289) surveys were successful collected and useable for further analysis. After collecting all the data, the reliability of the instrument was analysed by using Statistical Package for Social Sciences (SPSS). The instrument also undergoes content analysis by the experts. The Cronbach's Alpha reliability test was used to analyse the data and yielded a good coefficient of 0.814.

Research Procedure

In this current study, Pearson correlation coefficient analysis has been conducted to determine relation between the factors such as household income, perceived usefulness and perceived ease of use that influence actual usage of social media. In addition, multiple linear regression analysis has been conducted to test the hypothesis and draw conclusion on the factors that influence the usage of social media.

DATA ANALYSIS

The data collection was analyzed by two sections which are demographic data (gender, age and household income) and statement question for perceived usefulness, perceived ease of use and actual usage of social media. These data were collected in order to examine the factors that influence actual usage of social media among undergraduate students in UTAR.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	127	43.9	43.9	43.9
	Female	162	56.1	56.1	100.0
	Total	289	100.0	100.0	

From 289 respondents, 127 (43.9%) were male and 162 (56.1%) were female. The age of the respondents ranges from 19 years old to 26 years old. The data was then divided into categories as follows:

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	22	7.6	7.6	7.6
	19	76	26.3	26.3	33.9
	20	55	19.0	19.0	52.9
	21	52	18.0	18.0	70.9
	22	42	14.5	14.5	85.5
	23	26	9.0	9.0	94.5
	24	7	2.4	2.4	96.9
	25	5	1.7	1.7	98.6
	26	4	1.4	1.4	100.0
	Total	289	100.0	100.0	

Majority of the respondents were from the age 19 years old which constitute 26.3%, followed by those of age 20 years old (19.0%), 21 years old (18.0%) and 22 years old (14.5%). The next group aged 23 years old (n=26) which make up 9.0% and aged 24 years old (2.4%), 25 years old (1.7%) and lastly 26 years old (1.4%).

Since actual usage of social media is related to the amount of money one's have, the study collected respondents' monthly household income level. The table below shows the breakdown of the ranges:

Household Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than RM2,000	92	31.8	31.8	31.8
	RM2,001 to RM5,000	128	44.3	44.3	76.1
	RM5,000 to RM10,000	59	20.4	20.4	96.5
	More than RM10,000	10	3.5	3.5	100.0
	Total	289	100.0	100.0	

The table above showed that two top categories were evenly distributed. Respondents that had an household income of less than RM2,000 constitute 31.8% (n=92) of the respondents, 44.3% (n=128) income ranges from RM2,001 to RM5,000 and 20.4% (n=59) had income between RM5,000 to RM10,000. However, only 3.5% (n=10) had an income more than RM10,000.

Household Income (HI), Perceived usefulness (PU), Perceived Ease of Use (PEOU) and Actual Usage of Social Media (AU)

The analysis started with the determination of correlation between the factors influence the actual usage of social media

Table 1: Pearson Correlation Coefficient

Correlations

		HI	PU	PEOU	Actual Usage
Household Income(HI)	Pearson Correlation	1	.199**	.395**	.204**
	Sig. (2-tailed)		.001	.000	.000
	N	289	289	289	288
Perceived Usefulness (PU)	Pearson Correlation	.199**	1	.534**	.608**
	Sig. (2-tailed)	.001		.000	.000
	N	289	289	289	288

Perceived Ease of Use (PEOU)	Pearson Correlation	.395**	.534**	1	.551**
	Sig. (2-tailed)	.000	.000		.000
	N	289	289	289	288

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

A Person coefficient correlation was computed to assess the influence between respondents' household income. There was a positive correlation between the variable, r=0.204, n=289, p=0.001. It means that household income gets higher and at the same time their usage of social media also increases. Another positive correlation was also noted between perceived usefulness and actual usage of social media; r=0.608, n=289, p=0.001. This means the intention to use social media as a communication platform get higher when they believe the usage of social media is useful. Lastly, there was also positive correlation between perceived ease of use to the social media usage. The result showed r=0.551, n=289, p=0.001. It is easier to find internet connection as it becomes indicator to enhance the usage of social media among undergraduate students.

The Relationship between the Factors Influence and Actual Usage of Social Media

The second analysis is Multiple Linear Regression (MLR) was used to examine the relationship between household income (HI), perceived usefulness (PU) and perceived ease of use (PEOU) to the actual usage of social media.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665a	.442	.436	.54396

a. Predictors: (Constant), HI, PU, PEOU

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.366	.220		1.662	.098
	HI	-.008	.043	-.009	-.184	.854

PU	.517	.062	.439	8.371	.000
PEOU	.392	.068	.320	5.733	.000

a. Dependent Variable: Actual Usage

Multiple Linear Regressions was run to test the three hypothesis sets. The result showed that the 1st hypothesis was rejected and we accepted the null hypothesis that stated income does not influence the usage of social media. The 2nd and 3rd hypothesis was accepted. The result showed there is a significant impact opposite usefulness to the usage of social media (p<0.05). The same result has been shown that significant relationship between ease of use and social media usage. Therefore, the hypothesis that stated a significant relationship between ease of use and social media usage is accepted and reject the null hypothesis.

CONCLUSION

The current research suggests that social media usage have created a phenomenon over the past decade especially among the undergraduate students. The results obtained from this study have shown that a reasonable number of undergraduate students between 18 to 26 years old used social media as a tool for viewing and interacting the viewpoints and opinions in their studies. However, among the three factors, there were two results showed positive relationship which are perceived usefulness and perceived ease of use towards social media usage. Whereas, negative relationship revealed by the household income factor on the usage of social media. The negative significant relationship is due to the data collected from household income instead of personal income from prior research.

In conclusion, this study contributed more information about factors influencing the actual usage of social media among the undergraduate students. Despite, future research could explore more on demographic factors other than household income such as courses taken in order to know which courses are most applying social media.

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INFLUENCING FACTORS ON ACCOUNTING STUDENTS' PREFERENCE TOWARDS CAREER PATH

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Abstract

The objective of this study is to investigate the factors which influence accounting students' preference towards career path. Career path refers to the choices of jobs and occupational positions an individual may choose to hold. In this study, the respondents are accounting students. Accounting students may choose to advance their career into one of the following accounting related areas, namely: financial accounting, management accounting, taxation, auditing, finance and etc. According to past literatures, choices of career path are influenced by intrinsic motivation, extrinsic motivation, third parties and career exposure. A self-administered survey was used to collect data from students in one of the private universities in Malaysia. A total of 306 questionnaires were collected for data analysis using Statistical Analysis System (SAS). The findings of the study suggest undergraduate accounting students are more influenced by intrinsic motivation and career exposure in selecting their career path. Whereas third parties and extrinsic motivation are less likely to influence the undergraduate accounting students in their career choice. The theoretical contribution of this study is the inclusion of new variables in the model to ascertain which factors are significant in influencing accounting students' preference towards career path. The professional accounting bodies may benefit from the findings of this study as it may provide a basis in designing the members' recruitment strategies.

Keywords: Intrinsic motivation, extrinsic motivation, influenced by third parties, career exposure, career path

INTRODUCTION

According to Malaysia Institute of Certified Public Accounting (MICPA), accounting is a system of organizing, maintaining, and auditing the books of a firm; art of analyzing the financial position and operating results of a business house from a study of its sales, purchases, overheads and etc. In Malaysia, the profession of accountant is regulated by a statutory body called Malaysian Institute of Accountants (MIA) which established under the Accountants Act, 1967. Apart from regulating the practice of accountancy profession, the MIA also plays a significant role in enhancing the competency level of the accountancy professions in meeting the market demand. As reported by Nor, Zaini and Zahid (2013), Malaysia plans to achieve 80,000 professional accountants by year 2020. However, total registered MIA members in the country are only 29,624 for the year 2013/2014. The target is still far behind the targeted number. Apart from that, as reported by Southern University College in 2014, Malaysia is also in the shortage of qualified tax accountants, as well as qualified cost accountants. One of the reasons is outflow of trained and qualified accounting professionals to neighbouring countries, such as Singapore. A view on the members' recruitment in Association of Chartered Certified Accountants (ACCA) and Chartered Institute Management Accountants (CIMA) has indicated a slanted preference by accounting students. In year 2013, ACCA has recruited 10,361 new members while CIMA has only recruited 5,527 new members. The low members' recruitment in CIMA may be an indicator in the accounting students' preference

towards their career paths. Hutaibat (2005), as cited in Hutaibat (2012), explained the lack of management accounting preference could be due to the lack of formal education in management accounting. Past literatures revealed other influencing factors using social cognitive career theory include intrinsic motivation, extrinsic motivation, third parties influence and career exposure.

The objective of this study is to identify factors which influence the accounting students in their career path. Basically, accounting students have many choices in terms of career advancement upon their graduation. They may advance into areas of financial accounting, taxation, management accounting, auditing, finance and etc. This study includes new variables in the model to ascertain which factors are significant in influencing the accounting students' preference towards career path. Besides, the educational institutions may benefit from this study as subject teachers or academic counselors may use the findings of this study in assisting their students in their career choice. On top of that, the professional accounting bodies may also benefited as the findings could provide a basis to them in designing the members' recruitment strategies.

LITERATURE REVIEW

Social Cognitive Career Theory

In this study, social cognitive career theory (SCCT) which was developed by Lent, Brown & Hackett (1994) were used in explaining the variables which influence a person's career choices. According to Lent et al. (1994), social cognitive career theory refers to the process of an individual developing his or her career choices, vocational interests and persistence of her or his career. There are three major variables involved in the career choice process, which are personal, contextual and behavioral variables (Flores, Robitschek, Celebi, Andersen & Hoang, 2010). The concept of SCCT was regularly used by past literatures related to career choices. A past study conducted by James & Hill (2009) had used SCCT as a framework in analysing the phenomenon whereby majority African-American students are uninterested to advance accounting as their career option.

As explained by Chantara, Kaewkuekool & Koul (2011), SCCT comprises of three primary tenets, namely: self-efficacy, outcome expectations and goals. Self-efficacy refers to an individual's faith about his or her capabilities to achieve a course of action which is related to career achievement (Mandzik, 2011). Human with strong sense of self-efficacy will usually place great effort in accomplishing task despite of the obstacles they encounter. Outcome expectations, on the other hand, refer to the beliefs on the future consequence after certain behaviour is performed (Mandzik, 2011; Chantara et al., 2011). Lastly, goals are defined as a person's determination to decide on specific outcomes of learning or performance. The composition of goals represents critical mechanism which involves the method which a person exercise its self-empowerment.

Career Path

Career path is defined by Yusoff, Omar, Awang, Yusoff & Jusoff (2011) as a lifelong journey which should be planned at the beginning of a person's career. On the other hand, Joseph, Boh, Ang & Slaughter (2012) defined career path as an occupational positions held by an individual for the entire lifetime. A person could advance into a career of business, law, academic, entertainment and etc. According to Joseph et al. (2012), a person's career path is influenced by the personal attributes of the individuals. Career path may also refer to the work experiences, instead of the progress from career, personal growth, job status and job satisfaction (Jennifer, 2010 as cited in Yusoff et al., 2011).

Intrinsic Motivation

Generally, motivation is divided into intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to something or an activity which brings personal satisfaction (Ryan & Deci, 2000). Ryan & Deci (2000) further explained that intrinsic motivation is a positive experience a person has when he acts out of his own interest or challenge, it is not influenced by the external factor such as pressures,

rewards or force by others. On the other hand, Jackling & Keneley (2009) defined intrinsic motivation as a personal contentment achieved from chasing and searching some activity. Intrinsic motivation includes two components, namely personal interest and personal choice.

A past study was conducted by Odia & Ogiedu (2013) which inspected the factors affect accounting students' career choice decision in Nigerian University. All 300 questionnaires were collected from undergraduates in three different universities. The t-test analysis showed that intrinsic motivation was an important factor for accounting students. Findings found that intrinsic motivation can positively affect the career path. Students prefer accounting simply because accounting is interesting. The students are also confidence in getting good result and the students are addicted on numbers and figures. These factors had intrinsically motivated students to study accounting.

Another past study conducted by Mbawuni & Nimako (2015) examined the job-related and personality factors that influence the career decision for accounting student from University of Education, Winneba. Altogether 516 questionnaires were collected from the undergraduate accounting students. Findings from this study showed feelings and perception towards the accounting profession have positive and significant influence towards career decision in accounting students. On the other hand, according to Adeleke, Binuomote & Adeyinka (2013), personality factors which included aptitude and attitude are shown as significant factors of personality in the progress of career interest's determinant. Respondents of that study comprise of secondary school leavers from urban and rural area. Therefore, this leads to the hypothesis that:

H[1]: There is a positive relationship between intrinsic motivation and career path.

Extrinsic Motivation

As explained by Ryan & Deci (2000), extrinsic motivation is different from intrinsic motivation. A person may be extrinsically motivated in performing some tasks even though they do not enjoy the task, as he may be working for expected rewards (Bainbridge, 2015). As such, Bainbridge (2015) defined extrinsic motivation as a motivation factor which comes from outside of an individual.

A study had been carried out by Hejazi & Bazrafshan (2013) which consist of 75 questionnaires to survey the perception of graduate accounting students in universities of Iran regarding their interest in management accounting. The result showed management accounting is less preferred than financial accounting and auditing among the accounting students because financial accounting could provide them with better extrinsic motivation in terms of the higher pay and better benefits. The findings of the study concluded that extrinsic motivation could influence the career path. Apart from that, there are also other past studies which have found that extrinsic motivation is positively associated with career path (Jackling & Keneley, 2009; James & Hill, 2009; and Demagalhaes, Wilde & Fitzgerald, 2011). Based on these past studies, the common extrinsic motivation factors found to influence the career path are salary and the availability of job opportunities.

However, Porter & Woolley (2014) found that the effect of extrinsic motivation is smaller in comparison to intrinsic motivation in terms of career choice. The study was conducted in a single university with a total of 278 questionnaires being collected and analysed. Even though Porter & Woolley (2014) agreed that accounting career does provide extrinsic benefits, such as better pay and career stability, intrinsic motivation is a greater factor in influencing the career path. Despite the mixed result found, the hypothesis of this study on extrinsic motivation is as follows:

H[2]: There is a positive relationship between extrinsic motivation and career path.

Influence of Third Parties

Career choice can also be affected by an individual or a group of people which includes family members, friends, career guidance teacher and career consultant. Numerous past studies have found that third parties influence is one of the important factors which influence career path of accounting

students. According to these past studies, students are influenced by parents (Byrne, Willis & Burke, 2012; Myburgh, 2005; Porter & Wolley, 2014; Tan & Laswad, 2006; Umar, 2014), subject teachers (Byrne et al., 2012; Myburgh, 2005), relatives (Myburgh, 2005) and friends (Porter & Woolley, 2014).

However, one of the past studies conducted by Wally (2013) who examined that the factors which influence accounting students has concluded that influence by third parties is less significant. Wally (2013) conducted the study in University of Botswana with a collection of 51 questionnaires from final year accounting students. The findings of the study suggested influence from parents, peers and secondary teachers are unimportant. Conversely, availability of career advancement, personal interest towards the subject, job opportunities available and higher earnings are more important factors in influencing the accounting students' career path. Despite the mixed result found, the hypothesis of this study on influenced of third parties is as follow:

H[3]: There is a positive relationship between influence of third parties and career path.

Career Exposure

In this study, career exposure refers to the students' exposures to career related information. According to Ghani, Said, Nasir and Jusoff (2008), most accounting students gained career exposure through professional accounting bodies. Ghani & Said (2009) commented that it is important for students to be exposed on the nature of an accountant's job and what type of career it offers. With greater exposure on career related information, one can make better decision in their career choice.

Past studies have indicated career exposures given by professional practitioners have influencing factors towards students' career choice (Ghani et al., 2008; Sugahara & Boland, 2006; and Hutaibat, 2012). A study conducted by Ghani et al. (2008) in one of the universities in Malaysia had collected a total of 802 questionnaires from first and final year students. The result shows slightly more than half of the students had obtained some forms of exposure during their university life. The exposures were obtained from lecturers, as well as through career talks provided by professional accounting bodies and counseling sessions. On the other hand, a study in investigating the factor which influence students to be interested in pursuing management accounting careers were conducted by Hutaibat (2012). The study had found that the accounting students preferred public accounting as their career choice compared to management accounting area due to lack of seminars, workshops and tutorials organized by their universities. As a result, students are lack of detail information and sufficient knowledge with regards to career options in management accounting area. Through this study, it suggests the importance of career exposure towards students' preference in career path. Therefore, this leads to the hypothesis that:

H[4]: There is a positive relationship between career exposure and career path.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed conceptual framework
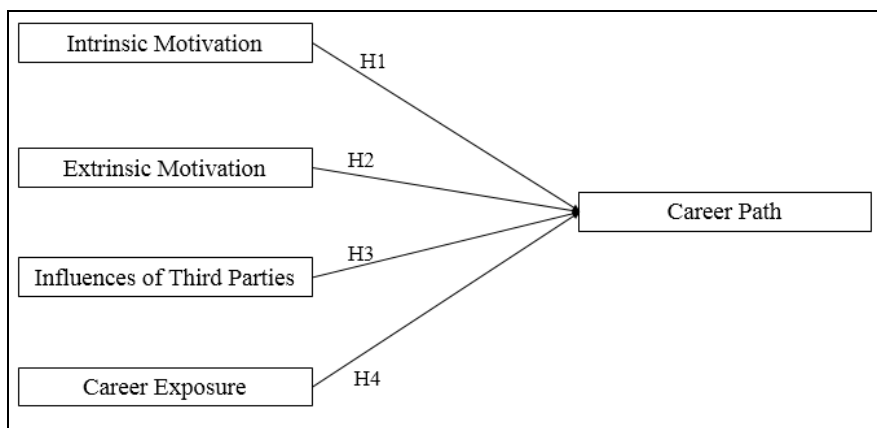
Source: Adapted from Mustapha & Abu Hassan (2012), Hutaibat (2012), Odia & Ogiedu (2013) and Ghani et al. (2008)

RESEARCH METHODOLOGY

This study is conducted in Universiti Tunku Abdul Rahman (UTAR) as it is a reputable higher learning institution which recruits a huge number of accounting students annually for its accounting programme. Convenience sampling is applied in this study. According to Huysamen (1993), non-probability sampling is a useful technique in data collection. Convenience sampling technique represents a fast, simple and convenient technique in obtaining data from large population. Self-administered questionnaires were distributed and collected immediately. Items in the questionnaires were adapted from past studies. Both intrinsic motivation and extrinsic motivation are measured using 5 constructs adapted from Odia & Ogiedu (2013). Influence by third parties is measured by 5 constructs adapted from Hutaibat (2012) and Ghani et al. (2008). Career exposure is measured using 5 constructs adapted from Hutaibat (2012); and career path is measured using 5 constructs adapted from Yusoff et al. (2011). Before the questionnaires were distributed, a pilot test of 30 samples were conducted in ensuring the questions are reliable and understood clearly by the respondents. Five-point Likert Scale ranging from 1=strongly disagree, 2=disagree, 3=neutral, 4=agree to 5=strongly agree were used to measure each item. For the measurement of gender, programme of study and family background of the respondents, nominal scale was used. Ordinal scale was used to measure age, education level and rank of choices of accounting students. A total of 306 sets of usable questionnaire were collected. The questionnaires collected were then keyed in to Statistical Analysis System (SAS) for further analysis.

DATA ANALYSIS

Table 1 summarised the demographic profile of the respondents of this study. The respondents of this study consist of 173 (56.54%) female and 133 (43.46%) male. Most of the respondents are around 21 years old, 22 years old, and 20 years old which comes to 30.07%, 29.08% and 27.45% respectively. The remaining respondents are 19 years old (13.40%). There are 106 respondents (34.64%) in their second year of degree programme. Respondents in the first and third year consist of 88 (28.76%) and 86 (28.10%). Only a small number of students (8.50%) are in the fourth year as these are students who extended their three years degree programme. More than half of the respondents (51.63%) do not have family or friends who are accountants. Close to half of the respondents (147 respondents, 48.04%) have indicated that accounting programme was their first choice.

Table 1: Demographic Profile of Respondents

Profile	Category	Frequency	Percentage (%)
Gender	Female	173	56.54
	Male	133	43.46
Age	19	41	13.40
	20	84	27.45
	21	92	30.07
	22 or greater	89	29.08
Year of programme	First year	88	28.76
	Second Year	106	34.64
	Third year	86	28.10
	Fourth year	26	8.50
Accounting professionals among family members or friends of respondents	Yes	148	48.37
	No	158	51.63
Rank of choice on accounting programme	First choice	147	48.04
	Second choice	105	34.31
	Third choice	54	17.65

Table 2 below shows the mean, standard deviation and result for reliability and normality. Career path has the highest mean of 3.6098. This deduce that majority of the respondents agree with our statements that they clear of their career choices upon graduation. The second highest mean is the extrinsic motivation (3.5314). This shows that majority of the respondents agree that higher pay and better job opportunities are important to them. Cronbach's alpha is frequently used in testing reliability of data. According to Tavakol & Dennick (2011), an acceptable value of Cronbach's alpha is 0.70 and above. As seen from Table 2, all of the constructs have Cronbach's alpha value of 0.7 and above which indicate that the multiple items used in measuring each construct are reliable. Lastly, skewness and kurtosis is used to assess normality. Kurtosis is related to the distribution's flatness, while skewness measures the symmetry. Overall, the data appears to be normally distributed. According to DeCarlo (1997), kurtosis values in the range of ±3 are considered an acceptable. As for skewness, a range of ±2 is considered acceptable (West, Finch & Curran, 1995). The results shown in Table 2 shows that constructs are normally distributed as the skewness values are within the range of ±2 and the kurtosis value are within the range of ±3.

Table 2: Mean, Standard Deviation, Reliability and Normality Results

Variables	Mean	Standard Deviation	Cronbach's Alpha	Skewness	Kurtosis
Intrinsic motivation	3.4374	1.1630	0.8551	-0.3163	-0.3432
Extrinsic motivation	3.5314	0.9220	0.8031	-0.2449	-0.3008
Influence of third parties	3.2379	1.0463	0.7592	-0.1609	-0.4455
Career exposure	3.4889	0.8823	0.7502	-0.2756	-0.1816
Career path	3.6098	0.9454	0.8013	-0.2519	-0.5493

Table 3 shows the result from Pearson correlation analysis. Since the value of correlation between each variables are below 0.9, there are no multicollinearity problem (Saunders, Lewis & Thornhill, 2009). As seen from table 3, the highest correlation between the independent variables is 0.59499 and since it is below 0.9, the multicollinearity problem does not exist.

Table 3: Pearson Correlation Analysis Results

	Intrinsic motivation	Extrinsic motivation	Influence of third parties	Career exposure	Career path
Intrinsic motivation	1				
Extrinsic motivation	0.49885 <0.0001	1			
Influence of third parties	0.22283 <0.0001	0.39503 <0.0001	1		
Career exposure	0.39976 <0.0001	0.59499 <0.0001	0.39684 <0.0001	1	
Career path	0.59933 <0.0001	0.46208 <0.0001	0.18249 <0.0001	0.48257 <0.0001	1

Multiple regression analysis was conducted to examine the relationship between several independent variables and one dependent variable. Table 4 below shows the result from multiple regression analysis. The proposed model was adequate as the F-value (58.42) was significant at 0.05 level (Pr>F = <.0001). Thus, this indicates that the overall model was reasonable fit. As seen from Table 4, the adjusted r-square (adjusted R^2) of the model is 0.4296. This indicates that 42.96% of the variance in the career path can be explained by the four independent variables, namely: intrinsic motivation, extrinsic motivation, influence of third parties and career exposure.

Result of the hypothesis testing for the independent variables' relationship with the dependent variable is shown at Table 4 below. Two out of the four independent variables: intrinsic motivation; and career exposure have p-value less than 0.05 and therefore, null hypothesis is rejected. This study has concluded that both intrinsic motivation and career exposure have positive relationship with career path. For extrinsic motivation and influence of third parties, the p-value is above 0.05, hence, the null hypothesis is not rejected. Therefore, both extrinsic motivation and influence of third parties do not have significant relationship with career path. Lastly, from the multiple regression analysis results, the following prediction model is formed:

Career path = 1.0075 + 0.4030(IM) + 0.1045(EM) − 0.0611(ITP) + 0.2997(CE)

Where, IM stands for intrinsic motivation
EM stands for extrinsic motivation
ITP stands for influence of third parties
CE stands for career exposure

According to the equation above, the most powerful antecedent to career path is intrinsic motivation. It means every 1 unit increase in intrinsic motivation, career path will increase by 0.4030 unit. The second powerful antecedent is career exposure to career path. Every 1 unit increase in career exposure will resulted an increase of career path by 0.2997 unit.

Table 4: Multiple Regression Analysis Results

Model	Unstandardised coefficients		Standardised coefficients		
	Beta	Std. error	Beta	t-value	Sig.
(Constant)	1.0075	0.2005		5.02	<.0001
Intrinsic motivation	0.4030	0.0445	0.4569	9.06	<.0001
Extrinsic motivation	0.1045	0.0601	0.1021	1.74	0.0831
Influence of third parties	-0.0611	0.0455	-0.0647	-1.34	0.1804
Career exposure	0.2997	0.0630	0.2648	4.75	<.0001
R^2	0.4370				
Adjusted R^2	0.4296				
F-value	58.42				
Sig. F	<.0001				

CONCLUSION AND DISCUSSION

The findings of this study have concluded that intrinsic motivation and career exposure have positive relationship with career path. However, extrinsic motivation and influence of third parties do not have significant relationship with career path.

The result of this study is supported by past studies. According to past studies, intrinsic motivation was an important variable in influencing career path (Jackling & Keneley, 2009; Ryan & Deci, 2000; Adeleke et al., 2013; Odia & Ogiedu, 2013; Mbawuni & Nimako, 2015). Most of the respondents reflect that they choose accounting as their career choice because they liked calculation and they found accounting is interesting. Past studies conducted by Ghani et al. (2008), Sugahara & Boland (2006) and Hutaibat (2012) have also concluded career exposure has a positive relationship with career path. This is in-line with the findings of this study. The respondents need sufficient information on accounting career and exposure to choose their career path. The findings of this study have also indicated that extrinsic motivation has no significant relationship with career path. This is supported by Porter & Woolley (2014) which found that extrinsic motivation is not as influential as intrinsic motivation. Influence in third parties is also to have insignificant relationship with career path, which is in-line with the past study conducted by Wally (2013) and Hejazi & Bazrafshan (2013). According to Hejazi & Bazrafshan (2013), interest of family members and friends do not affect the students' own interest.

This study is beneficial to the professional accounting bodies in designing their strategies for members' recruitment. From the findings of this study, shortage of qualified cost accountants as mentioned earlier could be solved by creating interest on secondary school students before they enter into tertiary education. Professional body, such as CIMA and ACCA may consider in providing more talks, seminars and events in improving secondary school students' interest towards management accounting. Besides, talks, seminars and events on management accounting career could provide the tertiary students with further career exposure in management accounting area. With more career exposure towards management accounting career, accounting students' interest towards management accounting career could be further improved.

For future research, the model could be further improved by replacing the two insignificant independent variables to other independent variables, such as employer requirement and sources of information from media as determinants for career path.

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ADOPTION OF MALAYSIAN PRIVATE ENTITIES REPORTING STANDARDS: AN INSTITUTIONAL PERSPECTIVE

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Abstract

Malaysian Accounting Standard Board (MASB) has issued Malaysian Private Entities Reporting Standards (MPERS) on 14th February 2014. MPERS will be the single uniformed standards for all private entities in Malaysia effective from 1st January 2016. In this context, this study intends to examine the perception of Malaysian accounting professionals regarding the desirable and undesirable characteristics of MPERS, the potential challenges of MPERS implementation and the influence level of the institutional factors on the MPERS adoption in Malaysia. This study will also investigate the impact of accounting profession in the adopting of MPERS. Institutional and legitimacy theories are utilized to explain the incentives and pressures for MPERS adoption. This study will examine the perceptions of the three different classes of Accountants, Accountants in public practice (Certified Public Accountants); Accountants in industry (Chief Accountants or Chief Financial Officers); and Accountants in academia (the accounting lecturers and researchers) in Malaysia by using quantitative methods with primary data collected from a survey questionnaire. The collected data will be analyzed using Structural Equation Modeling. The findings of this study are anticipated to provide useful and timely information to the MASB in making favorable provisions affecting the accounting practices, which in turn, will support the social and economic development in Malaysia. This study is expected to furnish some early evidences on the MPERS adoption in Malaysia besides bringing some fresh perspectives by applying institutional theory in the adoption of MPERS.

Extended Abstract

Accounting Standard Board (MASB) has issued Malaysian Private Entities Reporting Standards (MPERS) on 14th February 2014 which will be the single uniformed standards for all private entities in Malaysia. The purpose of this thesis is to examine key factors that are likely to influence the possibility of adopting MPERS in Malaysia. Specifically, the thesis examines the perception of Malaysian accounting professionals regarding the desirable and undesirable characteristics of MPERS, the potential challenges of MPERS implementation and the influence level of the institutional factors on the possibility of MPERS adoption in Malaysia.

This study is aim to evaluate the perceptions of accounting professionals (practitioners, company accountants and accounting academics) towards the features and implementation of MPERS. Secondly, the study will investigate how the isomorphism pressures (coercive, normative, mimetic and legitimacy) influence the adoption of MPERS in Malaysia. Finally, the study will integrate the strength of accounting profession to investigate the impact of accounting profession in adopting and implementation of MPERS.

The aim of this research is to identify major factors that could influence the application of MPERS by emerging and developing economies like Malaysia. In this study, incentives and pressure for convergence of MPERS in Malaysia are explained by institutional and legitimacy theories supported by the concepts of institutional isomorphism (i.e. coercive, mimetic, normative isomorphism).

Malaysian accounting profession and academic community could also benefit from the movement from the PERS to MPERS. With the growth of MPERS adoption in Malaysia, the Malaysian financial statement preparers, public auditors, and accounting academics will have to become knowledgeable about the international standards. This motivates the Malaysian practitioners and academics to obtain training and sit for examinations of international accredited professional bodies such as CPA Australia and the Association of Chartered Certified Accountants (ACCA).

Lastly, the study will evaluate the support and opposition in switching from PERS to MPERS by taking into consideration the views of three different accounting stakeholder groups in Malaysia (i.e. public auditors, corporate accountants and accounting academics). The findings of the project are anticipated to provide useful and timely information to the Malaysian Accounting Standards Board in making favourable decisions affecting accounting practices, which in turn, will support social and economic development in Malaysia.

This current study examines the perceptions of the three different accountant sub-groups in Malaysia by using mixed methods with primary data collected from a survey questionnaire and interviews. The first stage, descriptive data analysis, is planned to be conducted by the statistical software Statistical Package for the Social Sciences (SPSS). The second stage, the relationship and model fitness of the hypotheses and latent variables are tested by the Structural Equation Modelling (SEM) program, namely Analysis of Moment Structure (AMOS).

ASSESSING THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE, SUSTAINABILITY DISCLOSURE AND FINANCIAL PERFORMANCE

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Abstract

Corporate governance is a monitoring mechanism created due to the possible conflict of interest resulted by separation of ownership and control between the shareholders and the Board of Directors. With the introduction of corporate governance, companies' control and procedures can be improved. Shareholders can then be enjoying greater assurance as there is a greater likelihood that the management is acting in the shareholders' best interest. The past literatures support corporate governance as effective corporate governance helps companies to increase firm's value, attract foreign investors and improve quality of reporting. Past studies also indicated that investors are drawn to companies which actively involved in sustainability activities. When companies are involved in sustainability activities, disclosures of such involvements will be reported by companies through their annual reports. Despite the increasing number of companies making sustainability disclosures in their annual reports, the real commitments from Malaysian companies onto sustainability activities are questionable. According to a survey conducted by PricewaterhouseCoopers in 2014, only 35% of companies have dedicated teams to drive and monitor sustainability strategies. In view of the increasing occurrence of natural disasters worldwide, it is a high time for companies to seriously consider their authentic involvements in sustainability activities. This study identifies a corporate governance attribute: CEO duality, from agency theory perspective, in assessing its relationship to the financial performance, as well as its relationship to the sustainability disclosure. Agency theory is chosen for this study as it is frequently used in the past literatures in explaining the principal-agent relationship between the shareholders and the Board of Directors. According to Malaysian Code of Corporate Governance 2012, the position of chairman and CEO should be held by two different individuals. Samples of the study comprise of companies that are listed on Bursa Malaysia Main Board. Data will be collected through the companies' annual reports in the financial year 2014. The theoretical contribution of this study is through the extension of previous researches by exploring the relationship between corporate governance towards sustainability disclosure and financial performance. Many past researches focus on the relationship of corporate governance towards financial performance; and sustainability disclosure towards financial performance separately. The findings of this study will provide a basis for the policymakers and practitioners in deciding the worthiness of investments in sustainability activities and reports.

Keywords: Corporate Governance, Sustainability Disclosures, Global Reporting Initiative (GRI), Financial Performance

EMPIRICAL EVIDENCE OF PERFORMANCE MEASUREMENT OF INTERNAL AUDIT FUNCTION ON ITS EFFECTIVENESS

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Abstract

Performance measurement of internal audit functions can definitely play important roles in determining their level of effectiveness; studies that focus on the effect of such performance measurement in relating to the effectiveness of internal auditors are very scanty. In line with this, the objective of this study is to provide empirical evidence on the effect of performance measurement of internal audit function on internal audit effectiveness via the perceptions of internal auditors. Data of the study were collected through research assistant employed, in which 220 questionnaires were sent to internal auditors in the South West geo-political zone local government in Nigeria. The study used simple random sampling technique; data were analyzed using Statistical Package for Social Science (SPSS) version 21. Descriptive statistic, factor analysis, correlation matrix and finally, simple regression analysis were carried out. The result finding of the analysis revealed that, performance measurement of internal audit functions has a significant positive relationship with internal audit effectiveness. Finally, conclusion was provided and the direction for future research was also provided.

Keywords: Performance measurement, internal audit effectiveness, Local government, internal auditors, internal audit functions.

INTRODUCTION

Literature review revealed that within the recent period, only fewer studies give consideration to the recent internal audit functions (Sarens & Abdolmohammadi, 2011) despite the fact that it's important to have effective internal audit function in place (Kinsella, 2010). In this vein, one of the functions of the internal audit which recent literature affirmed was the constant review of management operation with the intention to ensure effectiveness of management activities (Badara & Saidin, 2012; Yule, 2010). That is why organizations are now require to broaden the scope of their respective internal auditors (Ahmad, Othman, & Jusoff, 2009; Aguolu, 2009; Davies, 2001; Zahran, Chulkov & Inomata, 2010) so that to have extensive coverage in order to assist in achieving the organizational objectives. Even Cohen and Sayag (2010) Mihret, James, & Joseph, (2010) acknowledged that effectiveness and efficiency of an organizational operation is part of the objective of internal audit. Therefore, such functions of internal audit need to be given due consideration so that to achieve management effectiveness in any organizations (Badara & Saidin, 2012; Dounis, 2006).

Department of internal audit are been regarded as an important department within the government organizational setting that constituted various experts which assist in the resources utilization effectiveness, identification and prevention of fraud (Aikins, 2011), it even considered as the most essentials and single tools that ensure the effectiveness of an organizations (Ruud, 2003). Nevertheless, literature revealed that such internal audit functions are not effective in various organizational setting (Al-Twaijry, Brierley, & Gwilliam, 2004; Ahmad et al., 2009; Ebimobowei & Kereotu, 2011; Badara & Saidin, 2013; Emmanuel, Ajanya, & Audu, 2013) that is why Arena and Azzone (2010), Mihret et al., (2010), Cohen and Sayag (2010), Endaya and Hanefah (2013), Chaveerug (2011), Salehi, Arianpoor, & Salehi (2013) Badara & Saidin (2013) stressed the need for future studies to empirically investigate the factor that might influence such effectiveness of internal audit functions.

Performance measurement helps in concentrating resources in an area that might lead to high productivity within an organization (Muchiria, Pintelon, Martinb, & De Meyer, 2010); increase in performance measures improves employee's efforts and thereby reduce uncertainty concerning the employee's performance (Chiesa, Frattini, Lazzarotti, & Manzini, 2008; Scott & Tiessen, 1999). In line with this, performance measurement has received significant interest recently among both academics and practitioners (Tangen & Sweden, 2004). Equally performance measurement is consider recently as useful service that supports a large scope of strategy and tactical decisions of management, more importantly measuring value creation process (Gimzauskiene & Valanciene, 2010; Tangen & Sweden, 2004). Management should put all necessary effort toward ensuring the present of effective performance measurement yardstick within the organization (Kaplan, Donnell, & Arel, 2008).

Therefore, using performance measures within the context of internal auditing is a clear signal that internal audit functions would be properly manage and control toward achieving efficiency and effectiveness (Epstein, Grifel, & Morgan, 2004; Rupsys & Boguslauskas, 2007). Institute of Internal Audit (2010) provided that internal audit should appraise their effectiveness through the system of self-performance measurement which to some extent similar to that of their organization, even Feizizadeh (2012) expressed that performance measurement of internal auditors need to be given due consideration in determining the level of their effectiveness. But then, studies that consider the effect of performance measurement on internal audit effectiveness are very scanty. For example; Mizrahi and Ness-Weisman (2007) expressed that performance measurement with regard to internal audit effectiveness are very inadequate, future studies should focus on the implication of performance measurement (Khan, Baharun, Abdul Rahim, & Zakuan, 2011; Patrick & French, 2011; Zuriekat, Salameh & Alrawashdeh, 2011). In addition, Abushaiba and Zainuddin (2012) expressed that most of the performance measurement system literature and empirical evidence has been collected in developed countries. This indicates the need to have empirical evidence from developing countries.

Likewise, more research should be done on the impact performance measures for internal audit Functions (Hill et al., 2009). Even Badara and Saidin (2013) recommended the empirical validation of the relationship between performance measurement of internal audit functions and internal audit effectiveness using different kind of analysis. In line with these, the objective of this paper is to present the empirical evidence on the relationship between performance measurement of internal audit functions and internal audit effectiveness using the perceptions of internal auditors. Section two of the paper present the literature review and hypothesis development, section three present the methodology, result and discussions are presented in section four of the paper and finally the conclusion and the direction for future research.

LITERATURE REVIEW

2.1 Internal Audit Effectiveness

Organizations that have effective and efficient internal audit functions in place are better than any organizations that do not such effective and efficient internal audit functions in place especially in aspect to fraud detection and prevention (Corama, Fergusona, & Moroney, 2006). Some of the recent researches that focused on internal audit effectiveness are (Bota, & Palfi, 2009; Arena & Azzone, 2010; Cohen & Sayag, 2010; Mihret, et al., 2010; Theofanis, Drogalas, & Giovanis, 2011; Unegbu & Kida, 2011; Feizizadeh, 2012; Badara, & Saidin, 2012; Badara, & Saidin, 2013). For instance; Bota and Palfi (2009) carried out a literature review study on measuring and assessment of the effectiveness of internal audits, the study reveals that it is imperative to find the most appropriate methods for measuring and assessment of the effectiveness of internal audits so that to improve such effectiveness. Arena and Azzone (2010) conducted a case study research on the internal audit effectiveness: Relevant drivers of auditees satisfaction, the result analysis of the research indicated that several factors are very relevant to drive the effectiveness of internal audit, among which is the auditee cooperation in such auditing processed.

In an empirical study carried out by Cohen and Sayag (2010) within the Israeli organizations on the internal audit effectiveness, the study employed the followings independent variables in determining

internal audit effectiveness that comprised: Quality of audit work, Career and advancement, organizational independence, top management support, Professional proficiency of internal auditors and finally private versus public sector. The study reveals the strong support of top management in determining the effectiveness of internal auditors. And other determinants of internal audit effectiveness derive from support of top management. In a conceptual research carried out by Mihret, et al., (2010) using the mediating effect of internal audit effectiveness on the relationship between organizational attribute and organizational performance through the moderating effect of management action on internal audit recommendation. The study concluded that such relationship should be empirically validated and thereby calling for more research to be conducted on internal audit effectiveness.

In a related empirical study conducted by Theofanis et al., (2011) in Greek Hotel Business on the internal audit effectiveness evaluation, the study used the following element of internal control system in examining the internal audit effectiveness that comprised of: Information and communication, monitoring, control environment, control activities and risk assessment. The result of the study reveals the significant of the internal control system components on the effectiveness of internal audit in the Hotel and thereby concluded by suggesting that more research on internal audit effectiveness are need using a large sample size. Likewise Unegbu and Kida (2011) conducted an empirical study at Kano state in Nigeria on the internal audit effectiveness as an instrument that improves public sector management. The study revealed that Kano state public sector of Nigeria have significant number of relevant internal audit department and such internal auditors have the ability to figure out fraudulent activities within such organizations.

Similarly, Feizizadeh (2012) carried out conceptual research on strengthening internal audit effectiveness in Iran. Finally the study discloses that most of the companies in Iran measure and quantify the performance & effectiveness of their business activities, thereafter the study concluded by recommending that measuring the performance of internal auditors is one of the factors that contribute toward their effectiveness. This shows that performance measurement is an antecedent of internal audit effectiveness. Badara and Saidin (2012) carried out another conceptual study on the effect of risk management on internal audit effectiveness at local level; the study concluded that such risk management can definitely influence the effectiveness of internal auditors at local level. Equally, Badara, & Saidin (2013) carried out another conceptual study on antecedents of internal audit effectiveness through the interaction of audit committee effectiveness, the study concluded that such relationship should be validated and finally emphasize on more research to be conducted on internal audit effectiveness.

Therefore, having identified some of the current previous studies on internal audit effectiveness, it's quite agreeing that such effectiveness has been examined by different variables and this is in line with interpretations made by (Arena & Azzone, 2010; Cohen & Sayag, 2010; Mihret, et al., 2010; Theofanis et al., 2011) that different variable can be employ in examining such effectiveness. But then, despite the above studies on internal audit effectiveness, none of the studies empirically examine the effect of performance measurement on internal audit effectiveness. Therefore, this study extends the previous via presenting the empirical evidence on the effect of performance measurement on internal audit effectiveness using the perceptions of internal auditors.

2.2 Performance Measurement of Internal Audit Functions

Using a continuous standard criteria for performance measures in the area of internal auditing is important for the auditing professions (Hill, et al., 2009; Rupsys & Boguslauskas, 2007) and it is quite interesting that investment in performance measurement usually delivers the expected benefits (Mac-Allister, 2000) because it's an effective agent for changes (Artley, & Stroh, 2001) that is why performance measurement has been recognized as a planning and controlling tools (Khan et al., 2011). Even, Odhiambo, Indoshi, and Agak (2012) observe that management of school can use performance measurement as part of their management strategy in evaluating, controlling, motivating, budgeting, planning, directing, promoting, and improving the learning of their schools.

Recently, there has been a strong concerned about the expansion and diversity of the performance measures portfolio with the view of providing more complete assessment of quality, for example Spertus,

Eagle, Krumholz, Mitchell, & Normand (2010) recommend that it is less important to continue using performance measure for internal quality improvement alone, but could also be useful to physicians in analyzing practice patterns because it will meaningfully improve the health either survival or health status in such a way that will indicate all eligible patients receive high quality of treatment. Even in the context of auditing, Ziegenfuss (2000) agreed that performance measurements with regard to internal audit are absolutely a vital issue for practitioners, due to this development, performance measurement recently is facing a considerable increase of interest in the side of internal auditing because it constitutes one of the most essential managerial functions (Rupsys & Boguslauskas, 2007), therefore, performance measurement of internal audit function need to be given due consideration in order to enhance their effectiveness.

Mac-Allister (2000) noted that performance measurement has the following fundamental objectives; improvement in public services and improved accountability. It is also agreed that different kind performance measurement activities leads to better accountability in the government agencies (Amirkhanyan, 2011). The Institute of Internal Auditors (IIA) provided that: there should be frequent review of internal auditors performance activity by himself or personnel of such organization that has good awareness on the operation and standard of internal audit and this should formed part of the organization internal assessment (Hill et al., 2009). In this vein, maintenance and enhancement of internal auditing credibility, effectiveness and efficiency must be monitored through performance measurement of their respective functions (IIA, 2010). Likewise, Rupsys and Boguslauskas (2007) point out that establishing performance measurement in internal auditing could be compared to the overall progress of the organizational performance measurement. This indicates the importance of performance measurement in the aspect of internal audit functions, and this should be incorporated so that to enhance their effectiveness.

Among the recent studies that have been carried out on performance measurement include; (Rupsys & Boguslauskas, 2007; Dogarawa, 2011; Badara & Saidin, 2013; Odhiambo et al., 2012; Amirkhanyan, 2011). But then, none of these studies reveals empirically the effect of such performance measurement of internal audit functions in relating to their effectiveness. While literature reveals that mostly performance measurement are established in order to achieve; effectiveness, efficiency, timeliness, productivity, quality, and safety (Artley & Stroh, 2001; Amirkhanyan, 2011; Dittenhofer, 2001; Helden, Johnsen, & Vakkuri, 2008; Ma-cAllister, 2000; Scott & Tiessen, 1999), it's also confirm that the success of organization depend on their performance measurement (Abushaiba & Zainuddin, 2012). Establishing performance measures would determine whether audit activity meet its goals (IIA, 2010), similarly, performance measures of internal auditors can not only increase their effectiveness and efficiency, but can also improve their credibility (Hill et al., 2009). Performance measurement would lead to increase in internal audit effectiveness (Dominic & Nonna, 2011). Therefore, in view of the above presumption, the following hypothesis is formulated that;

H1: Performance measurement of internal audit functions has significant positive effect on internal audit effectiveness.

2.3 Contingency theory

Contingency theory of Woodward (1958) is been employ as the underpinning theory for the research due to the fact that, the theory is one of those theory that are recently been employed in the research area of management accounting and auditing (Valanciene & Gimzauskiene, 2009; Abushaiba & Zainuddin, 2012) even though, the use of theory may have different effect and equally it effectiveness depend upon the field that is been proposed (Drazin & Van de Ven, 1985). Nevertheless, contingency theory enables a researcher to systematically introduce factors to explain or predict expected phenomena (Umanath, 2003). The theory enable hypothesize a conditional relationship between two or more independent variables with a dependent variable and subject it to an empirical validation (Drazin & Van de Ven, 1985).

Equally, the theory has been employed by previous researchers in explaining some of the research variables (Sudsomboon and Ussahawanitchakit, 2009) as contingent variables can also differ (Wood,

2009). Therefore, this study posits that the effectiveness of internal audit in contingent upon the performance measurement of such internal audit functions as hypothesized.

RESEARCH METHODOLOGY

Data for the study were obtained through a survey questionnaire administered to the internal auditors within the South West geo-political zones in Nigeria. The population of the study is the entire local government in the South West geo-political zones in Nigeria. There are 137 local government in the South West geo-political zones in Nigeria, based on this population, the sample size required to fill the questionnaire so that to aid generalization of the findings is 110 (Watson, 2001), to reduce the sample error in order to take care with non-response problem, the sample size has been increase to 220 (Hair, Black, Babin & Anderson, 2010), it is also recommended that the larger the sample size, the better (Pallant, 2001).

The sampling design was simple random sampling, in which every element in the population has equal chance of been selected as a sample, it has least bias and offer the most generalizability (Sekaran & Bougie, 2009). The data were administered and collected through research assistant employed so that to facilitate quick retrieval of completed research questionnaire and equally to provide high responds rate. Precisely, using research assistance in questionnaire administering and collecting reduces non-response bias and equally facilitates high response rate for the research. Therefore, out of 220 questionnaires distributed, 200 were fully completed and returned which represent 91% responds rate. A response rate of 30% is acceptable for survey (Hair et al, 2010).

3.1 Measurement of Research Variables

Dependent Variable:

Internal Audit Effectiveness: Internal audit effectiveness is the ability of the internal auditors to achieved established objective of the internal audit functions. This variable is the dependent variable; the variable is measured by 9 items adapted with some modification (Beckmerhagen, Berg, Karapetrovic, & Willborn, 2004).

Performance Measurement: Refers to the process of determining the extent level of achievement of established objective by internal auditors. This variable is the independent variable; the variable is measured by 7 items adapted with some modification (Hill et al., 2009; Mac-Allister, 2000).

Thus, five –point type rating scale, ranging from strongly agree to strongly disagree has been used in measuring the responses of the entire questions. This is because several researchers has make used of this scale due to its easier for respondents to understand, hence, responses from five point scale are probably to be reliable (Chelimo & Kariuki, 2013; Theofanis, et al., 2011; Zuriekat et al., 2011). Face and content validity of the instrument was carried out through meeting with the expert on the field in order to ensure that those items that contain in the instrument actually belong to that particular instrument. The expert contacted consisted of academic staff in Universiti Utara Malaysia, academic staff in Nigerian Institutions, Auditor General for Local Government in Nigeria and internal auditors at local government in Nigeria, so that to improve the validity of the instrument.

To this end, after taking note on the expert observation, a revised version of the instrument was made which result to some questions were re- worded in order to measure the constructs appropriately, so that to enable clear understanding by the potential respondents, which thereafter administered for pilot study with 30 respondents of internal auditors from the Nigerian local government. After running the reliability of the respondents using SPSS version 21, the reliability of the pilot study was all above 0.7 which indicate the internal consistency of the constructs (Hair, et. al, 2010).

3.2 Method of Data Analysis

The data were analyzed using SPSS, hence descriptive statistic was carried out, factor analysis was equally carried out so that to reduce the items into more manageable number (Pallant, 2001) in which after the factor analysis, the items remain for each variable certified the requirement of factor analysis, such as KMO >0.5, Bartlett's test of Sphericity $p < 0.05$ or smaller, communalities >0.5, factor loading above >0.5 (Hair et al., 2010), as you can see the factor loadings and the cronbach alpha of the variables in table 2, correlation matrix has been carried out and lastly, simple regression analysis was then conducted.

DATA ANALYSIS

Result and Discussions

4.1 Descriptive statistic

Table 1.0 present the background information of the respondents, the result reveals that 86% of the respondents are male while 14% of the respondents are female; this implies that the male respondents outweigh the female respondents. Descriptive statistic result indicates that 26.5% of the respondents are within the age of 30 – 35 years old which implies that the majority of respondents are within the productive age of the entire population which their responses can equally be fair. With regard to highest school qualification, the result shows that majority of the respondents are within diploma/ NCE certificates which represent 46.5%. Majority of the respondents have no professional certificate as reveals by descriptive statistic result with 72.5%. Finally, the result equally displayed that majority of the respondents have enough working experience which represent 36.5%

Table 1.0 Background information of the respondents

Demographic profile	Categories	Frequency	%
Gender:	Male	172	86.0
	Female	28	14.0
	Total	200	100.0
Age:	Less than 25 years old	6	3.0
	25 years - 30 years old	40	20.0
	30 years - 35 years old	53	26.5
	35 years - 40 years old	47	23.5
	40 years - 45 years old	39	19.5
	Above 45 years old	15	7.5
	Total	200	100.0
Highest school qualification	Secondary certificate	10	5.0
	Certificate	20	10.0
	Diploma/NCE	93	46.5
	Degree/HND	62	31.0
	Masters	15	7.5
	Total	200	100.0
Professional qualification	ICAN member	7	3.5
	ANAN member	30	15.0
	ICPAN member	14	7.0
	None	145	72.5
	Others specify	4	2.0
	Total	200	100.0
Working experience	Less than 1 year	4	2.0
	1-5 years	40	20.0
	6-10 years	48	24.0
	11-15 years	35	17.5
	15 years - Above	73	36.5
	Total	200	100.0

Table 2 Results of Measure Validation

Items	Factor Loadings	Cronbach Alpha
Internal Audit Effectiveness (IAE)	0.64 – 0.79	0.79
Performance Measurement (PM)	0.80 – 0.85	0.74

Table 2 above provided the results for both factor loadings and Cronbach alpha, it can be seen from the table that the factor loading of the variables range from 0.64 – 0.85, hence, it is an indication of construct validity (Hair et al., 2010). The cronbach alpha value indicates the constructs reliability because the value range from 0.74 – 0.79, hence is indicating that scales of all measures appear to produce internally consistent results (Hair et al., 2010).

Table 3 Correlation Matrix

	IAE	PM
Internal Audit Effectiveness (IAE)	1	
Performance Measurement (PM)	.196**	.260**

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

The correlation analysis of the variables was subjected to a two- tailed test of statistical significance at two different level; significant ($p< 0.01$) and significant ($p< 0.05$), table 3 above shows that correlations between all variables are statistically significant at ($p< 0.01$) respectively. It can also be seen from the same table 3 that the correlation of the variables ranges from 0.196 to 0.260. Hence, the problem of multicollinearity is not there.

Table 4 Multiple Regression Analysis Results and Hypothesis Testing between Performance Measurement and Internal Audit Effectiveness

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.498	.251		21.874	.000		
	Performance Measurement	.391	.074	.289	5.292	.000	.845	1.183

Dependent Variable: Internal Audit Effectiveness

Table 4 above displayed the result of regression analysis on the relationship between performance measurement of internal audit functions and internal audit effectiveness. Performance measurement of internal audit functions has significant positive relationship with internal audit effectiveness (β = .289, t = 5.292, p = .000) this implies that, the more organizations gave emphasis on measuring the performance of their internal audit functions, the greater their effectiveness will be. In other word, effectiveness of

internal auditors can easily be ascertained when there is frequent performance measurement of their internal audit functions. The finding confirms the contingency theory via the contingency effect of internal audit effectiveness on the performance measurement of internal audit functions. Equally, the finding is consistent with Rupsys and Boguslauskas (2007) which found that stakeholders of the internal auditing discover that the measurement of internal audit activity to be important.

Similarly, Odhiambo et al., (2012) found positive relationship between performance measurement practices and managerial roles. Bota and Palfi, (2009) point out that, in order to determine the efficiency as well as the effectiveness of internal audit, it becomes more and more important to find relevant methods for measuring and assessment of their performances. Therefore, **hypothesis 1** which stated that there is significant positive relationship between performance measurement of internal audit function and internal audit effectiveness is fully supported.

Conclusion

This study provided the empirical evidence on the relationship between performance measurement of internal audit functions and internal audit effectiveness via the perceptions of internal auditors. The result analysis of the study reveals the significant positive effect of performance measurement of internal audit function on internal audit effectiveness, which implies that, for organizations to sustain the effectiveness of their respective internal auditors, performance measurement of their respective functions need to be given due considerations. Some of the limitation of the study includes; collecting data from local government internal auditors only despite the fact that there are various internal auditors in different organizations not necessary the local government, the research was based on cross-sectional and the finding cannot be generalized due to different setting of various organizational internal audit department operations in terms of their effectiveness in different countries.

Despite the above limitations, the study contributed to internal audit effectiveness by providing empirical evidence on the relationship between performance measurement of internal audit functions and internal audit effectiveness, which previous studies have not empirically investigated in examining the internal audit effectiveness. Therefore, more research are require to be conducted on internal audit effectiveness particularly in the public sector setting because literature has showed limited study and reporting of internal audit within the context of various public sector setting. Future studies should incorporate different significant theories in explaining the effectiveness of internal audit. It's important future studies to examine the effect of some different variables on the internal audit effectiveness, likewise future studies should explore the role of mediating effect or moderating effect of some variables on internal audit effectiveness.

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IS THE RISK OF BANKRUPTCY A SYSTEMATIC RISK? : MALAYSIA EVIDENCE

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Abstract

Although Malaysian economy has shown a good performance in during peak economy period and fast recovery process after being hit by many crisis either economy or currency crisis, not all companies are able to survive and forced into financial distress and threat of bankruptcy. Thus, this study tries to examine relationship between bankruptcy risk and systematic risk in Malaysia.The sample of study focuses on distressed and non-distressed companies that are listed in Bursa Malaysia board within the period of 2001 to 2014. Due to the highly volatile ratios, companies under the financial and properties industries will be excluded from the sample. Logit model and MDA model will be used to obtain the probability of bankruptcy and constructdistress minus undistress portfolio (DMU) portfolio. Non-linear seemingly unrelated regression (NLSUR) will be used to findthe relationship between bankruptcy risk and systemic risk by usingexcess market returns as dependent variable, small minus big market value (SMB), high minus low book-to-market (HML) and distress minus undistress portfolio (DMU) as independent variables. Result from this study important for investors and regulators to understand the effect of bankruptcy risk on Malaysia's stock market's return.

Keywords: Bankruptcy Risk, Systematic Risk, Non-Linear Seemingly Unrelated Regression.

INTRODUCTION

Malaysian economy has shown a good performance in during peak economy period and fast recovery process after being hit by many crisis either economy or currency crisis. Due to this situation it creates large investment opportunity, encourage new company to enter the market and profit increase tremendously. However, not all companies will be able to survive since the competition among companies keep increasing due to the changes in many aspect of the economy.Usually, these companies forced into financial distress and threat of bankruptcy. This situation is not favorable for listed company since it might lead to be delisted from trading.This situation is not only observed in Malaysian market but also occur in other countries. Thus, both academics and practitioners increase their attention on developing models using related factors to predict firm's exit (Amendolaet. al., 2014).

Beaver (1966) and Altman (1968) were the pioneer contributor that introduced models for bankruptcy prediction. Starting from that, academics and practitioners have actively studied on this area (Ohlson, 1980, Adiana et al. 2008, and Bhunia and Sarkar, 2011). Basically, most of the studies use the same proxy for firm distress as define by Altman (1968) which is probability of bankruptcy. The probability of bankruptcy is also uses to represent bankruptcy risk.

Brown and Reilly (2009) classified risk into two different groups which are (1) systematic risk, and (2) unsystematic risk. Systematic risk can be defined as risk that cannot be eliminated but can be reduced and usually due to external factors of the company like interest rate risk and market risk. Meanwhile, unsystematic risk defines as risk that can be controlled or eliminated and basically based on internal factors of the company such as financial risk and bankruptcy risk.

Although bankruptcy risk is not in the systematic risk's group, some researchers tried to relate bankruptcy risk with systematic risk like Dichev (1998), Lang and Stulz (1992), and Denis and Denis (1995). However, results from existing studies show various findings and sometimes contradict witheachothers. Thus, this study focuses on finding relationship between probability of bankruptcy and systematic risk based on Malaysian Market.This study would help investors to have batter understanding on risk especially relationship between financial distress (bankruptcy risk) with systematic risk. As for the regulators such as Bursa Malaysia and Securities Commission, this study is hoped to be able to improve existing guideline or policy to ensure the performance of capital market especially equity market in Malaysia. This is essential to attract investors to invest in this market.

Research Gap and Objectives

This study will contribute to the body of knowledge by increasing the number of literatures available related to relationship between bankruptcy risk and systematic risk specifically in Malaysia. In particular, this study has two main objectives; (1) to identify which bankruptcy prediction model more suitable for Malaysia market, (2) to examine relationship between bankruptcy risk and systematic risk in Malaysia.

This paper is arranged as follows: Section 2 focuses on empirical evidence from previous study. Section 3 discusses the methodology of this paper and section 4 provides conclusion of the paper.

LITERATURE REVIEW

Although financial distress or bankruptcy risk is a part of unsystematic risk or risk that can be eliminated, some previous studies (Lang and Stulz, 1992, Denis and Denis 1995) show a contradict result. For examples, in study done by Shumway (1996) result shows that risk of default for NYSE and AMEX firms is related to systematic risk. However, there are also studies that show bankruptcy risk is not a systematic risk like Dichev (1998), and Opler and Titman (1994). So, this study will measure bankruptcy risk by using bankruptcy prediction model first before continue with defining relationship between both risk based on Malaysian market.

Bankruptcy Prediction Model

There are few models developed by previous researchers to predict bankruptcy. Altman (1968) introduced Z-score model in his study to predict bankruptcy by using ratios such as profitability, liquidity, solvency and cashflow. The result shows that ratios used are highly significant to predict bankruptcy.

By referring to Altman (1968), researchers start to highlight the important ratios in predicting bankruptcy (Rohani&Adiana, 2005). Many other ratios introduced by researchers such as net income to total assets, total liabilities to total assets, and size (Ohlson, 1980; Lennox, 1990; Shumway, 2001). The main difference between other researchers and Altman (1968) is on the model that they used. Most of researchers after Altman used logit model and not Multiple Discriminant Analysis (MDA) in their studies. This is because MDA is found to violate the assumption of normality and group dispersion which result may bias for the test of significance and estimated error rates.

This is the main reason Ohlson (1980) introducedlogit model that do not have the same assumption as MDA. This model normally used average data and considered as a single period model. Thus, due to the weaknesses of logit model, Shumway (2001) used hazard model to predict bankruptcy. He also found that the predictability of hazard model is better than MDA and logit model.

In Malaysia, there are also researchers that compared the models' predictability between MDA and logit model by using Malaysian companies as the sample of study. Mohamed et al (2001) in their study found that MDA is more accurate to predict bankruptcy compared to logit model. However, the

result of accuracy for both logit and MDA model are lower compared to Low et al (2001) that used logit model and Zulkarnain et al (2001) that used stepwise multivariate discriminant analysis.

Since most of the previous studies used Multiple Discriminant Analysis (MDA)or/and logit model to analyz probability of bankruptcy (Dichev, 1998, Adiana et al., 2008, and Khaliq et al., 2014), this study will also use Multiple Discriminant Analysis (MDA) and logit model to predict bankruptcy based on Malaysian market data.

Relationship between Bankruptcy Risk and Systematic Risk

Previous studies show various results in explaining relationship between bankruptcy risk and systematic risk. Based on Denis and Denis (1995), bankruptcy risk is positively related to systematic risk. This is supported by Shumway (1996) that suggested risk of default is a systematic risk. However, based on Opler and Titman (1994) and Dichev (1998), they found that bankruptcy is unrelated to systematic risk.

Rohani (2011) used UK's companies to find relationship between bankruptcy and systematic risk. This study used hazard model and found that risk of bankruptcy and systematic risk were not related. Thus, based on Rohani (2011), author also focuses on Malaysian companies but not only focus on MDA model and also includes logit model to predict bankruptcy. This study usesthese models in order to compare the predictability among models which will also help in showing the relationship between bankruptcy risk and systematic risk. Since none of the studies focus on Malaysia's market, hence this study will try to fill this gap.

CONCEPTUAL FRAMEWORK

In this study, the research framework displays the existence of five variables, which include leverage ratios, profitability ratios, cash flow ratios, size and growth. All these ratios used in this study are based on Rohani and Adiana (2005). Thus, this study's research framework has been illustrated in figure 1.

Figure 1: Proposed Conceptual Framework
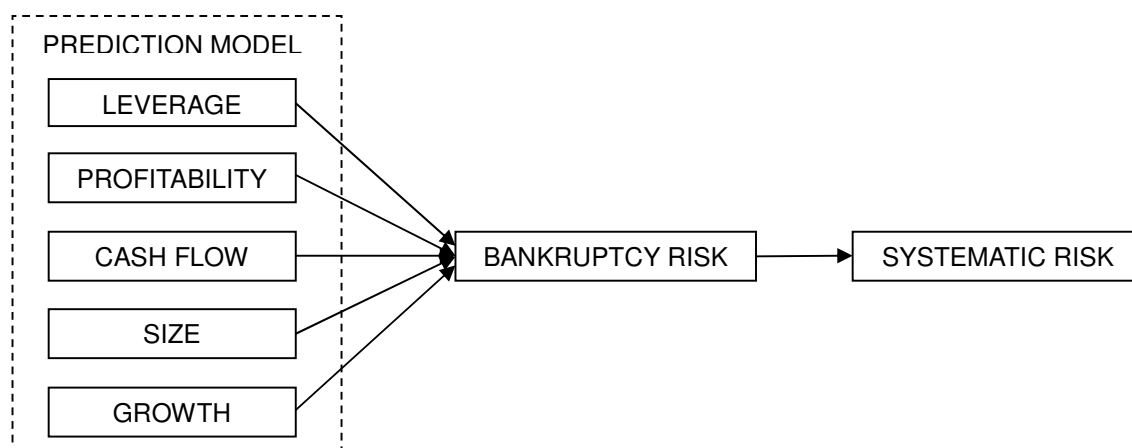
Based on this framework, the data will be first analyzed by using bankruptcy prediction model either logit model or hazard model in order get the bankruptcy risk. Next, by developing portfolios based on the bankruptcy risk level for each company, this study will use non-linear seemingly unrelated regression (NLSUR) to find the relationship between bankruptcy risk and systematic risk (Rohani, 2011).

Similar to Mohamed et al (2001), this paper does not attempt to develop exotic ratios because the important criterion to select the ratio is simplicity. Thus, this paper used leverage ratios, profitability ratios, cash flow ratios, size, and growth (Rohani&Adiana, 2005) as independent variables in the Multiple Discriminant Analysis (MDA) and logit model. Although there were many ratios appeared in most of empirical study, these ratios are selected based on the predictability based on previous research (Rohani&Adiana, 2005). The ratios used in this paper are explained in Table 1

Table 1: The Ratios Utilized

Ratios	Explanation
Leverage ratios	
Interest coverage (INTCV)	This ratio is obtained by dividing earnings before tax with interest expenses. It represents the ability of the company to meet its interest obligation.
Total debt to total assets (DTOA)	It is calculated as total liabilities divided by total assets. This ratio will show the reliability of the company on debt to finance its assets.
Profitability	
Net profit margin (NPM)	Defined as earnings after tax divided by revenue or sale. This will give picture on abilities of the company to generate profit from its revenue generated.
Return on assets (ROA)	Calculated as earnings after tax divided by total assets. This ratio will show the abilities of the company to generate profit from its assets.
Cash flow ratios	
Cash to total assets (CTOA)	This ratio is calculated as cash flow from operation divided by total assets. This ratio is used to estimate when cash will be available and how much cash will be available for future operations.
Cash to current liabilities (CTOCL)	This ratio is obtained by dividing cash flow from operation divided by current liabilities. This ratio represents the ability to generate cash from operating activities as a percentage of current liabilities in a given period.
Size	
Total assets employed (TAE)	Defined as total assets of the company. This will give picture on current size of the company in the market.
Growth	
Change in net income	This ratio calculated as net profit of current year divided by net profit of previous year. This ratio will show the ability of the company to increase its profit.
Change in sales	Calculated as sales of current year divided by sales of previous year. This ratio will indicate the performance of the company to generate its sales each year compared to previous year.

This study uses financial leverage because it will show the company's reliance on debt to finance the company's assets and operations that may lead to bankruptcy if the company depend too much on debt and fail to manage it. This paper uses interest coverage ratio and total debt to total assets to represent leverage ratios. This is because previous studies like Rohani&Adiana (2005) and Mohamed et al. (2001) found that these ratios have significant effect on corporate failure.

Profitability ratios also important in measuring company's probability of bankruptcy. This is because it will show managerial performance. It is expected to have negative relationship with financial distress and bankruptcy because companies with negative profit expected to have high probability of bankruptcy (Rohani&Adiana, 2005). Based on Zulkarnain et al (2001) and Lennox (1999), profitability ratios are an important determinant of bankruptcy.

In this study, cash flow ratios are represented by cash to total assets and cash to current liabilities also being used to predict bankruptcy. These ratios are used as a proxy in measuring short-term solvency of the companies and expected to have negative relationship with bankruptcy. Previous researchers found that cash flow ratios were significant to determine companies' bankruptcy risk (Zulkarnain et al., 2001; Low et al., 2001).

This study also includes size and growth ratios (change in net income and change in sales) since these ratios were found to be significant to determine companies' bankruptcy risk (Rohani&Adiana, 2005; Ohlson, 1968). Size is expected to have a negative relationship with bankruptcy in which the larger the company's size, the lower probability of bankruptcy. Meanwhile, growth ratios are expected to have negative relationship with bankruptcy because companies with high growth ratios are expected to be in healthy condition andgrow rapidly that leads to have low bankruptcy risk.

METHODOLOGY

Sampling Design

The sample focuses on financial distressed and non-distressed companies that are listed in Bursa Malaysia board within the period of 2001 to 2014. Sample for financial distress companies are based on the list of Practice Note 17/2005 (PN17) companies provided by Bursa Malaysia. Practice Note 17/2005 (PN17) refer to companies in the Bursa Malaysia's main board that face financial distress and do not fulfill minimum requirement for equity and paid-up capital set by Bursa Malaysia.

Financial distresses companies will be matched with non-financial distress companies according to same industry group and have closest assets size. This is an acceptable method in failure prediction studies which is consistent with Altman (1968) and Rohani and Adiana (2005). Financial information will be collected from companies' annual report publish in Bursa Malaysia and data from Datastream. Due to the highly volatile ratios that rely heavily on the economic condition and slightly difference in interpretation of the ratios, companies under the financial and properties industries will be excluded from being part of the sample of study.

Bankruptcy prediction model

This study uses two different models to predict bankruptcy by choosing selected ratios before trying to find relationship between bankruptcy risk and systematic risk. The models are Multiple Discriminant Analysis (MDA) andlogit model.

MDA is a statistical analysis used to make prediction in the situation whereby the dependent variable is in qualitative form while independents variables are in quantitative form (Altman, 1968). This is suitable with this study since dependent variable is either 1 or 0 which represent either the financial distress company (1) or non-financial distress company. This paper focuses on two different groups of companies lead to MDA transformed into one dimension model. Thus, the discriminantfunction transforms individual variable values to single discriminant value of Z value.

$$Z = V_1X_1 + V_2X_2 + v_3X_3 + \ldots + V_nX_n \tag{1}$$

Where

V_n = discriminant coefficients
X_n = independent variables (selected ratios)

Based on this function (1), MDA will derive a linear combination of characteristic which discriminates both groups. For this study, MDA will determine a set of discriminant coefficient based on ratios of financial distress companies or non-financial distress companies.

Next, logit model introduced by Cox (1958) that also known as logistic regression or logit regression. It is a direct probability model. It measures the relationship between the categorical dependent variable and one or more independent variables. In predicting company failure, this technique weighs the financial ratios and creates a score for each company in order to be categorized as either financial distress company or not. This model first used by Ohlson (1980) to predict bankruptcy among companies. This model normally uses average data and consider as a single period model. Thus, data either non-distressed or distressed companies will only be one company-year observation. The function in logit analysis is called the logistic function and can be written as follows:

$$P_{jt}(Y=1) = 1 / (1+e^{-z}) \tag{2}$$

$$= 1 / \{1+ \exp [- \beta_0 + \beta_1X_1 + \beta_2X_2 +\ldots+ \beta_nX_{n,jt}] \} \tag{3}$$

where

$P_{jt}(Y=1)$= probability of failure for entity j at the end of year t;
　　　exp= exponential function
$\beta_1, \beta_2, \ldots \beta_n$ = slope coefficients
$X_1, X_2, \ldots X_n$,= independent variables (selected ratios)

In order to determinemodel's goodness of fit and the significance of the variables used,this study used Pearson's and Deviance's Chi-Square values. If the p-value is > 0.05 then the value is not significant and the model fit is good. Furthermore, to test if the variables included in the final model are significant to explain the variability in the data, this study uses a likelihood ratio test.

Next, this study uses PsuedoRSquare to measure the proportion of explained variation in the dependent variable. This measure is important as it isalways reported to represent R^2 in logistic regression (Norusis, 2005). Based on this measure; the higher the values of R^2, the better the model fit.

Relationship analysis

In order to meet this research objective of examining the relationship between bankruptcy risk and systemic risk, this study uses non-linear seemingly unrelated regression (NLSUR) that includes excess market returns as dependent variable, SMB, HML and DMU as independent variables (Rohani 2011). The small minus big (SMB) market value is the value-weighted return on small firms minus the value-weighted return on large firms while high minus low (HML) book-to-market is the value-weighted return on high book-to-market firms minus the value-weighted return on low book-to-market firms. This study uses the estimated bankruptcy probabilities from the logit model and MDA model to construct the distress minus undistress (DMU) portfolio.

CONCLUSION

In conclusion, this study's intention is to identify which bankruptcy prediction model more suitable for Malaysian market and examine relationship between bankruptcy risk and systematic risk in Malaysia. Result from this study is important for investors to understand the effect of bankruptcy risk on Malaysia's stock market's return. As for the regulators such as Bursa Malaysia and Securities Commission, the finding could help to improve the existing guideline or policy to ensure the performance of capital market especially equity market in Malaysia. This is essential to attract investors to invest in this market. Lastly, this study would add to the body of knowledge by adding literature because previous studies focus on other countries and not based Malaysian's listed companies.

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Exchange Rate and Monetary Policy Transmission Mechanism in Malaysia

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Abstract

This study examines whether exchange rate act as a channel of monetary policy transmission in Malaysia through net export and firms' balance sheet effects from 2009 to 2015. By using a structural vector-autoregressive (SVAR) model, result provides two findings. First, there is an immediate appreciation and a lagged depreciation of currency after a positive shock of domestic interest rate. This finding is found to be consistent with the Dornbush's overshooting hypothesis. Second, depreciation in nominal exchange rate leads to an improvement in economic growth with persistent effect. Overall, net export effect is found to be slightly stronger than firms' balance sheet effect. This study suggests that the Central Bank should not undermine the importance of exchange rate channel in setting monetary policies.

Keywords: Exchange rate channel, Monetary policy transmission mechanism, Malaysia, Structural-VAR

JEL classification: E52

INTRODUCTION

The literature of monetary policy transmission channels is dated back to mid-1980s, where most of the pioneering empirical studies exclusively focus on these transmission channels in United Sates, which is often characterized as a closed economy. As the rest of the world economy is considered having relatively minor impact on the United Sates, the exchange rate channel in the monetary transmission is often assumed not operating. The operation of monetary policy through this channel does not effective if a country has a fixed exchange rate. It is more effective and stronger if a country opens more its economy (Mishkin, 2001). The exchange rate channel is particularly important in small open economies with flexible exchange rate regimes and under-developing capital markets (Kamin et al., 1998).

Malaysia fits these criteria perfectly, especially after the capital control has been withdrawn in April 2005. Therefore, a careful and complete examination of exchange rate channel in Malaysia is of immediate action. For example, Ringgit Malaysia (RM) against 1 Dollar of United States (USD) was depreciated from RM3.51 in January 2, 2015 to RM3.7635 in June 8, 2015 led to some rapid changes in its monetary policy framework in improving the operation of money market (Bank Negara Malaysia, 2015). Subsequently, Bank Negara Malaysia (2015) has decided to maintain the overnight policy rate at 3.25 percent in June 2015 in order to reflect the underlying liquidity conditions and provide financing in enhancing the productivity of economic activities.

However, most of the previous studies are found to fail in providing a full picture on how exchange rate channel is working, or whether is it working. Therefore, this study addresses a question: how does monetary policy shock affect exchange rate fluctuation and thereby affect economic growth? To explain the impact of a change in exchange rate on real gross domestic product by using a simple framework of monetary transmission mechanism, the world oil price, foreign interest rate, domestic output, domestic monetary policy indicator and nominal exchange rate are included into empirical analysis based on a structural vector autoregressive (SVAR) model.

Likewise, the objective of this study is to examine whether exchange rate act as a channel of monetary policy transmission in Malaysia through net export and firms' balance sheet effects from 2009 to 2015.

This study provides two contributions. First, to the best of our knowledge, this study is the first of a kind which studies solely on the exchange rate channel in the most parsimonious form. Second, by using an appropriate identification scheme, this study contributes to solve the empirical anomaly about the effect of monetary policy shocks on exchange rate movement.

This study is organized as follows: This section is followed by a literature review. The subsequent section touches on data and methodology. Then, it is followed by empirical results and findings. The last section concludes the discussion of the study.

LITERATURE REVIEW

The empirical past findings on exchange rate and monetary policy transmission mechanism are categorized into two stages. First stage is how action of monetary policy affects exchange rate movement. To explain the first stage, Dornbusch (1976) has proposed the exchange rate overshooting hypothesis. This hypothesis suggested that an unexpected monetary tightening led to an immediate appreciation of the currency and a delayed depreciation in line with uncovered interest rate parity (UIRP). However, majority of the empirical studies are found to against the overshooting hypothesis based on various explanations on the coined term "exchange rate puzzle".

From the methodological point of view, majority of studies have applied a vector autoregressive (VAR) model and imposed the typical recursive zero-contemporaneous restrictions on the interaction between monetary policy shock and exchange rate fluctuation. For instance, Eichenbaum and Evans (1995) found that a contractionary monetary policy shock led to significant and persistent appreciations in nominal and real exchange rate in United States. Similarly, Peersman and Smets (2003) found a hump-shaped responses of real effective exchange rate to a contractionary monetary policy shock in the aggregate Euro area.

In addition, Mojon and Peersman (2003) found mixed results of the response of nominal exchange rate to monetary policy shock among countries under European Union (EU). Among EU countries, they found that nominal exchange rate hardly moved in the case of Belgium and Netherlands. It further slightly depreciated in Austria after a monetary tightening. From the perspective of their findings based on zero-contemporaneous restrictions, Faust and Roger (2003) criticized that the identification scheme is "dubious" as the zero restrictions disregard the strong contemporaneous interaction between monetary policy and exchange rate movements.

Meanwhile, there is limited empirical evidence that support the overshooting hypothesis. There are some researchers have nonetheless tried to revive the hypothesis. For instance, Faust and Roger (2003) and Scholl and Uhlig (2008) have resolved the exchange rate puzzle by applying sign-restriction approach on data of United States, Germany, United Kingdom and Japan. They found that the responses of exchange rate to monetary policy were sensitive to the restrictions imposed. However, the effect was found to be not uniquely identified, so no robust conclusion could be drawn with regard to the exact timing of the peak response, which could be immediate or delayed.

However, Bjørnland (2008; 2009) argued that although relying on sign restrictions was a useful way of testing the implications of alternative short-term restrictions, but imposition of a long-run neutrality restriction on the real exchange rate allowed for the contemporaneous relationships between monetary policy shock and real exchange rate movements. As a result, he found that the puzzle was disappeared afterward. In addition, Jääskelä and Jennings (2011) found that the sign restriction approach recovered the impulse responses reasonably well in Australia, providing that a sufficient number of shocks were uniquely identified. The exchange rate puzzle was still remained if only the monetary policy shocks were identified.

The second stage tells how the exchange rate movement induces changes in real output. According to Mishkin (2001), this framework of monetary transmission mechanism through exchange rates could be explained by two sub-channels, namely net export and the firms' balance sheet. His stated that action of central bank in raising the money supply reduced domestic interest rate. This negative relationship between money supply and interest rate led to less attractive of deposits in domestic currency relatively to deposits in foreign currencies. As a result, depreciation of exchange rate provided cheaper domestic goods as compared to foreign goods, thereby causing a rise in net export and hence in aggregate spending.

Mishkin (2001) further stated that depreciation of exchange rate due to domination of a substantial amount of domestic debt in foreign currency could affect the balance sheets of both financial and nonfinancial firms. In this case, monetary expansion could reduce aggregate demand. For example, this depreciation of domestic currency increased the debt burden of domestic nonfinancial firms. As a result, declining in net worth would deteriorate balance sheets and led to occurrence of moral hazard. Consequently, it contributed to declining lending and investment and hence in economic activity.

The size of literature that gives regard to the linkage between exchange rate fluctuation and economic growth is comparatively small than the ones studied on monetary policy and exchange rate. Still, majority of the empirical evidence suggest that a depreciation of exchange rate would promote growth. Exchange rate depreciation has positive impacts on economic growth (Rodrik, 2008; Abida, 2011), and overvalued exchange rate reduces growth (Elbadawi & Kaltani, 2012). Rodrik (2008) added that the effect of currency depreciation on growth would be stronger in developing countries.

In contrast, Glüzmann, Levy-Yeyati, and Sturzenegger (2012) hold different views on the effects of exchange rate undervaluation on the different components of GDP. Their results show that undervalued currency currencies in developing countries do not affect the export sectors, but promote greater domestic saving, investment and employment.

As overall, this study finds that there is a lack of empirical study on how monetary policy through channel of exchange rate affects net exports and balance sheets. The well-accepted explanation for this expanded framework of the monetary transmission mechanism has yet to be found. Therefore, this study attempts to determine which mechanism is dominant in the case of Malaysian monetary system.

METHODOLOGY

Variable wise, this study employs five variables for the SVAR analysis, namely world oil price, foreign interest rate, domestic output, domestic monetary policy indicator and real exchange rate. The world oil price (WOP) and foreign interest rate (U.S. federal funds rate, FFR) are employed to capture exogenous foreign monetary policy shocks. The domestic output (Y) and domestic monetary policy shock (OPR) are indicated by real GDP (linear interpolation) and overnight policy rate, respectively. Lastly, the nominal exchange rate (ER) is denominated in RM/US$.

Data wise, all variables are monthly observations obtained from BNM monthly statistical bulletins, except WOP from U.S. Energy Information Administration (EIA) and FFR from Federal Reserve Economic Data (FRED). The observation period spans from 2009:1 to 2015:2 which amounted to 74 observations. Except the interest rates, all series are expressed in natural logarithms in order to make unit-less evaluation of analytic relationships among the time series. In addition, all variables are seasonally adjusted using Census X12 method. Summary of the data and variables are reported in Appendix, Table A1 and Table A2.

In order to analyze the effects of monetary policy on exchange rate and then economic output, this study employs the VAR techniques introduced by Sims (1980). The VAR model is preferable in handling the identification problem of the complex endogeniety lied among macroeconomic variables. However, the basic forms of VAR explain the dynamic interrelationships among the variables solely by their statistical trend. One way to improve the basic VAR is to impose a structural identification scheme that relies on economic theories to the standard VAR model, as suggested by Sims (1986) and Bernanke (1986). Following the *AB* approach proposed by Amisano and Giannini (1997) an economy can be modeled in the following structural VAR in level:

$$AX_t = \alpha_1 X_{t-1} + \cdots + \alpha_p X_{t-p} + B\varepsilon_t$$

(3.1)

where *A* is an invertible $m \times m$ coefficient matrix of contemporaneous relationships, *B* is a $m \times m$ diagonal matrix, and $\alpha_i = AA_i$ are $m \times m$ coefficient matrices. The model residuals u_t are assumed to be linearly correlated to the structural errors ε_t, so that

$$Au_t = B\varepsilon_t \text{ or } u_t = A^{-1}B\varepsilon_t$$

(3.2)

where ε_t has a normal distribution and a normalized diagonal variance-covariance matrix $\boldsymbol{\Omega} = I$. System 3.2 illustrates the decomposition of the structural innovations ε_t into elements caused by the contemporary reduced-form shocks u_t, which carries fundamental economic contents. Sufficient restrictions must be imposed on matrix *A* or *B* or both. For instance, $2m^2 - 0.5(m^2 + m)$ restrictions is required for the system to be exactly-identified (Amissano and Giannini, 1997). In this study where $m = 5$, the minimum number of necessary restriction is 35.

The SVAR model of the Malaysian exchange rate channel involves a set of time series represented by the following vector X_t.

$$X_t = (WOP_t, FFR_t, Y_t, OPR_t, ER_t)'$$

(3.3)

where WOP_t is the World Crude Oil Price, FFR_t represents the foreign monetary policy shock, Y_t indicates domestic real output, OPR_t is the domestic monetary policy indicator proxied by overnight policy rate, and ER_t is the nominal exchange rate denominated in RM/US\$, respectively. As aforementioned, all time series is natural log-transformed except FFR_t and OPR_t which are already expressed in percentage term. Then, the vector X_t is built into the following SVAR system.

$$AX_t = \alpha_1 X_{t-1} + \cdots + \alpha_p X_{t-p} + C + B\varepsilon_t$$

(3.4)

where *A* and *B* are diagonal 5×5 matrices of contemporaneous relationships and diagonal elements respectively, while *C* is constant term that includes possible deterministic trends and structural breaks. In identifying the SVAR, this study develops the following identification scheme that is customized to the context of Malaysia:

$$
\begin{bmatrix}
1 & 0 & 0 & 0 & 0 \\
-a_{21} & 1 & 0 & 0 & 0 \\
-a_{31} & 0 & 1 & 0 & 0 \\
0 & -a_{42} & 0 & 1 & -a_{45} \\
a_{51} & a_{52} & a_{53} & a_{54} & 1
\end{bmatrix}
\begin{bmatrix}
u_t^{wop} \\
u_t^{ffr} \\
u_t^{y} \\
u_t^{m} \\
u_t^{er}
\end{bmatrix}
=
\begin{bmatrix}
b_{11} & 0 & 0 & 0 & 0 \\
0 & b_{22} & 0 & 0 & 0 \\
0 & 0 & b_{33} & 0 & 0 \\
0 & 0 & 0 & b_{44} & 0 \\
0 & 0 & 0 & 0 & b_{55}
\end{bmatrix}
\begin{bmatrix}
\varepsilon_t^{wop} \\
\varepsilon_t^{ffr} \\
\varepsilon_t^{y} \\
\varepsilon_t^{m} \\
\varepsilon_t^{er}
\end{bmatrix}
$$

(3.5)

which is modified from Kim and Roubini (2000). The sequences u_t and ε_t capture the reduced-form shocks and structural innovations of the VAR model, which corresponds to each variable respectively. a_{jk} and b_{jk} are unrestricted estimators where a represents the contemporaneous shock and b is the orthogonal complements of the structural errors. System 3.5 is over-identified with 17 restrictions imposed on A and 20 imposed on B, which is amounted to 37 restrictions or additional two restrictions for exact-identification.

The rationale behind the matrix A formation is as follow. The first two equations of *WOP* and *FFR* are formed to isolate foreign monetary policy shocks from the total impulse of the domestic monetary policy impulse. Likewise, the endogenous variables WOP and FFR are treated 'exogenous' in the SVAR system as in Grilli and Roubini (1996) and Kim and Roubini (2000). The third row portrays the output equation assuming domestic real output will immediately respond to impulses of world oil price only. In addition to the response to foreign monetary action, the setting of monetary policy response function here, unlike many others, assumes immediate response to exchange rate fluctuation. This decision is effectively resolving the exchange rate puzzle.

Lastly, the nominal exchange rate is included to consider the effects of the identified monetary shocks on the value of the domestic currency.

SVAR ESTIMATION

As a preliminary step, unit root tests precede the estimation of the VAR model. Table A1 in appendix summarizes the result of augmented Dickey-Fuller (1981) unit root test (ADF) and Phillips-Perron (1988) unit root test (PP) on all series, in level or in first-difference.

The results of both unit root tests are fairly in consensus. The only contradictions relate to real output in first-difference. ADF test shows no sign of null rejection for ΔY but PP tests rejects the null of nonstationarity at 10 percent level. In this respect, we follow the suggestion by Cheung and Lai (1997) that PP test outperforms ADF test with the improvement due to the combined use of prewhitening procedure and data-based bandwidth selection. Therefore, we conclude that all of the time series are stationary only after first differencing or $I(1)$.

The above conclusion implies that the $I(1)$ series may share a common trend(s) or cointegrating relationship(s) among them. Nonetheless, since the goal of this analysis is to identify the interrelationships of the time series, this study continues to estimate VAR in level.

Table A3: Results of Unit Root Tests

Series	Exogenous	Augmented Dickey-Fuller	Phillips-Perron

WTI	c, t	0.515	0.159
ΔWTI	c	-6.475***	-6.491***
FFR	c, t	-1.943	-2.352
ΔFFR	c	-7.582***	-7.587***
Y	c, t	-1.231	-1.794
ΔY	c	-2.541	-2.699*
OPR	c	-1.998	-1.998
ΔOPR	c	-4.118***	-8.811***
ER	c, t	1.256	1.166
ΔER	c	-7.393***	-7.393***

c indicates a constant and t a trend. Lag length selections for ADF test are based on SIC and the maximum lag length allowed is 10. The bandwidth selections and the spectral estimations in PP test are based on Newey-West and Bartlett kernel approach.

*, **, *** represents null rejection at 10%, 5% and 1% level of significance, respectively.

As for misspecification check, we test the models for possible serial correlation by using the multivariate LM test, for any ARCH effects in the residuals by univariate ARCH test, and for any parameter instability in the systems by CUSUM test and CUSUM-Square test. Given the selected autoregressive orders (p = 2), the results from the LM test conclude no significant residual serial correlation at all lag orders. The same model also passed the ARCH test for all univariate models. The CUSUM and CUSUMSQ plots also show no sign of serious instability in estimated parameters or error variance. We therefore conclude our VAR specifications have passed most of the adequacy tests, and continue with the structural impulse response analysis.

Table A4: Multivariate LM Test for Serial Correlation

System	Lags	LM stats	p-value
WTI, FFR, Y, OPR, ER	1	31.33	0.178
	2	33.76	0.113
	4	24.63	0.483
	8	22.58	0.602
	16	27.43	0.335
	24	21.33	0.674

** and *** represents null rejection at 5% and 1% level of significance, respectively.

Table A5: Univariate ARCH Test for System Equations

Dep. Var	nR^2	p-value
WTI	7.603	0.815
FFR	10.55	0.568
Y	7.944	0.790
OPR	9.247	0.682

ER	10.71	0.554

The ARCH order is 12.

STRUCTURAL IMPULSE RESPONSE ANALYSIS

The overall existence of the exchange rate channel can be evaluated through the resulting impulse response curves. From Figure 1, the nominal exchange rate is expected to appreciate by 0.0125% immediately follows an impulse of one standard deviation in interest rate. The response of nominal exchange continues to incline (depreciate) over time and cross the zero-line in between 15th and 16th month. This observation is supporting the Dornbusch's view which is also evident in Bjørnland (2008; 2009), Jääskelä and Jennings (2011). This finding shows that an appropriate structural identification scheme is crucial before ones could conclude about the existence of the so-called 'exchange rate puzzle'.

As presented in Figure 2, we observe a positive response of economic growth corresponding to a depreciation of nominal exchange rate. The response is peak at 6th month after the shock, with a magnitude of 0.002% and lasting for more than 12 months. This finding suggests that, particularly on the second stage of exchange rate channel, the net export effect is greater than the negative firm's balance sheet effect in Malaysia.

Overall, there exists an exchange rate channel of monetary policy transmission in Malaysia. A contractionary monetary policy shock leads to an immediate appreciation and a delayed depreciation in nominal exchange rate. The delayed depreciation would, in turn, induces a persistent increase in economic growth.

CONCLUSION

This paper intends to find out whether there exists an exchange rate channel of monetary policy transmission in Malaysia. Overall, the results show that there exists an exchange rate channel of monetary policy transmission in Malaysia. That is, the effect of monetary policy shock on economic growth would be transmitted through the exchange rate fluctuation along with other transmission channels. This implies that, given the estimated influence of the exchange rate channel, the Central Bank should not undermine the importance of exchange rate channel when setting monetary policies.

In addition, we also find that there is no evidence of exchange rate puzzle or delayed overshooting of exchange rate in Malaysia. The behaviour of nominal exchange rate after a monetary contraction is consistent with the uncovered interest rate parity and the overshooting hypothesis.

Fig. 1 Response of ER to Impulse of OPR
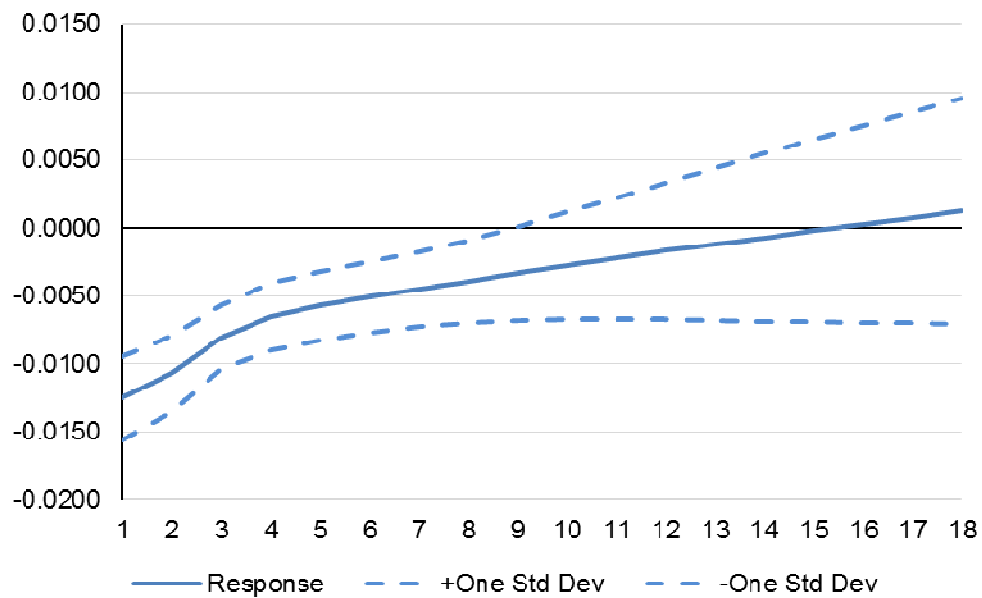
Fig. 2 Response of GDP to Impulse of ER
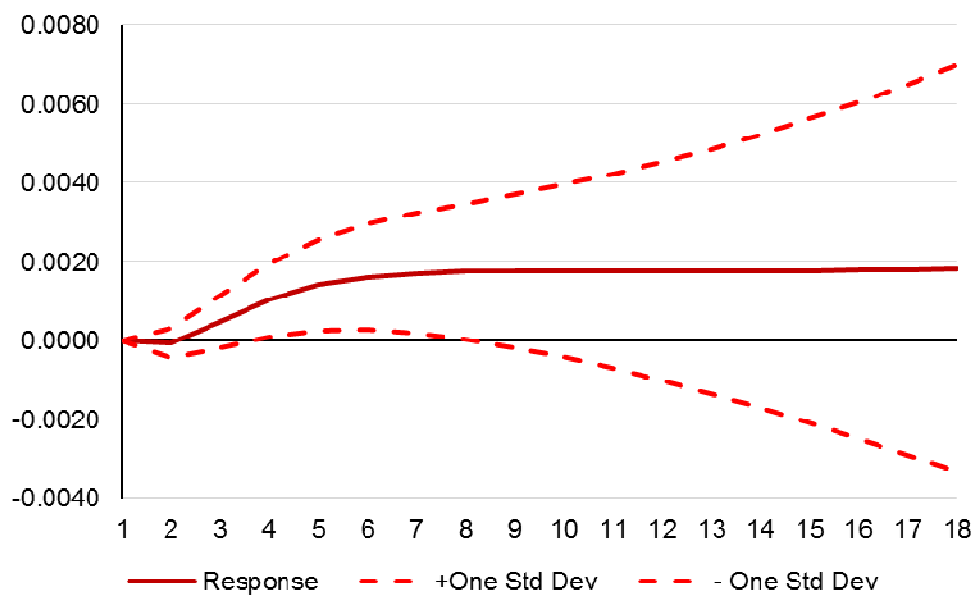
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APPENDIX

Table A1: Data sources and descriptions

Variable	Data	Source
WOP	World crude oil price, WTI index.	EIA,
	Monthly data from 2009:7 to 2015:2, deflated by CPI, seasonally adjusted using Census X12 and in natural log.	(U.S. Energy Information Administration).
FFR	Federal funds rate, %	FRED,
	Monthly data from 2009:7 to 2015:2, seasonally adjusted using Census X12.	Federal Reserve Economic Data.
Y	Gross domestic product, RM million.	BNM,
	Monthly observation (linear interpolation using quarterly data from 2009:2 to 2015:1), deflated by CPI, seasonally adjusted using Census X12 and in natural log.	Monthly Statistical Bulletin.
OMR	Average overnight policy rate, %.	BNM,
	Monthly data from 2009:7 to 2015:2, seasonally adjusted using Census X12.	Monthly Statistical Bulletin.
ER	Nominal exchange rate, RM/$.	BNM,
	Monthly data from 2009:7 to 2015:2, end of period, deflated by CPI, seasonally adjusted using Census X12 and in natural log.	Monthly Statistical Bulletin.

Table A2: Descriptive Statistics of Data

	WOP	FFR	Y	OPR	ER
Mean	4.475991	0.122941	12.12852	2.838235	1.161726
Median	4.530454	0.115000	12.13001	3.000000	1.156710
Maximum	4.669098	0.200000	12.31825	3.250000	1.277533
Minimum	3.866751	0.070000	11.96054	2.000000	1.084449
Std. dev.	0.168135	0.039020	0.089100	0.365909	0.046971
Observation	68	68	68	68	68

Figure A1: CUSUM Plots
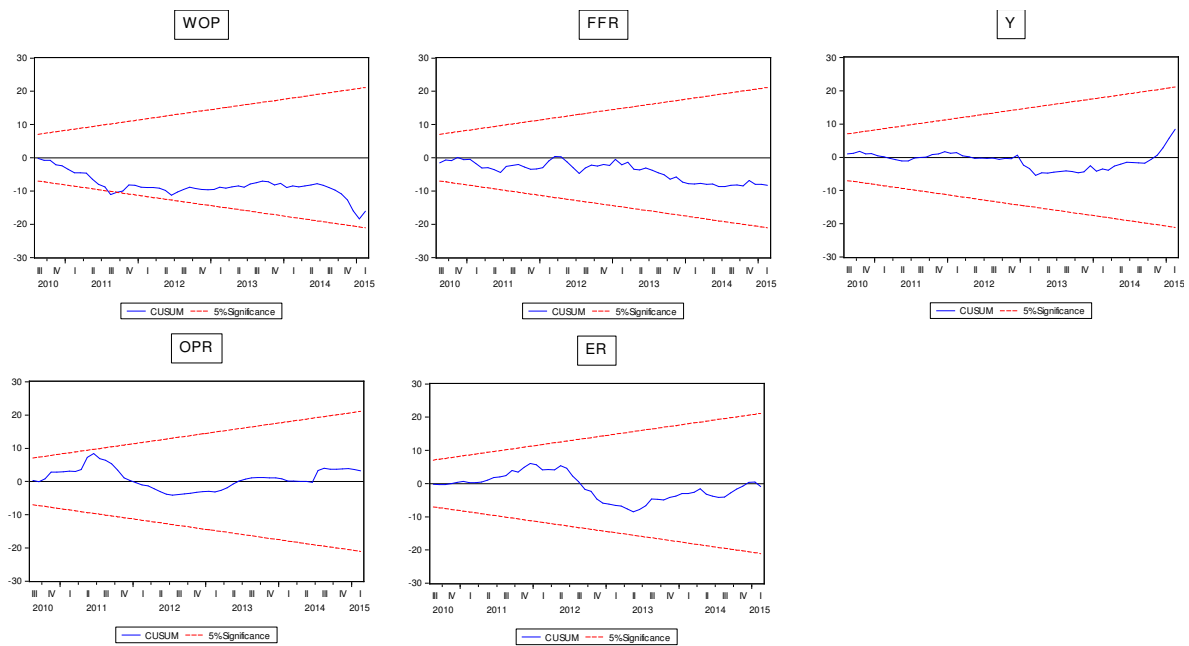
Figure A2: CUSUMSQ Plots
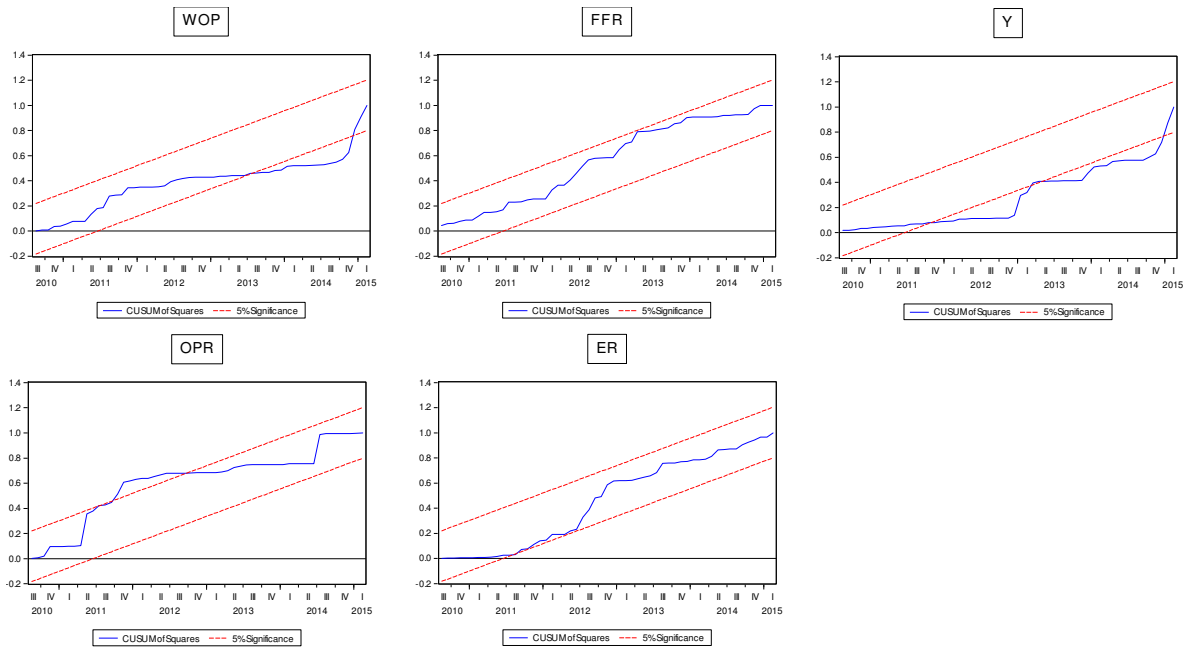
CAPITAL CONTROL ON FDI, GDP AND UNEMPLOYMENT RATE: A COMPARATIVE STUDY BETWEEN MALAYSIA, ARGENTINA, ICELAND, AND GREECE

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Abstract

Greece recent debt default had led to freezing on banking facilities, where business transactions get halted and disrupt the supply chain activates. A question is raised as to what extent the effect of a nationwide capital control imposition could have toward commerce. This working paper purports to discover the relationship between capital control and national key financial indicators, i.e., FDI, GDP, and unemployment rate. Four nation's case studies are deliberated in light of recent occurrence of national capital control, with Malaysia as the home country of the researchers. Data containing five (5) years before and after the capital control event were obtained from the World Bank, DataStream and government statistics websites. Preliminary result appears to suggest businesses' ability to foresee and avoid an incoming capital control event. Specifically, both FDI and GDP dropped prior to imposition of capital control. Recommendation of study includes the need to empirically attest these claims with a more robust empirical test, i.e., time series analysis.

Keywords: Capital Control, FDI, GDP, Unemployment Rate

INTRODUCTION

The debt-burdened Greece recently implemented capital control despite assurance to the public that they will not impose measure of limiting currency flow out of the country. As a result, it is severely affecting business activity as fund transfer to creditors abroad and from the customers is denied. Current Greece profile displays a declining GNI, as well as 163.6% debt-to-GDP ratio as of 2012 data (World Bank, 2015). With series of bailouts assisted by IMF and the Eurozone, it is drawing attention that Greece requires a strong economic reform. Nevertheless, recent implementation of capital control casts a shadow of doubt as to whether the companies could withstand this commerce limitation. As of this writing the E-commerce based Groupon has announced its exit from the Greece market due to its economic instability.

Objective and Significance

This working paper originally purports to discover difference in nation's FDI, GDP, and unemployment before and after capital control. Here we use the case study of Malaysia, Argentina, and Iceland in measuring the pre and post effect of capital control. In light of Greece recent inclusion, pre capital control data is used. Propositions forwarded below are intentionally directional following the

thought that capital control halts business transactions, which directly affect foreign investor's confidence, nation's consumption and investment, as well as fewer jobs created.

P1: There is a difference in nation's FDI before and after imposition of capital control.
P2: There is a difference in nation's GDP before and after imposition of capital control.
P3: There is a difference in nation's unemployment before and after imposition of capital control.

LITERATURE REVIEW

Capital Control and FDI

Studies involving empirical investigation between capital control and FDI can be categorized according to their objectives. Some studies involved only one type of capital control while others involve more than one type of capital controls. Also, the reviewed empirical studies can be grouped based on different number and nature of countries as well as groups of countries or regions (see Asiedu & Lien, 2004; Desai, Foley & Hines Jr., 2004; Elo, 2007; Clements & Kamil, 2009; (Dell'Erba & Reinhardt, 2015).

For instance, three impacts were examined, i.e., namely the existence of multiple exchange rate, restrictions on capital account, and restrictions on repatriation of export proceeds due to capital control policies on FDI. Asiedu and Lien (2004) found that the effect of capital control on FDI changes over time and by region. Specifically in the 1970s and 1980s, none of the policies had a significant effect on FDI. However, in the 1990s, all three were important. Besides, capital controls have no impact on FDI to sub-Saharan Africa and the Middle East, but they significantly affected FDI to East Asia and Latin America. Asiedu and Lien's research involved panel data covering 96 developing nations for the period 1970-2000, and the data were analyzed using fixed effect panel estimation method.

Elo (2007) had similar findings both theoretically and empirically. By employing Dunning's "eclectic theory" framework and cross-sectional (covering 81 nations) estimation model, he evaluated the effect of capital controls on FDI decisions and how this effect change base on different country-risk levels. According to Elo (2007), rising capital controls decrease the life span of FDI investments at each level of country risk, showing that restrictive capital control measures reduce the flexibility of the managers in deciding on the allocation of their investment proceeds, and hence choose to decrease their operation in that particular market. His empirical analysis reinforces the theoretical findings that capital controls decrease the quality of FDI in terms of volatility and volume. Also, the efficiency of these restrictive measures on capital especially in high-risk country was found to be insignificant on the volatility of these flows and having a significantly adverse effect on their average income.

Furthermore, it was found that capital controls have a contradicting effect on the two different kinds of FDI flows (Dell'Erba & Reinhardt, 2015). In particular, examining the relationship between financial sector FDI flows, banking debt flows and capital controls in emerging countries during episodes of large gross capital inflows, they found that capital controls have an opposite effect on the two types of flows in which the restrictive measures on short- term debt flows tend to reduce the probability of increases in banking debt flows but raise the probability of increase in financial sector FDI.

In contrast, Desai, Foley and Hines Jr. (2004) who analyzed a panel of annual survey data (ranges from 1982 to 1997) on the financial and operating features of U.S. based multinational corporations (MNCs), producing a different results that shows a clear cut negative relationship between capital controls and FDI. This is because nations imposing capital controls have substantially higher interest rates compared to those without capital controls. Therefore, multinationals considering new projects are associated with high local cost of borrowing and hence substantially lower investment levels.

However, Clements and Kamil's (2009) finding revealed that although capital controls successfully decrease overseas borrowing (not categorized in FDI), they do not have any influence on other, more important kinds of inflows, including portfolio inflows. Same (no statistical impact) is applied to non-FDI net flows as a whole. Their study involves the weekly data spans from end July 2006 to early July 2008 for the country named Columbia, and these data were being analyzed using econometric model

of capital flows (theoretically) and an OLS model (empirically). Overall, it can be indicated that the effect of capital controls on FDI varies in different situation, though there are a few clear-cut cases.

P1: There is a difference in nation's FDI before and after imposition of capital control.

Capital Control and GDP

There were researches empirically examining the linkage between capital control and GDP. This is due to the important role played by both macroeconomic variables in most of the economies. Those studies can be classified based on their objectives with some studies involve interactive variable (see: Mckenzie, 2001; Klein & Olivei, 2008) and some others not (Blundell-Wignall & Roulet, 2013).

For example, by employing both cross-sectional and panel data estimation to examine the influence of different kinds of capital controls on economic growth and growth convergence, Mckenzie (2001) found the impact of capital controls to be highly dependent on the particular type of control in place, with controls on current account payments are associated with the most deteriorating effect on growth. The main finding is the significance of interaction effects between capital controls and trade openness, as well as capital controls and initial income. The interaction with initial income reveals that growth convergence is slower in the presence of capital controls, in addition to the direct impact of capital controls on the GDP growth rate. This is not only indicating that capital controls retard growth; they also decrease the rate of conditional growth convergence.

Klein and Olivei (2008) support after obtaining the result indicating the positive relationship between capital account openness and economic growth. By using a set of cross-sectional data of developed and developing nations over the periods 1986-1995 and 1976-1995, their findings reveal that nations with unrestrictive capital accounts are able to have significantly higher rise in financial depth (and hence economic growth) than nations who pursue capital account controls. More specifically, the positive relationship are concentrated among nations who are OECD members, suggesting that benefits of capital account liberalization are only completely realized when the policy change takes place in a good institutional quality and sound macroeconomics condition.

In contrast, Blundell-Wignall and Roulet's (2013) finding contradicts with the notion that capital controls are most beneficial in a crisis. By employing panel (of 37 countries) regression to investigate the effect of IMF measures of capital controls on annual real GDP growth around the global crisis, they found that beneficial effects were in the pre-crisis period while negative effects take place during the crisis period. This is majority of the emerging economies focus on exchange rate targeting. During pre-crisis periods in which inflows are huge and the risk of exchange rate appreciation is high, imposing capital controls on inflows to reduce appreciation leads to strong trade benefit. However, during crisis period, funding constraints are more binding on firms because cash flows decrease while the reversal of capital inflows put downward pressure on the exchange rate. Capital controls on these times are more deteriorating for firms, hence adversely affect economic growth.

In short, the review indicates that the results or findings of previous researchers for the relationship between capital controls and economic growth are mixed, with some having a clear-cut case of negative relationship while some others found that the effect of capital controls on GDP vary with different situations.

P2: There is a difference in nation's GDP before and after imposition of capital control.

Capital control and unemployment

Should a country mobilize its capital account or restrict the capital mobility? The idea of free capital mobility or control the capital account remains as an argument. Theoretically, free capital flow enables to promote the investment growth, reduce volatility and enhance financing opportunities. Reality, however, is not a perfect world. The ideal of free capital mobility ended in a sudden stop after the experiences of the financial and exchange rate crises that happen in Southeast Asia in the late 1990s and peripheral Europe in the late 2000s. Increasingly, the adoption of capital control is encouraging as it prevents the huge macroeconomic implications such as over-valuation of exchange rate, increasing of

unemployment rate, and lead to economic recession (Amin & Annamalah, 2013). The International Monetary Fund has recognized capital control as an adequate crisis mechanism and concerns are remain on its effectiveness.

Greece's capital control may cause significant impact to the business, where consumers only demand for essential items. Consequently, Greece's domestic productions have dropped with sharp rise of 160,630 dismissal and unemployment rate after the implementation of capital control. Is the capital control policy effective? The benefits of capital control can only knowing through assessing whether the imposition of capital control was effective or not. The best method to evaluate the effectiveness of capital control is to confront the data from pre and post implementation of the capital control in the country. Hence, this study aims to evaluate the effectiveness of capital control through examine the unemployment on pre and post imposition of capital control.

P3: There is a difference in nation's unemployment before and after imposition of capital control.

RESEARCH METHODOLOGY

Research Design

Archival data is retrieved from the World Bank, DataStream, as well as government statistics websites in July 2015. The data validity from these sources are yet to receive a significant challenge, despite some scholars prefer independent estimates such as ShadowStats.com (Westra, 2012).

DATA ANALYSIS

Pre-post data difference may be analyzed by means of independent t-test. Due to adherence to minimum sample size (i.e., n=30), current data is insufficient to perform meaningful data analysis. Nevertheless, available data (sorted by quarter and by year) is tabulated for preliminary analysis.

Table 1: FDI, GDP, and Unemployment Rate of Four Countries

Factors	Country	Pre					Post					Comments/ Observations
		t-5	t-4	t-3	t-2	t-1	t+1	t+2	t+3	t+4	t+5	
FDI (US\$ in millions)	Malaysia	4342	4178	5078	5137	2163	554	3203	2473	4624	3925	Pre: declined due to 1998 Asian Financial crisis; Post: declined initially due to another 2011 Global Economic Slowdown, inclined subsequently.
	Argentina	9160	7291	23988	10418	2166	4125	5265	5527	6473	9726	Pre: declined sharply due to 1998 Argentina Great Depression; Post: inclined subsequently.

Table 1 (Continued): FDI, GDP, and Unemployment Rate of Four Countries

Factors	Country	Pre					Post					Comments/ Observations
		t-5	t-4	t-3	t-2	t-1	t+1	t+2	t+3	t+4	t+5	
	Iceland	757	2641	3190	3129	-221	137	239	473	748	-	Pre: declined sharply due to 2008 Icelandic Financial Crisis; Post: bounced back to positive figure.
	Greece	534	1092	1663	2945	2184	-	-	-	-	-	Pre: declined due to Euro Debt Crisis.
GDP Growth (%)	Malaysia	9.2	9.8	10	7.3	-7.4	0.5	5.4	5.8	6.8	5.3	Pre: declined since 1996 and achieved negative growth in 1998; Post: bounced back to positive growth and remained stable at about 6%.
	Argentina	8.1	3.9	-3.4	-0.8	-4.4	9	9.2	8.4	8	3.1	Pre: declined since 1997 and achieved negative growth in 1999; Post: bounced back to positive growth and remained stable at about 9%.
	Iceland	8.2	6	4.2	9.7	1.2	2.4	1.3	3.6	1.9	-	Pre: declined dramatically in 2008; Post: remained stable at 2.0% averagely.
	Greece	-5.4	-8.9	-6.6	-3.9	0.8	-	-	-	-	-	Pre: maintained negative growth between 2000 and 2003.
Unempl- oyment Rate (%)	Malaysia	3.8	3.1	2.5	2.4	3.2	3.5	3.5	3.6	3.5	3.5	Pre: inclined due to 1998 Asian Financial crisis; Post: inclined and remained at about 3.5% due to another 2011 Global Economic Slowdown.
	Argentina	14.9	12.8	14.1	15	18.3	12.6	10.6	10.1	8.5	7.8	Pre: inclined since 1998 Argentina Great Depression; Post: declined subsequently.
	Iceland	3.1	2.6	3	2.3	3	6.6	6.1	6.3	5.6	-	Pre: remained stable at about 3%; Post: inclined and remained at about 6%.
	Greece	12.5	17.7	24.2	27.3	26.6	-	-	-	-	-	Pre: inclined since 2000 and remained high.

Remark: t= occurrence of capital control: Malaysia (t=1999-2000); Argentina (t=2002-2003); Iceland (t=2009-2010); Greece (t=2015).

The imposition of capital control by Malaysia, Argentina, Iceland and Greece was originated by different forms of economic recessions and crises (i.e.: Malaysia - 1998 Asian Financial crisis; Argentina - 1998 Argentina Great Depression; Iceland - 2008 Icelandic Financial Crisis; Greece - Euro Debt Crisis). Generally, prior to the implementation of capital control, FDI of the four nations declined, among them Argentina was severely affected with consecutive drop of FDI, while Iceland recorded negative FDI due to the recessions. Besides, GDP of the four nations declined, among them Iceland's GDP dropped dramatically and breached its 5-year low figure, while Malaysia and Argentina even hit negative growths. In addition, observably incline of unemployment rate took place in four nations especially with Argentina's highest unemployment since 1997 and Greece's consecutive raise in unemployment.

The post effect of imposition of capital control is detectable in Malaysia, Argentina and Iceland, yet excluding Greece. After the implementation of capital control, FDI of Argentina inclined in a consecutive manner for 5 years while FDI of Iceland recovered and bounced back to positive figures. Unlike Argentina and Iceland, FDI of Malaysia declined contrarily due to another 2011 Global Economic Slowdown, but successfully recovered in the following years. On the other hand, Malaysia and Argentina reported to have positive GDP growth and remained stable at 6% and 9% respectively, while Iceland stabilized its growth at about 2% after the imposition of capital control. Likewise, from the aspect of unemployment, only Argentina experienced a positive effect resulted from imposition of capital control with its consecutive drop in unemployment. Whereas Malaysia and Iceland reported to have incline of unemployment and kept high at about 3.5% and 6% respectively.

RECOMMENDATION & FUTURE RESEARCH

Data accuracy can be improved by collecting quarterly data of above variables. For unemployment data, there is a trend that the number of government jobs is growing in significant proportion as compared to private jobs. More studies can be conducted to monitor the government to private jobs ratio when analyzing unemployment trend.

For further works, empirical analysis such as time series analysis will be used to attest the propositions made in this working paper.

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COMPARISON BETWEEN AR-RAHNU AND PAWN BROKING

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Abstract

This study is conceptual bases which include the comparison between Islamic pawn broking (Ar-Rahnu) is seen as a new micro credit and traditional pawn broking (conventional pawn broking) in Malaysia. Islamic pawn broking consists of four basic concepts namely, Qardhul Hasan, Ar-Rahnu, Al-Wadi'ah and Al-Ujrah. Assets pawned are guaranteed to be kept safely and there is a fair practice in auctioning and bidding under Ar-Rahnu. In addition, Ar-Rahnu also helps finance educational needs and provides capital to small businesses and entrepreneurs. For conventional pawn broking the pawn items are forfeited when payments are not made, borrowers do not accrue ever more burdensome debts whereas payday lenders charge higher fee. In consequence to the purpose of conducting this research is to determine the comparison elements between Islamic pawn broking (Ar-Rahnu) and traditional pawn broking (conventional pawn broking), qualitative analysis through interview has been done with few of Ar-Rahnu and pawn broking implemented in both banks and non-banks institutions. The general finding of this study may give clear picture on the different application between these two schemes implemented in Malaysia.

Keywords: Ar-Rahnu, pawn broking, bank, Malaysia.

INTRODUCTION

The main purpose of the conceptual paper for conventional and Islamic pawn broking is to study historical development in Malaysia and figure out significant differences between the two in terms of their business model and practice; standard operating procedure of pawning and redemption; methods for anti-counterfeiting check; service charges and payment that will be discussed in the latter part of this paper. The common confusion and perplexity among consumers on the mechanics of Islamic pawn broking still remains unattended and this has induced researchers' interest. In addition, researchers also intend to shed light on Islamic pawn broking to serve as an enrichment and contribution to the existing literature.

History of Pawn Broking

Pawn broking is a form of secured money lending by pawnshops in the conventional pawn broking system. The pawn broking business began since the 15th century and was introduced by the Chinese merchants during the Sultanate of Malacca. In the early stage, this business was not bounded to any

laws. They serve more like banks provide credit facility to people. In the era of British Colonialism, the Pawnbrokers Ordinance 1871 was introduced to govern licensing system of pawnshop. The pawn broking business becomes more popular after the discovery of tin mining activity in Larut in the 19ᵗʰ century (Azila Abdul Razak, 2011). The law, the Pawnbrokers Act 1972, was introduced in June 1973 after the independence of Malaysia in order to standardize the regulation of pawn broking in Malaysia. Majority conventional pawn shops now are operating in a smaller scale and managed by majority of Malaysian Chinese (Pawnbroker, n.d.). Pawn broking industry in essence serves as a mean and also a fast and easiest source for short-term cash borrowing: to lower income group to finance their household consumption and emergency financial need; and to small scale business and merchants to seek short-term financing to manage their cash flow problems. Unlike loans, pawn shops offer instant cash without credit checks, proof or income or even gainful employment when valuable item is pawned.

Demands for pawns among Muslims in Malaysia are seeking for an alternative to conventional pawn shops to access an interest-free and low cost short-term financing with compliant of Shariah laws. Realizing various parties against fraud and shortcoming in the conventional pawn, it led to the introduction of the Shariah based Islamic pawn broking system - Ar-Rahnu, in the early 1990s (Mohd Sharif, 2002) that is an intrest-free source of micro credit instrument. The first Islamic pawn shop practicing the concept of Ar-Rahnu and Qardhul Hasan in Malaysia was established by the Terengganu State Government and known as Muassasah Gadaian Islam Terengganu (MGIT) in 1992 (Hisham et.al, 2013). At the same year, this practice been followed in Kelantan State Economic Development Cooperations Permodalan Kelantan Berhad (PKB) by formed Kedai Ar-Rahnu in Kelantan (Khir et. al. 2008). The Ar-Rahnu begins to achieve more milestones after several cooperation efforts of opening new Ar-Rahnu outlets, between Bank Rakyat and Yayasan Pembangunan Ekonomi Islamic Malaysia known as YaPEIM in 1995 and between Bank Islam and YaPEIM in 1999 (Study on the pawn broking system in Malaysia Finance Essay, n.d.).

Target market of pawn broking industry is however very much narrow than before. Items and goods that used to be pawned are more variety than now, ranging from daily livestock (dried meat and fishes), commodities (corn, wheat), precious metal (gold, silver), antiques (painting and vases), jewels (gems, charms, jewelry) to other valuables (bicycles, watches). Nowadays, almost all pawnshops either conventional or Islamic only make deals with their clients on certain valuable items such as gold, silver and jewelry, and some even deal strictly and solely with gold. Attributed to advance cloning technology and technique and prevalent and unregulated duplication, it creates superb similarity in term of appearance and features between the genuine and the counterfeit, and differentiation between the two is nearly impossible. Nevertheless, the pawn broking could still remain attractive due to its ease of attaining credit facility. The existence of conventional and Islamic pawn broking service has given clients the choice to choose the best services provider in order to get fast and easy access to cash compared to getting loans from commercial banks or finance companies. The number of conventional and Islamic pawnshops in Malaysia in 2010 is exhibited in the table 1.

Table 1: the number of Islamic Pawnshops in Malaysia in 2010

No	States	PAWNSHOP	
		Conventional	Islamic
1	JOHOR	34	30
2	KUALA LUMPUR	14	22
3	KEDAH	29	27
4	KELANTAN	11	50
5	MELAKA	12	7
6	NEGERI SEMBILAN	18	16
7	PULAU PINANG	27	17
8	PAHANG	14	26
9	PERAK	40	31

10	PERLIS	4	6
11	SABAH	7	14
12	SARAWAK	3	15
13	SELANGOR	39	40
14	TERENGGANU	7	28
		259	329

Sources: "Economic Significance of Islamic Pawnbroking in Malaysia",2010

LITERATURE REVIEW

Implementation Ar- Rahnu with Bank Rakyat

As a micro-credit instrument, Ar-Rahnu secured and facilitates safe-keeping guarantee by providing insurance coverage for the pawned item. In actual fact, Ar-Rahnu scheme is created with aims to help members of society, poor people and small traders when they are dreadfully in need of cash for certain reason.

Diagram 1: Flow of Ar- Rahnu scheme
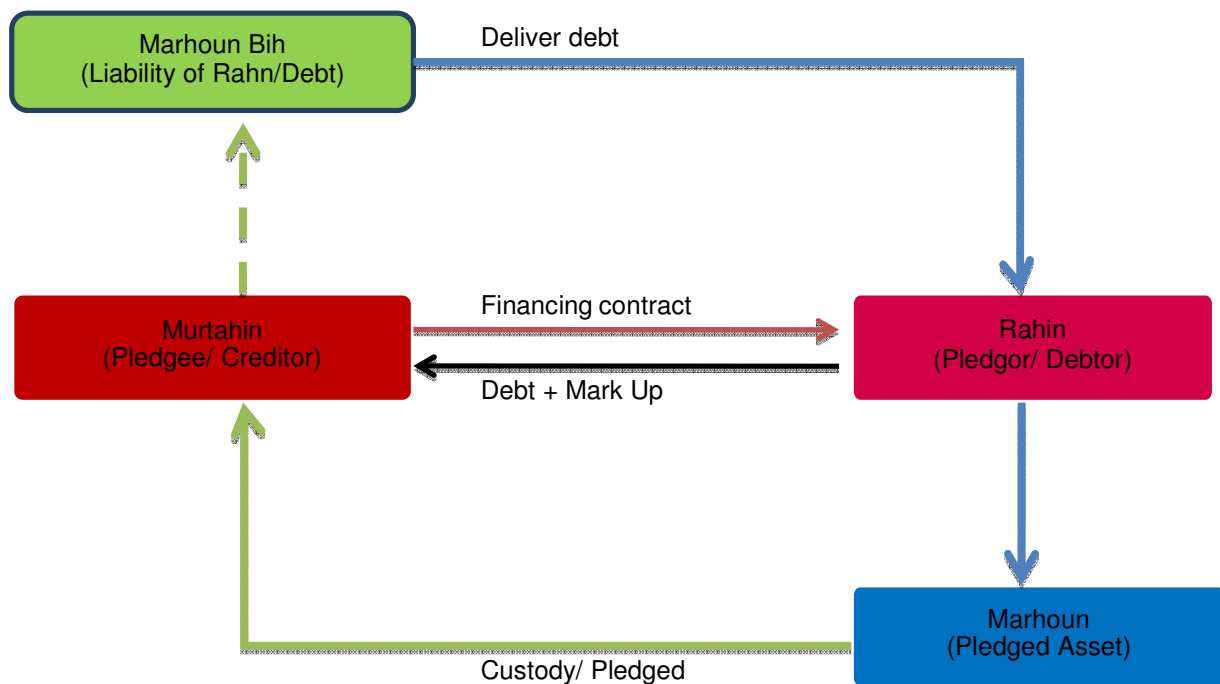
Adopted from Bank Rakyat 2001

(i)   Concept of Al Rahnu
   a) Qard Hassan
       A bank will grant a benevolent loan to the applicant who wishes to pawn his valuable item. The loan will be issued under the concept of QardhulHasan, whereby the customer is only required to pay the amount borrowed;

   b) Wadiah Yad Dhamanah

The bank accepts custody of the valuable asset on a Wadiah concept whereby the bank promises to keep the valuable asset in a safe place. The bank will need to take precautionary measure such as providing security and insurance to ensure its safe returns once the customer pays his debt. Under the Wadiah concept, the bank will charge the customer for the services rendered in keeping the valuable asset.

c) Ujrah
Al-Ujrah concept states that lender is allowed to charge a reasonable fee for the services rendered in keeping the pawned items safe and in good condition, The financial institution accepts custody of the valuable asset on a Wadiah concept whereby the bank promises to keep the valuable asset in a safe place and return when the time comes. The lending institution takes the precautionary measure such as providing security and insurance to ensure its safe returns once the customer pays his debt. Under the Wadiah concept, the bank will charge the customer or the services rendered in keeping the valuable asset.

d) Ar-Rahnu
Pledge or security related to loan prior to disbursement of cash to the applicant, the applicant is required to place a valuable asset as collateral for the loan extended by the bank;

(ii)   Transaction of Al Rahnu

a) Contract and operation
1. The borrower (Al--rahin) should submit the item or the collateral to the lender (Al--murtahin), where the lender can forgo the item (like returning back to the borrower) but not vice versa.
2. Any property which cannot be traded according to the syariah law cannot be used as Al-rahnu.
3. The borrower must pay the loan after the maturity date and the lender must return the collateral or the item to the owner. If the borrower fails to repay the loan, the lender receives the right to recover his loan form the collateral and he must return to the borrower if anything remained.

b) Limit and Margin of Loans
Usually, the amount offered by banks and financial institution for Ar-Rahnu loan is between RM100 till RM150,000. Plus, margin approved by those institutions also depends on every Ar-Rahnu implementer institution. For example, Muassasah Gadaian Islam Terengganu (MGIT) offers 100% free wage for asset below RM1000 but generally, the margin of this scheme is between 50% - 80% of the asset value. Calculation of safe-keeping fee is also different between each institution.

c) Safekeeping fee
According to table 2, Ar-Rahnu institution in Malaysia offered different Loan Margins on Ar-Rahnu transaction. This is because this institution has their own rights to determine the amount itself. The lowest loan margin offered is 10% while the highest loan margin offered by those institutions can reach untill 80% of marhun value. Bank Rakyat has categorized with the name of Az Zahab for the huge range of loan amounts RM10, 001.00 - RM100, 000.00 = RM0.75.

Table 2: Loan Margin and Safe Keeping Fees Calculation.

MARHUN VALUE (RM)	LOAN MARGIN	SAFEKEEPING FEES
RM100-RM1,000	65%	0.65
	70%	0.75
RM1,001-RM10,000	65%	0.75

	70%	0.85

Sources: Adapted from Bank Rakyat Malaysia

d) Duration of Pawn Financing
The pawn duration is longer. It means that for the first duration is for 6 months, then it can be extended for another 3 times.

e) Criteria of Pawned Items
In the Islamic-based pawnshop, gold is the only permitted item. Firstly, gold is easily resold and so there is potentially auctioning the collateral should the borrower not redeem the pledge. Secondly, gold's purity can be easily determined and so the risk of mispricing the collateral can be minimized. Thirdly, gold chains and rings typically require only a small flat envelop for storage and so can be kept securely in the bank safe at little additional cost.
Finally, women often receive gold chains and bracelets as wedding gifts and generally retain personal ownership of these items especially in Malaysia.

f) Internal control and security
Islamic pawnbrokers would prefer the customer to redeem their collateral within 6 months. However, if there is no repayment, there is an extension period of three months after which the client is informed that the item will be sold by auction within a further of 2 months period. Any surplus from the sale of the gold over the amount owed to the pawnbroker, including accumulated deposit fee and any costs related to the sale, has to be returned to the customer. In case the customer cannot be located, the surplus will be forwarded to the Baitulmal from which the customer is entitled to make future claims

g) Customer
They found the Islamicised Conventional Pawn broking attracted the relatively low-income stratum of the society which they had been serving in the pre-Islamicised form. In addition they appealed more to the female than do to the males. In term of age, their customers were generally in the early fourties. On the contrary, the institutional Ar-Rahnu carved a market amongst the relatively higher income groups and gender neutral-appealing equally well to males and females. Furthermore, customers of institutional Ar-Rahnu were relatively youngers. In term of lifestyle, the institutional Ar-Rahnu customers were more sociable and outdoor in nature than the Islamicised Conventional Pawn brokings customers.

Implementation Ar-Rahnu with YaPEIM

(i) Concept of Ar Rahnu
Yayasan Pembangunan Ekonomi Islam Malaysia (YaPEIM) offering ArRahnu services through recognized YaPEIM branches/ community centres at various locations nationwide. YaPEIM with cooperation of Bank Rakyat has start up Ar-Rahnu scheme on 23 Oktober 1993 (Syarifah, 2005; Dakian, 2005). (YaPEIM) provide ArRahnu-Based micro credit programme with application of four concepts or approachs which are Ar-Rahn, Al-wadiahYad Dhamanah, Al Qard and Al-Ujrah.

Ar-Rahnu refers to a valuable item that is used as collateral in a mortgage debt or loan, which can be used to pay the debt with if the debtor fails to pay it off. While, Al-WadiahYad Dhamanah refers to the safekeeping of valuable items with a guarantee, and fees will be charged for the safe keeping and the thirds, Al Qard refers to a loan given based on a certain percentage of the marhun value, and safekeeping fees charged is not based on the amount of loan disbursed. Lastly, Al- Ujrah (Safe keeping) Al- Ujrah concept states that lender is allowed to charge a reasonable fee for the services rendered in keeping the pawned items safe and in good condition. The financial institution accepts custody of the valuable asset on a Wadiah concept whereby the bank promises to keep the valuable asset in a safe place and return when the time comes.

(ii) Transaction of Al Rahnu

a) Contract and Operation
At YaPEIM, beginning of the Ar-Rahnu contract is start from when the prospect pawnor came to any YaPEIM nearest branches. As the Procedures, Prospect pawnor need to become a member of YaPEIM with the member fee charges of RM10.00, so than the pawnor are allowed to do Ar-Rahnu transaction at any YaPEIM branches in Malaysia. YaPEIM required pawnor to bring along the pledged items, identity card as evidence of Malaysian citizen and pawnor need to fill up a YaPEIM pawning application form to proceed with the contract.

b) Limit and Margin of Loans
A pawnor is allowed to make more than one transaction at any anytime on the same day. The accumulated total of loan for one transaction should not exceed RM10,000.00. The accumulated total of loan should not exceed RM25,000.00 at any time and this amount is not inclusive of the safekeeping fees. The maximum loan for every transaction is up to or not exceeding 65% of the marhun value of the pawned item. The lowest margin between those institutions is offered by YPEIM which offered only 65 % of marhun value (Rasmin & Markom, 2014).

c) Safekeeping Fees
Safekeeping fee is calculated based on the marhun value and the duration of the pawn financing (in months) until the pawned item is redeemed or sold (auctioned). Table 3 shows safekeeping fee charged by YaPEIM.

Table 3: Safekeeping Fees

MARHUN VALUE (RM)	SAFEKEEPING FEE (RM)
Special Rate	0.1
720.00 and below	0.5
721.00 -2,000.00	0.65
2,001.00 and above	0.75

Sources: Adapted from Yayasan Pembangunan Ekonomi Islam Malaysia (YaPEIM)

Based on table 2 above, the special rate of RM0.10 applies for the poor, as provided in the Poverty Database with reference to the Poverty Database developed by YaPEIM using the official data from the Government. According to Rasmin & Markom (2014) the lowest safe keeping fees of Ar-Rahnu RM0.10 which offered only by YPEIM. The calculation of the safekeeping fees is carried out on the date the pawned item is redeemed using the following formula:

Safekeeping fees = Marhun Value x Rate x Duration Periods

The duration for each pawned item is calculated monthly based on the date when the pawn transaction takes place. For the purpose of calculating the safekeeping fee, a financing period of less than a month is considered as a month. The safekeeping fee for a sold/auctioned pawned item should be calculated up to the settlement period based on the marhun value on the date of the original transaction.

d) Duration of Pawn Financing
The duration of a pawn financing is six months. Should the pawnor fails to redeem the pawned item within the period, Ar Rahnu YaPEIM can give a grace period for redemption of up to two months for the first extended period, even without a request from the pawnor. If the pawnor still has not redeemed within the grace period, the pawn duration can be extended for another two months for the second grace period. If there is no request from the pawnor to extend the duration or no safekeeping fee is made by the pawnor, ArRahnu YaPEIM can proceed to auction the item after a maximum period of 10 months.

e) Criteria of Pawned Items
   YaPEIM only accept gold based item as pawned items. Criteria of pawned items recognized
   and accepted by YaPEIM shown in table 4 as:

Table 4: Criteria of Pawned Items

QUALITY OF GOLD	GOLD CONTENT	ALTERNATIVE NAME
24.0 karat	99.90%	Emas sepuluh/ Emas kertas/ Pure gold
22.8 karat	95.10%	950 gold
22.0 karat	91.60%	22k gold/916 gold
21.0 karat	87.50%	21k gold/875 gold
20.0 karat	83.50%	20k gold/835 gold
18.0 karat	75.00%	8k gold/750 gold

Sources: Adapted from Yayasan Pembangunan Ekonomi Islam Malaysia (YaPEIM)

f) Internal control and security
   The lending institution takes the precautionary measure such as providing security and
   insurance to ensure its safe returns once the customer pays his debt. Under the Wadiah
   concept, the bank will charge the customer for the services rendered in keeping the valuable
   asset.

g) Customer
   Most of Ar-Rahnu customer in YaPEIM are among Malay community since the biggest
   pupolation muslim in Malaysia are Malay, even Ar-Rahnu is a way of Islamic pawn broking,
   minority Indian and Chinese community that are non- muslim also willing to accept the Ar
   rahnu concept based on the record from YaPEIM that shows there are Ar-rahnu customer
   from this minority community.

Implementation Conventional Pawn Broking

(i)   Concept of Conventional Pawn Broking

In Malaysia, the conventional pawn broking business tradition brought by Chinese Hakka from
China. Pawnshop businesses operate as one- stop financial centers for their customers under
Pawnshop Art (1972). (Ghafar & Zakiah Ahmad, 1997). There are 307 registered pawnshops
nationwide and the number is increasing (Sulaiman, Kassim, Alzoubi, Ashaboul & Abidin, 2014).

(ii)   Transaction of Conventional Pawn Broking

a) Contract and operation
.   The loan contract is specified in receipt issued by pawnshops, a copy of which the customer
   receives. The receipt states the customer's name and address, a description of collateral,
   amount of lent, maturity date and the amount that must paid to redeem the assets.

b) Limit and Margin of Loans
   Basically no limit amount offered by conventional pawnshop compare with Ar-rahnu. Plus, the
   margin of this scheme is between 60% - 70% of the asset value. Basically, RM100 have been
   charged in every 10 gram.

c) Interest rate

The interest rate and other charges are determined by each pawnbroker. Basically interest rate is fixed in range of 1.5 percent to 2 percent per month. The interest rate is expected to increase if the maturity of the loan is more than one month.

d) Duration of Pawn Financing
In the case of loan default, the pawn dealer has the right to auction the collateral is overdue by specific period of time, usually is 6 months. However, the customer needs to renew these loans by paying extra fees or interest on the loan extension. Customer may redeem within a week by following action as reminder letter.

e) Criteria of Pawned Items
Nowadays, gold is accepted as pawn gold by pawnbroker.

f) Internal control and security
Conventional pawnbrokers would prefer the customer to redeem their collateral within 6 months. If not, pawnbroker collaborates with licensed auctioneer to auction the pawned jewelry. However, pawnbroker will not return the extra money after auction surplus.

g) Customer
Majority customers under conventional pawn-broking are Indian in Malaysia. Basically the customer will pawn their collateral for many reasons such as poor, renovate house and buy new clothes for New Year celebration or for liquidity purposed.

CONCLUSION AND RECOMMENDATION

In conclusion, Ar-Rahnu is beyond doubt that it is fundamentally upholding the shari'ah principles aiming to achieve its objective. The Islamic pawn broking have several advantages over conventional pawn broking because it provides a cheaper way to obtain financing and is free from interest. Besides that the cost of borrowing in this scheme is the lowest compared to the conventional pawn broking scheme. The emergence of conventional pawn broking operating side by side with the Islamic pawn broking (dual system) provides an option to the customers to choose the best pawn broking service based on the features offered. Therefore, the Ar-Rahnu scheme needs to address central issues such as the marketing, public awareness and the locations of this scheme. Since this paper is a conceptual paper and future research can be done by interview through respondents in their decision making when choosing between Islamic pawn broking (Ar-Rahnu) and traditional pawn broking (conventional pawn broking).

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SHORT RUN MOMENTUM FACTOR AND VOLATILITY OF STABLE STOCKS IN UNITED STATES

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Abstract

This paper is to examine the relationship between momentum factor and the volatility of stable stocks listed in New York Stock Exchange (NYSE), United States from August 2010 to July 2015 which contains daily data 1305 set of observations.Inspired by the momentum strategy, investors are more preferable and routinely attempt to exploit the momentum profit in stock in period of 3 to 6 months, which earn an abnormal return (Jegadeesh & Titman, 1993, 2001; Chan, Jegadeesh & Lakonishok, 1996).In addition, Jegadeesh (1990) and Lehmann (1988) evidenced that contrarian profits enable to show in weeks' time or long-term periods. In order to examine the presence of abnormal momentum profit, this study will be conducted by short-term period of 1 month, 2 months and 3 months of holding for the momentum strategy. This paper employs Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model to investigate the stock volatility with the momentum factor, lagged 1 to 3 month daily returns. The number of the lag in the GARCH model will be justified by Autoregressive Distributed Lag (ARDL) model.The results presented that 2 months and 3 months momentum factor has significant relationship towards volatility of stable stocks. However, there is no significant relationship between 1 month momentum factor and volatility of stable stocks.

Keywords: Momentum, Stable Stocks Volatility, United States

INTRODUCTION

Stock market is a platform in which an investor buy or sell the stocks as part of the shareholder exercise and most of them involved in stock market for solely benefit which is to maximize their profit of investments in term of capital gain rather than dividend. If investors are able to predict the flow of the stock market volatility therefore, favorable profit can be earned through these arbitraged by anticipate the momentum factor. According to the risk-return tradeoff, higher risk are compensated with the high return,thus, investors can diversify their portfolio investment in order to reduce unsystematic or firm-specific risk which leads to aggressive losses.

Many investors are currently adopting momentum investing strategy in US stock market as momentum strategies possess dominant effect that outperforms in international stock markets which include United States, German, United Kingdom and European markets. Furthermore, investors do not deliberate in establishing strategy for their investing but unwittingly benefit from momentum effect in short run in order to maximize their profit. These behavior which is known as self-attribute bias would associate with the volatility of the stock market. Hence, with dynamic investigation on stock market volatility, these will lead to a more precise and dependable prediction of the stock price movement.

In short, momentum and volatility are important determinant to explain the stock returns in the market. Global financial crisis has brought an imperative impact on the stock price over the past decades which have caused failure of stock markets and economic condition drowns to the worst. In order to overcome the obstacles, this study is focus on stock market condition after global crisis and how the short run momentum factor affects volatility of stable stocks in US market.

LITERATURE REVIEW

Momentum Factorand Stock Market Volatility

Stock volatility is a measurement tool used to determine risk and uncertainty exposure of any investment vehicle in the financial market (Das et al., 2014). In order to quantify risk, standard deviation has been calculated, which directly assists in evaluating certain stock stability. According to Yang and Liu (2012), historical volatility acts as an indicator to evaluate and predict future price changes. High volatility stock signifies the difficulties for investors in foreseeing and anticipating the price movement of the stock in the future. As a result, investors need more desirable return for the risky investment. Therefore, companies have to show preferable performance in order for the investors continue pool their resources into company. Other than that, beta is a medium to measure and estimate return and risk (Bahhouth et al., 2010; Bali, Engle & Tang, 2014). Optimum market beta value is 1.0, which indicates that the stock's price will move at same amount and direction with the index.

Jegadesh and Titman(2001) stated that momentum effect is occur when the particular stock are having a good performance over 3 to 12 months, it may tend to continue performing well for the subsequent 3 to 12 months and vice versa. So, the best momentum trading strategies is to include the portfolio that consist of buy in past winner stock and sell the past loser stock over 3 to 12 month. Throughout this strategy will gain a momentum profit in every five year period since 1940. Gaining on momentum profit is due to the stock under react to the common information. In order to gain profit from the momentum effects, it will be the suitable time to purchase the firm's stock once the initial good news has been spoken. Therefore, past return can be chosen as one of the momentum factors to examine the effect on stock volatility and past return is calculated based on stock price.

Stock Price and Return

Stock price is one of significant factor of momentum effect by screening the stock based on price momentum (Jegadeesh & Titiman, 2001). Besides, momentum profit is created by the delay reaction to common information of a stock and this caused the investors have to predict the future price movement based on the current situation. Due to the leverage effect, Hasanhodzic and Lo (2011)investigated that there is an inverse relationship between stock price and stock volatility. It found that increase of leverage will lead to high volatility.

Stock return is another significant momentum factors. According to Jegadeesh and Titman (2001), stock prices are responding to common information, thus stockholder should be selected based on their past return in order to form a profitable trading strategy. This can be defined that stock price is used to calculate the stock return momentum that enable investors to predict the performance of the stock. If the firm has more alternatives on the investment opportunities, this helps to increase the firm value and exhibit a stronger sensitivity firm value to volatility because firm enables to minimize the effect of the bad news and amplify the effect of good news. Therefore, Jegadeesh and Titman (2001) proved that there is a significant positive relationship between firm level stock return and firm level return volatility. Besides, Bekaert and Hoerova (2014) indicated that there is a significant positive relationship between stock return and stock market volatility. This is evidenced by the expected market risk premium calculated by expected return minus the yield of treasury bills, which demonstrated a positively correlation with the predictable level of volatility in NYSE common stock. In contrast, Richard (1990) examined that there is weak relationship between stock return and volatility by using GARCH model. This is proven by estimating variety of model portfolio return data.

Behavior Finance Theory

Behavioral finance indicated that human psychology condition may impact on financial decision making (Shefrin, 2001) which supported by some empirical studies that investors' behavior do not consistent with traditional theory, the rationality of investor affecting on their decision (Akintoye, 2008; Burton Malkiel, 2005) in addition to investors are lack of ability in making decision with adequate and available information provided (Kahneman & Tverskey, 1979). As a result, this will cause an inefficient market which created anomalies in market prices and return that facilitate the investors to have an arbitrage opportunity in earning an abnormal profit. Future direction of stock price is forecasted based on past stock price, which is one of the momentum strategies known as investment-related anomaly.

Efficient Market Hypothesis (EMH) is a stock market efficiency that caused the existing share price incorporated and reflected all relevant information (Fama, 1970). According to Fama (1970) stated that efficient market hypothesis consists three different form of efficiency with respect to different types of information. First, weak form of efficiency can be defined as the existing stock price is reflected based on historical information. Second, semi-strong form of efficiency explained the stock price is reflected according to historical price and publicly available information. Third, strong form of efficiency is the stock prices that contributed by all types of information including past prices, publicly available information and confidential information. In conclusion, the price of securities is fair and the investors are incapable to earn profit above the average return as the information is freely available and they have to accept additional risk. Based on EMH theory, investors will be receiving higher return when rational decision is made during the investment in stock market.

Stable Stocks

Defensive stock is best known as stable stock whereby it provides constant earning regardless to the condition of efficient market. Stable stocks enable investors to gain higher dividend for their investment yet there is no unexpected loss through the investment. Hence, stable stocks are high risk as it provides higher return in future. According to New York Stock Exchange (NYSE) the best stable stock category are consumer staples and healthcare which provide constant earnings for past decades.

According to Ang, Chen, and Xing (2006), Winkler and Dirks (1958) and Khan (2008), the defensive stocks which is known as stock with high level of risk in efficient market can remain in a stable condition during recession period. These statements clearly state that defensive stocks can reserve a stable place in market. According to Lintner (1965) and Sharpe (1964) during market downturns, investors are attracted to invest in defensive stocks. This shows that, investors are willing to take risk by investing in stable stocks although market curve are downward sloping. According to Billingsley et al. (1987), McDonald and Kendall (2011) there is significant positive effects on the stock price of defensive stocks.

In conjunction with strong advantages of defensive stocks, there might be random walk in stable stocks whereby stock market prices may be random at certain period and may be uncertain. As the stable stock prices are in random walk, we cannot use historical data to predict future price of the stable stocks. There is high probability for stock prices to rise up or goes down. Thus, random walk is impossible to outperform the efficient market since there is high possibility of uncertainty in stock prices.

RESEARCH METHODOLOGY

According to Fenghua et al. (2014), and Du and Ning (2008), a study on the cross sectional on major stock market, assert that New York Stock Exchange (NYSE), United States, are more efficient to momentum effect from stock returns during the intimidate period. The paper, employs a listing of 28 stable stocks in NYSE, examine a momentum investment strategy for the 1 month momentum return, 2 months momentum return and 3 months momentum return.

The stock price of stable stocks is extracted from DataStream on the basis of daily trading days and sample period from August 2010 to July 2015 which contains daily prices data of 1305 set of observations. 28 stocks are chosen on random for Consumer Staples and Healthcare sectors, represent as a stable stock proxy, which are characterized by provide constant dividend and stable earning regardless of the overall stock market (Ang, Chen, & Xing, 2006; Khan, 2008).

Augmented Dickey-Fuller (ADF)

Augmented Dickey-Fuller (ADF) test is a test of any variable that beyond period y_{t-1}, and to include that error term may be serial correlated based on the following equation:

$\Delta Rt = \beta 1 + \Delta Rt\text{-}1 + \lambda t + Rt$ (intercept only) ……………………...…...……………………….…..……..Equation (1)

$\Delta Rt = \beta 1 + \beta 2t + \Delta Rt\text{-}1 + \lambda_t + \varepsilon t$ (Intercept andslope) ……...…………………….………....…Equation (2)

$\Delta Rt = \Delta \ - \ + \lambda t +$ (No intercept and slope) ....Equation (3)

When significant level isless than the P value of t-distribution, which is normally measured at 5% level of significance, it indicates that variableof the study is stationary.

Autoregressive Distributed Lag (ARDL) model

According to Liew (2004), the major step to generate Autoregressive model is to identify the AR lag length probability based on certain rules such as lag length selection criterion. The Akaike Info. Criterion (AIC), Schwarz Criterion (SIC), Hanna-Quinn Criterion (HQIC) are used to identify the lag length selection. The criterions are derived from the ARDL model in this paper as follow:

The lag length selection criteria to be evaluated include:

Akaike information criterion = $- 2T [\ln(\quad)] + 2p$ ....…...……………………….……….Equation (4)

Schwarz information criterion = $\ln(\quad)]) + [\text{———}$ …………….....……………….………....Equation (5)

Hannan-Quinn criterion = $\ln(\quad)]) + 2 - 1\ T\ p\ \ln[\ln(T)]$ ………………………………….……..….. Equation (6)

Generalized Autoregressive Conditional Heteroskedasticity Regression (GARCH) Model

The paper deploys Generalized Autoregressive Conditional Heteroskedasticity Regression (GARCH) model developed and extended by Bollersev (1986) indicates that it can capture long lagged effects with fewer parameters. The GARCH model can be denoted as GARCH (p, q), where p equals to number of lagged length of h term, variance and q equals to the number of lagged length of square of error to explain the significant of the momentum factor toward the volatility of the stable stock. Equation 7 indicate that the dependent variable (Y_t) can be explained by constant β_0 and an error term ignoring the explanatory variables (Xs) in the model so to focus more on the essential of GRACH model concept..

$$\beta \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{Equation (7)}$$

The model of the study as follow:

$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{Equation (8)}$$

Where   = Daily stable stock return
                = Coefficient   of regressions C = Intercept
                = GARCH term
                = ARCH term
                = 1 month momentum return
                = 2 month momentum return
                = 3 month momentum return

The hypothesis for the GARCH estimation procedure is as shown:

H0: $\beta_i = 0$
H0: There is no relationship between the dependent variable and independent variable.

H1: $\beta_i \neq 0$
H1: There is relationship exists between the dependent variable and independent variable.

Serial Correlation

Breusch Pagan Lagrange multiplier (LM) test will be performed in this study to ensure the fitness of the GARCH model and detecting ARCH effect and serial correlation, also referred as autocorrelation. Moreover, the correlogram Q-statistical test supplement the LM test to confirm that the GARCH model do not exist any serial correlation problem. The Serial correlation occurs when the current error term, period t, is correlated with the previous error term, period t-1. This problem will cause the variance of error unable to reach optimal level and it will lead the t and F statistic values become bias. Hence, the confidence interval and p-value for independent variable followed to be biased. At the end, the estimator will become inefficient. The Breusch Pagan test tests whether the approximated variance of the residual from a regression is dependent on the values of the independent variable. The LM test will test the equation (7) and equation (8) of the GARCH model by using the test statistic as below:

$$LM = (\ )(\overline{\quad} \quad [\ \overline{\ }])(\ )\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{Equation (9)}$$

Normality of the residual of GARCH

The Jarque-Bera(JB) test is a goodness of fit test to the whether the residual of the regression is normally distributed. The best fit GARCH model should justify whether the residual of the model is normally distributed in accordance to the fundamental assumption of time series. Thus, JB test is will be conducted to justify where if The JB test can defined as below:

$$(\qquad) ....Equation (10)$$

Where n = number of observation (degree offreedom)
        K =number of regression
        S = sample of skewness
        C = sample of kurtosis

Given equation formulae of skewness and kurtosis as below:

$$. ....Equation (12)$$

DATA ANALYSIS

Augmented Dicker Fuller (ADF)

Variable	Intercept only	Intercept and trend	No intercept and no trend
Daily return	-23.6213*** (0.000)	-23.6203 *** (0.000)	-23.30951*** (0.000)
1 month momentum return	-7.526353*** (0.000)	-7.532543*** (0.0000)	-6.915052*** (0.0000)
2 month momentum return	-5.753977*** (0.000)	-5.758993*** (0.0000)	-4.588510*** (0.0000)
3 month momentum return	-4.897096*** (0.0000)	-4.928194*** (0.0003)	-3.645305*** (0.0003)

*Table1: *, **, *** denote that reject the null hypothesis at the level of significance of 10%, 5%, and 1% respectively*

Table 1 reveals that the null hypothesis of unit root test is rejected at the significant level of 1 percent, 5 percent and 10 percent for the proxy of stable stock, 1 month momentum return, 2 month momentum return and 3 month momentum return. Thus, the ADF test aptly justifies that all variables will be applied in this GARCH model are stationary. Hence, the variables tested in the ADF can be used properly in the GARCH, which is a part of the time series model, since the variables have complied the fundamental requirement of the parametric time series model.

Autoregressive Distributed Lag (ARDL) model

lengths of lag	Akaike Info. Criterion	Schwarz Criterion	Hannan-Quinn Criterion
6	-4.129771	-4.014294	-4.08644
4	-4.132943	-4.049425	-4.101607
2	-4.130885	-4.079248	-4.111512
1	-4.134221*	-4.098494*	-4.120817*

*Table 2:*The preferred lag should be suggested to apply in the time series model*

Generally, the lags selection of the ARDL model will examine 6 lengths of the lags in the ARDL model. However, this paper tests only length of 4 different lags in the ARDL model. The reason for the omission of length of lag 5 and length of lag 3 is that the value of the AIC, SIC and HQIC are descending

order in the value from the highest length of lags, lag 6 of AIC, SIC, HQIC at -4.129771, -4.014294, and -4.08644respectively, to the lower length of lags, lag1 of AIC, SIC, HQIC at -4.134221,-4.0984 and -4.120817 respectively. Thus, it draw a hypothesis that the highest length of lag might not be appropriate to be applied to the GARCH model in this paper since the values of AIC, SIC, and HQIC are valued at the descending order. Moreover, as a result shown in table 2, the first level of the GARCH (1,1) is diagnosed as an appropriate length of lag to be applied in the GARCH model. It is substantiated that the length of lag 1 in ARDL model shows the lowest value to AIC, SIC and HQIC at -4.134221, -4.098494 and - 4.120817 respectively.

Generalized Autoregressive Conditional Heteroskedasticity Regression (GARCH) Model

Variable	Coefficient	Std. Error	z-Statistic
C	0.002874	0.000659	4.364214***
Variance Equation			
C	0.000172	4.22E-05	4.080784***
RESID(-1)^2	0.064551	0.016035	4.025549***
GARCH(-1)	0.648884	0.076636	8.467116***
1 month momentum return	2.26E-05	0.000125	0.180399
2 month momentum return	0.000218	0.000104	2.093958**
3 month momentum return	-0.000296	8.03E-05	-3.681209***

Table 3: *, **, *** denote that reject the null hypothesis at the level of significance of 10%, 5%, and 1% respectively

The GARCH estimation in the table 3 is denoted in the equation below:

$$...………………………………………………………………..……..…..…Equation\ (13)$$

The variation equation of the GARCH estimation

$$...Equation\ (14)$$

Based on general 5 percent of the significant level assumption, the result in the table shows that the endogenous variables, ARCH and GARCH, showan 1% significant level. The result contend that the past volatility and the previous stable daily return have significant influences to the current volatility of the stable stock return, current volatility and previous stable stock return will affect the future volatility of stable stock return. In nutshell, the volatility, also known as standard deviation, of the stable stock in US is influenced by its own ARCH term and GARCH term, or by its own internal shock, news or unexpected events.

Apart of these, 3 of the exogenous variable, 1 month momentum return, 2 month momentum return, and 3 month momentum return, in the GARCH model are examined in relation to the significant influence to the stable stock volatility. According to the table 3 substantiates that 2 month momentum return and 3 momentum return produce significant influences to the stable stock volatility by rejecting the Null hypothesis, states that the selected variable is not significant, whereas the 1 month momentum return fails to reject the null hypothesis, which indicates that the 1 month momentum return does not produce any significant influence to the stable stock volatility.

Breusch Pagan Lagrange multiplier (LM)

Heteroskedasticity Test: ARCH			
F-statistic	1.121604	Prob. F(1,1302)	0.2898
Obs*R-squared	1.122360	Prob. Chi-Square(1)	0.2894

Table 4: Breush Pagan LM test

According to table 4, the Breush Pagan LM test is properly conducted to verify whether the GARCH(1,1) has any ARCH effect or autocorrelation problem. In the LM test, null hypothesis cannot be rejected since the Prob. Chi-Square(1) is more than 5 percent. Hence, the LM test proved that the GARCH model do not have any ARCH effect or autocorrelation problem.

In addition, the p value of the 36 length of the lags of the Correlogram Q-statistic test is examined in the study. Based on the P value analysis in the Correlogram Q-statistic test, the null hypothesis cannot be rejected. The result of the Correlogram Q-Statistic test is consistent with Breush Pagan LM test to conclude that the GARCH model does not have serial correlation problem.

Apart of these, it is evident that the residual of GARCH is not normally distributed from the Jarque-Bera test with the P-value below general 5 significance level of the assumption. However, the problem of the non-normality is prevalent and not a critical problem in the time series. Provided the Estimator of the time series is persistent and consistent, the GARCH model can be consider a fit model to this paper.

CONCLUSION AND DISCUSSION

In nutshell, the paper concludes that 2 months and 3 months momentum factors have significant relationships towards stable stocks volatility. However, it is proved in our study that there is no significant relationship between 1 month momentum factor and stable stocks volatility in NYSE, United States.

In addition, in identifying the causality relationship between a stock momentum and a stock volatility, based on the finding of the study, it providessome sound evidence in determining there is robust association between stock momentum and stock volatility. Furthermore, Zhu et al. (2014) endorsed a significant connection between momentum return and stock volatility.

Last but not least, theoretical framework of momentum factor revokesan efficient market hypothesis (EMH) theory which past news and information are swiftly reflect future market stock price. The study also investigate the argument of efficient market hypothesis (EMH) hold in stable stock market, based on the outcome of the research finding, it asserts that momentum factor able to utilize past information to reflect future stock price in short-run performance. Therefore, efficient market hypothesis (EMH) is not efficient and holds in stable stock market.

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FACTORS AFFECTING COMMERCIAL BANK'S LIQUIDITY IN MALAYSIA

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Abstract

This study examines the macroeconomic and bank specific factors affecting eight local commercial bank's liquidity in Malaysia namely Maybank, CIMB Bank Berhad, Public Bank Berhad, Hong Leong Bank Berhad, RHB Bank Berhad, AmBank Berhad, Alliance Bank Berhad and Affin Bank Berhad from year 2005 until 2011. This paper utilized secondary data to carry out the empirical test. Pooled Ordinary Least Square model is used to analyze the data collected. The findings revealed that inflation rate, gross domestic product, bank's overnight policy rate, bank's capital, bank size, bank's profitability and bank's non performing loan are significant in examining the bank's liquidity. It is found that financial crisis is insignificant in explaining the bank's liquid holdings.

Keywords: *Liquidity, macroeconomic, bank specific factors, Malaysia.*

INTRODUCTION

Commercial banks play an important role in the economic development of a country. They are the financial intermediaries that provide an array of services to the consumers (Dodoo, 2007). Besides, commercial bank channels funds from surplus unit to deficit unit to earn profit from the interests and fees charged. However during this process, banks are exposed to risk in which large amount of funds might be withdrawn causing banks to face liquidity shock. Thus the purpose of this study is to examine the macroeconomic and bank specific factors affecting eight local commercial banks liquidity in Malaysia.

Past researches revealed that the decrease in liquidity during a financial crisis is the reason behind the failure of the banking system. Based on Moore (2009) findings, on average, the bank's liquidity might decrease by 7 percentage points during a crisis; usually will results in bank panic (Carlson, 2004). Cao, in 2009contended that when banks could not sell off their assets or convert them into cash without incurring a loss due to the decrease in asset value could lead to illiquidity. These will restrain economic development because an illiquid financial system can reduce the credit in a country; disrupt economic growth as more companies start to close down, high unemployment rate and decreases in both consumption and aggregate demand.

Asian financial crisis (1997) and subprime crisis (2008) have significantly affect Malaysia's banking industry. After the Asian financial crisis, Bank Negara Malaysia has imposed the merger and acquisitions for its 54 domestic deposit taking financial institutions to be consolidated into six institutions (Ahmad, Arrif, and Skully, 2007) on 29 July 1999.After the restructuring plan, today Malaysia is left with eight local commercial banks.

The impact of the subprime crisis has caused recession in European Union, Japan, Singapore and Malaysia. In order to cushion the effect, Malaysia has restructured the banking and financial system along with improved governance structure, risk management framework, infrastructure and practices (Bank for International Settlements, 2010a).

Arising from this crisis, Basel III was implemented in 2010 to overcome the shortfall of Basel II on liquidity matters. The implementation of Basel III has highlighted the importance of holding liquid assets, which have a better chance of survival during an economy downturn. The basic questions that arise in this context are : (1) How much liquid assets banks should hold during financial crisis? (2) How might bank's liquidity be affected by macroeconomic factors and bank-specific factors?

This study set up a theoretical framework to examine the effect of macroeconomic and bank specific factors on eight local commercial bank's liquidity in Malaysia namely Maybank, CIMB Bank Berhad, Public Bank Berhad, Hong Leong Bank Berhad, RHB Bank Berhad, AmBank Berhad, Alliance Bank Berhad and Affin Bank Berhad. This study covers the period from year 2005 until 2011. The four macroeconomic factors are inflation rate, gross domestic product, bank's overnight policy rate and financial crisis, while the other four bank specific factors are bank's capital, bank size, bank's profitability and bank's non performing loan.

LITERATURE REVIEW

Due to the great importance of liquidity for good functioning of the banking system, there are several authors that have devoted their time in this area :

Baltensperger (1980) and Santomero (1984) studied the **bank's liquid asset holdings** through liquidity management. The subsequent studies shed light on the determinants of bank's liquid asset holdings. The following empirical studies were conducted by G. Alger and I. Alger (1999) in Mexico, Agenor, Aizenman, & Hoffmaister (2004), Aspachs, Nier, & Tiesset (2005) in United Kingdom, Bunda and Desquilbet (2008), Moore (2009) in Latin America and Carribean, Archarya et al (2009), Fadare (2011) in Nigeria and Qin and Pastory (2012) in Tanzania. Their findings vary due to different liquidity measurements used in the studies. Hempel, Simonson and Coleman (1994) in their studies had indicated that stock approaches are most widely used and practiced. Recent study in bank's liquid asset holdings in Slovakia and Czech Republic were done using the stock approach (Vodova 2011a; Vodova 2011b). The determinants were segregated into macroeconomic factors and bank-specific factors in order to identify the impact on the bank's liquid asset holdings. This gives further insight to the previous studies.

Vodova (2011a) has found that **inflation rate** is negatively correlated with the bank's liquid asset holdings in Czech Republic but no relationship in Slovakia. He stressed that inflation will weaken the overall economy condition thus causing the bank's liquid asset holdings to deteriorate as well. The bank's liquid asset holdings can also be affected by inflation because the banks will increase their long term lending, thus the bank's liquid asset holdings will be greatly reduced (Bunda and Desquilbet, 2008). Ubegbunan's (1999) study indicates that during high inflation, the real value of bank's earnings will reduce significantly; a findings which is consistent with Bunda and Desquilbet (2008) empirical study.

Gross Domestic Product (GDP) is positively correlated with the bank's liquid asset holdings in the commercial banks in Slovakia (Vodova, 2011b). Calomiris and Wilson (1998) found that bank's liquid asset holdings tends to increase during recession and decreases when the economy starts to recover. This finding is consistent with Bunda and Desquilbet (2008); Maynard and Moore (2005) studies which indicates that during the economic expansion the demand for loans will increase as borrowers and investors are more confident with the economy and have more favourable investment opportunities.

G. Alger and I. Alger (1999) contended that economic recession can posed a higher risk of collapsing of the interbank market because of the higher default risk of the borrowing banks. Thus banks will hold more liquid assets during recession as the stability of the interbank markets is reduced (Kharroubi and Vidon, 2009). Aspachs et al. (2005) studyis consistent with the above findings.

Hackethal et al. (2010) study justifies that borrower's default risk tends to increase during a high unemployment period; a finding which is consistent with previous studies.

Empirical study by Carlettie, Hartmann and Spagnolo (2003) revealed that **interbank rate** and loan demand will increase along with an increase in reserves and deposits. This would directly reduce the liquid asset holding of banks.

Vodova(2011a); Vodova (2011b) contended that interbank rate is insignificant to bank's liquid asset holdings in the study done on commercial banks in Czech Republic and Slovakia.

Study conducted by Bunda and Desquilbet (2008) on the impact of bank's liquid asset holdings in 36 emerging countries during a **financial crisis.** Result showed that financial crisis has a positive relationship with the bank's liquid asset holdings. In the aftermath of the financial crisis, the growth of the business sector is sustained, causing the demand of loans to decrease; resulted in banks holding more liquid assets (Moore, 2009).

Research on commercial banks conducted by Vodova (2011a); Vodova (2011b) have found that financial crisis is negatively related with bank's liquid asset holdings in both Slovakia and Czech Republic. This is supported by Tirole(2002) study where he stated that financial crisis may result from excessive lending that eventually causes the banks to suffer poor bank liquid asset holdings. In Moore (2009) study revealed that during financial crisis, depositors might require more cash, thus leading to more withdrawals.

The bank with more **capital** will tend to hold more liquid assets (G. Alger and I. Alger, 1999)because larger capital will lead to greater loss for the investor (Bunda and Desquilbet, 2008) as evidenced by Vodova (2011a) research where liquid asset holdings will increase when the capital is higher.

Gonzalez-Eiras (2003) found a negative relationship between liquid asset holdings and bank's capital where the liquid asset holdings of a bank will decrease when the capital increase. Research conducted in Slovakia found a different result where banks with lower capital have higher liquid asset holdings (Vodova, 2011b). He justified that banks with lower capital are more concern about liquidity management, therefore more liquid assets will be held.

Based on Iqbal (2012) findings, the result shows that the **bank size** is proved to have a positive influence on the bank's liquidity risk due to less liquid asset holdings which are applicable to both conventional and Islamic banks.

Previous researches studies by Vodova (2011b) concluded that the bank size is negatively related with the liquid asset holdings of the banks in Slovakia. Reason being is that larger banks rely more on the liabilities to solve their liquid asset holdings problem. Similar findings were found by Hackethal et al (2010) in banks in Germany. G. Alger and I. Alger (1999) supported the findings

Bunda and Desquilbet (2008) conducted a study in 36 emerging economies from 1995 to 2000 to test the determinants of bank's liquid asset holdings. She concluded that bank size do not have any influence on bank's liquid asset holdings which are consistent with Vodova (2011a) study.

Return on equity (ROE) has a positive relationship with commercial bank's performance. In Chiaramonte, Casu, & Bottiglia (2012) results, the return on equity is significant and has a positive relationship with the bank's liquid asset holdings.

Vodova (2011b) studied on the determinants of bank's liquid asset holdings in commercial banks in Slovakia from 2001 to 2010. He found that ROE has a negative relationship with bank's liquid asset holdings which is consistent with finance theory, that high bank's liquid asset holdings reflect poor bank's performance. According to Hackethal et al (2010), when ROE increase, the bank's liquid asset holdings will decrease. Moreover, the bank's that is undergoing expansion in the market will have a lower ROE(Iqbal, 2012). The findings are consistent with the researchers expected result. However, Vodova (2011a) found that there is no correlation in commercial banks in Czech Republic.

The **non-performing loan (NPL)** ratio are said to have a relationship with credit expansion. The meltdown of the economy can cause the NPL to increase or decrease. Thus, the NPL ratio will affect the bank's liquid asset holdings (Festic and Repina, 2009).

Vodova (2011a) study on NPL ratio in Czech Republic's commercial banks from 2001 to 2009 revealed that NPL ratio and bank liquid asset holdings are positively correlated. This proves that banks remain prudent in their liquidity risk management to offset the high credit risk.

In Iqbal (2012) study, the result showed that NPL ratio is negatively correlated with the bank's liquid asset holdings in which NPL ratio reflects the excessive lending by banks that could lead to liquid asset shortage. However, Vodova (2012b) found that the NPL ratio shows no relationship with the bank's liquid asset holdings on banks in Slovakia.

RESEARCH METHODOLOGY

The study employed panel secondary data from eight local commercial banks for the period from 2005 to 2011. Pooled Ordinary Least Square model is used to analyze the data collected. The intercept and slope are assumed to be constant across the local commercial banks while time is invariant. The equation is shown as below:

$$Y_{it} = \alpha_1 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6 + \beta_7 + \beta_8 + \varepsilon_{it} \ldots\ldots\ldots\text{.model 1.1}$$

Where Y_{it} = bank's liquid asset holdings measured by liquid asset to total assets, α_1 = intercept, β_1 = gross domestic product measured by gross domestic product growth rate, β_2 = inflation rate measured by consumer price index, β_3 = financial crisis measured by '1' applied in 2007 and 2008, β_4 = bank's overnight policy rate, β_5 = bank's capital measured by total capital to total asset, β_6 = non performing loan measured by non performing loan to total loan, β_7 = bank's profitability measured by return on equity , β_8 = bank size measured by logarithm of total asset and ε_{it} = error term.

DIAGNOSTIC TESTS

Model Specification

Ramsey RESET test is performed to test the model specification error. If the p-value obtained is more than 10% significant level, it implies that the model is correctly specified.

Normality of the Error Term

The normality of error term can be tested by using the graph to detect the shape of the residual and the Jarque-Bera test statistics. The value of skewness and kurtosis of the model in required in order to calculate the test statistics value.

Multicollinearity

Multicollinearity test was conducted to determine the presence of relationship between the independent variables. The correlation between the independent variable is examined and the highest correlations between the two independent variables are chosen. Regression model were then constructed using the two independent variables that have the highest correlation to obtain the R-squared and variance inflation factor (VIF) is calculated to test the seriousness of the multicollinearity problem. If the VIF is equal to 1, this implies that there is no multicollinearity problem in the model. However, if VIF is less than 10, it implies that there is multicollinearity problem but not serious hence, no need to solve the problem.

Heteroscedasticity

After testing for multicollinearity problem, Breusch-Pagan / Cook-Weisberg test is conducted to test for constant variance of error term. If the p-value obtained is more than 10% significant level, it implies that the model does not have heteroscedasticity problem.

Autocorrelation

Wooldridge test is performed to examine the presence of relationship between current error term of the model and the error term in the past. If the p-value obtained is more than 10% significant level, it implies that there is no autocorrelation problem in the model.

DATA ANALYSIS

A few econometric treatments have been performed on the model. The first test that has been performed is the test on the model specification then followed by the normality of error term, multicollinearity, heteroscedasticity, and autocorrelation with the following findings:-

(i)   **Ramsey RESET test**- there is sufficient evidence to conclude that the model 1.1 is correctly specified.

(ii)   **Kernel density estimation** with **Jarque-Bera Test** - there is sufficient evidence to conclude that the error term of the model 1.1 is normally distributed.

(iii)   **Correlation matrix test** with an auxiliary estimated regression model '**variance inflation factor (VIF)**' –there is sufficient evidence to conclude that the model 1.1 does not contain any serious multicollinearity problem based on the VIF calculated value of 1.7406.

(iv)   **Breusch-Pagan / Cook-Weisberg test**-there is sufficient evidence to conclude that the model 1.1 does not consist hetetoscedasticity problem.

(v)   **Wooldridge test**- there is sufficient evidence to conclude that the model 1.1 consist autocorrelation problem. This problem can be solved using the generalized least square. (Liu, 2008). After regressing using generalized least square method, model 1.1 will become unbiased, efficient and consistent (BLUE). Thus, the variance of errors of model 1.1 is achieved at optimal level and its estimators are efficient.

Result of the Pooled Ordinary Least Square After Regressed by Generalized Least Square

Independent Variable	Coefficient Value	Sign	P-Value
Inflation rate (CPI)	-0.0181024	-ve	0.007 *
Gross Domestic Products (GDP)	-3.04e-07	-ve	0.000*
Bank's Overnight Policy Rate (BOPR)	0.065137	+ve	0.005 *
Financial crisis (FC)	0.018005	Insignificant	0.355
Bank's capital (BC)	1.399859	+ve	0.014 **
Bank's Size (BS)	-0.1092975	-ve	0.000*
Return On Equity (ROE)	0.2875147	+ve	0.010 **
Non-Performing Loans (NPL)	-1.949124	-ve	0.000*

*significant at 1%(strong effect), **significant at 5%(effect)&***significant at 10%(weak effect)

$y = c - 3.24\text{e-}13\ GDP - 0.014924\ CPI + 0.0201719\ FC + 0.068939\ BOPR + 1.405507\ BC - 2.039819\ NPL + 0.1020149\ ROE - 0.103575\ BS$ ....model 1.1

Based on the empirical results, it is found that CPI, GDP, BOPR,BS and NPL are significant at 1% which implies that they have strong effects on bank's liquid asset holdings. While BC and ROE are only significant at 5% which implies that they have effects on bank's liquid asset holdings. However, it is found that FC is not significant in explaining the domestic bank's liquid asset holdings.

From all the above findings, it can derived that:-

(i) **CPI** which is used to measure **inflation** is significant and negatively correlated with the bank's liquid asset holdings.

(ii) **Gross domestic product** is found significant and negatively correlated with the bank's liquid asset holdings which are consistent with the previous researchers study. The negatively relationship indicates that the banks hold less liquid assets when the economy is growing.

(iii) **Bank's overnight policy rate** is significant and has negative relationship with bank's liquid asset holdings.

(iv) **Financial crisis** is insignificant which is due to banking sector in Malaysia has grew stronger since Asian financial crisis 1997. In addition, the country macroeconomic fundamental experienced the same effect as well in the aftermath of the crisis.

(v) **Bank's Capital**. The results of the tests show that there is a positive relationship between the bank's capital and bank's liquid asset holdings.

(vi) **Bank's size** is found to be negatively correlated with bank's liquid asset holdings, which denotes that larger banks will have less liquid asset holdings.

(vii) **Return on equity** is significant and has a positive relationship with the bank's liquid asset holdings.

(viii) **Non-performing loans (NPL)** are significant in explaining Malaysia local commercial bank's liquid asset holdings. NPL has a negative relationship with the bank's liquid asset holdings.

In conclusion, it is found that financial crisis and return on equity are the independent variables which are insignificant in explaining the bank's liquid asset holdings. However, the gross domestic product, inflation rate, non-performing loans and bank's size are significant and negatively correlated with the bank's liquid asset holdings. Meanwhile, the bank's capital and bank's overnight policy rate are significant but have positive relationship with the bank's liquid asset holdings. All the findings are consistent with the previous researchers.

DISCUSSION, CONCLUSION & IMPLICATIONS

(i)   **Inflation** - One of the bank's main activities is lending out loans. However lending out loans during inflation is bad for the bank's liquid asset holdings because the nominal value of the loans will decrease during inflation. In addition, the real value of bank's earnings will decrease, thus reducing the liquid assets of the banks.

(ii)   **Gross domestic product** – Firstly, it might be due to a less stable interbank market during recession that affects bank's behaviour on holding liquid assets. Secondly, it might be due to the conservative behaviour in holding liquid asset during the economy recession. On top of that, banks will lend more loans when the economy starts to recover. The latter explains why bank's liquid assets drop when the economy recovers.

(iii)   **Bank's overnight policy rate** - Bank's overnight policy rate is positively correlated with bank liquid asset holdings because when the interbank rate is high, banks will hold liquid assets at optimal level. Banks will have to incur higher interest expenses to borrow at a higher interbank rate. Therefore, banks opt to hold liquid assets at optimal level to meet their own liquidity needs.

(iv)   **Financial crisis** - banks in Malaysia did not fall into a banking crisis during the Global financial crisis (2007-2008) because the banks have grew stronger since the Asian financial crisis in 1997. In addition, Malaysia's macroeconomy grew stronger as well in the aftermath of the crisis. These two factors contribute to the insignificance of the occurrence of a financial crisis to the local commercial bank's liquid asset holdings.

(v)   **Bank's Capital** - banks with higher capital will be more likely to hold more liquid assets as a precaution measure. Higher capital indicates higher stakes from the shareholders. Therefore, banks will be more concern about their liquidity management, as they want to avoid investors bearing the losses in the event of a liquidity problem.

(vi)   **Bank's size** - banks that are larger in size can gather fund through customer deposits more easily (G.Alger and I. Alger., 1999). Apart from that, the larger banks also have better credit ratings compare to smaller banks. When larger banks require liquid asset holdings, liabilities such as deposits or borrowings can be a source of funds for the bank (Hackethal et al. 2010; Vodova, 2011b). Therefore the larger banks will hold less liquid assets, and use the available fund to invest in a more profitable investment.

(vii)   **Return on equity (ROE)** / **Bank's Profitability**- Lower bank's performance can lower bank's liquid asset holdings. When banks gain higher profits, banks can reserve more liquid assets and generally banks with higher liquid asset holdings are perceived to be safer. Banks that gain higher profits will gain competitive advantages over banks during a financial crisis as they will have more liquid assets to buffer the liquidity shocks.

(viii)   **Non-performing loans (NPL**) - When NPL happens, banks will suffer losses as banks have to write it off as bad debt. Since losses will deteriorate the bank's liquid asset holdings, higher NPL ratio will eventually cause the banks to be less liquid.

Banks should remain liquid at all times to prevent falling into a liquidity crisis and cause distress to the overall economy. Thus this study attempts to identify the determinants of liquid

asset holdings of local commercial banks in Malaysia. This research also provides summary of previous studies on similar topics. Panel data set is used, spanning 8 Malaysia local banks over 7 years and estimated using pooled OLS. After carrying out the hypothesis testing, the following conclusion has been formed.

It is found that bank's capital, bank's size, non-performing loans ratio, gross domestic product, inflation rate, bank's overnight policy rate and return on equity have significant effects on bank's liquid asset holdings. However, in the event of a financial crisis it is proven to be insignificant in this research. This concludes that the occurrence of a financial crisis will not affect the local commercial bank's liquid asset holdings.

Despite the best efforts, this research still suffers from a few limitations. However, these limitations do not have a large effect on the results and some of them can be overcome. In brief, this research has reached its objective in finding the determinants of the liquid asset holdings of local commercial banks in Malaysia and can be used as a referral point for the future researchers who are interested to study this topic.

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Chinese Renminbi's International Status and its Influence on major Asian countries and Australia currency

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Abstract

As the largest export destination from Japan, South Korea, Taiwan, Malaysia, Thailand, Philippines and Australia, China has become the growth engine in the Asian region and Australia. Evidently the sharp upturn in exports to China in 2010 after the recovery from the global financial crisis 2008/2009 confirms the role of China as the growth engine in the Asian region and Australia. The upturn imports may have caused chronic trade deficits. Thus, these chronic trade deficits may have opened the door of supply of Chinese yuan or renminbi via the trade channel if these trades for settlement in renminbi. China started the exchange rate liberalisation in July 2005. The purpose of this paper is to (1) assess the extent of the renminbi's influence on the exchange rate and monetary policies in the Asian region; (2) to assess whether US dollar, while remaining as the anchor currency in the region, has seemingly losing its domination status.

Keywords: Chinese renminbi, exchange rate, currency internationalization, international status, anchor currency.

INTRODUCTION

China has now become the largest destination of exports from Japan, South Korea, Taiwan, Malaysia, Thailand, Philippines and Australia. China's role is confirmed after the global financial crisis in 2008/2009. This global financial crisis has exposed the vulnerabilities of the US Dollar (USD) denominated international monetary system. The privilege of a reserve currency and with negative externalities, the US dollar has hurt the global economy. Some economists argued that the USD should be weakened so that the international monetary system would be more diversified and less dependent on the US policies that were the origin of the global financial crisis. (Eichengreen, 2010).

As recovery from the global financial crisis, Asian countries growth started with an upturn in their exports to China. Thus caused China posting chronic trade deficits with these trading partners (refer to Table 1). These trade deficits might have opened the door for the supply of Chinese yuan or renminbi via the trade channels with trade settlements in renminbil. Therefore, renminbi may have been significantly influencing the exchange rates and monetary policies in the region since China started the exchange rate liberalisation in July 2005.

With growing trade integration within the region, exporters of these Asian countries and Australia may have been invoicing in renminbi. Central banks of these countries may also have been hoarding renminbi in their foreign reserve currencies. Especially when the United States Treasuries or other sovereign bonds are perceived to be less and less safe when some sovereigns have lost their triple-A rating. This as a result of S&P's downgrades such as the United States in August 2011 and France in January 2012. The U.S. dollar has been losing its value against the renminbi to approximately 20 to 30% since the liberalisation of the renminbi in July 2005. (Refer to Graph 01)

However, the renminbi is a non-convertible (especially for financial accounts) and convertibility is an essential liquidity parameter for an international currency. This limitation of the renminbi is that only Chinese imports are to settle in renminbi. Any slowdown of the Chinese imports will affect the demand for renminbi and thus the Chinese government may be forced to devalue its currency. Therefore, any devaluation of the renminbi will negatively affect the currencies of these trading partners. Especially, if their currencies are to peg to a basket of international currencies and where renminbi is part of the basket of currencies.

Past studies have identified renminbi's significant impact in the East and South-east Asian region(Fratzscher and Mehl 2010), Some even claimed that a renminbi bloc is already in shape(Subramanian & Kessler, 2013). The purpose of this paper is to: (1) assess the extent of the renminbi's influence on the exchange rate and monetary policies in the Asian region. (2) assess whether US dollar (while remaining as the anchor currency in the region) has seemingly losing its domination status. We shall assess the influence over two periods. That is Pre-2005, from January 2000 to 22 July 2005 (when China liberalise the renminbi) and Post-2005 from 23 July 2005 to 21 August 2015.

LITERATURE REVIEW

The Development and Theories of International Currencies:
Metal coins were the earliest and common transactions media for commerce within border while precious metals emerged as the near universal vehicle for commerce because of their wide acceptance, high value to weights and easily verifiable weight and quality during the ancient and developments of money. As trade pushed commerce beyond national political boundaries, coin of high and easily verifiable characters established a key role in the settlement of trade flow. With the wide spread of trade and commerce and fueled by dominance of an empire combined the coin's attributes, the spread of use these monies like silver *drachma* of Athens, the gold *aureus* and the then silver *denarius* under Augustus (50 – 3- BC) which expanded to reach as far as Chine (Einzig, 1970). In the late fifth AD, a coin known as *bezant* or *solidus* issued by the Emperor Constantine of Byzantium became the standard medium of exchange throughout the western world for 700 years until the fall of Constantinople after 1200 AD. Although most of these empires have issued their national currencies, only a few of them served as accepted means of payment in international transactions. (Lopez, 1951) suggested that the gold *solidus* of the Byzantine Empire is "the dollar of the Middle Age". This was because of its acceptability everywhere and no kingdom has a currency that can be compared to it at that time. In the seventh century, the Byzantine coins were replaced by the *dinar* of the Arabs to provide a commerce vehicle in conformity with the Islamic law. All *drachma, aureus, bezant* and *dinar* lost their status due to devaluation with a pattern of debasement and coin chipping.

In the thirteenth century, the florin of Florence became the dominant currency and its dominance continued until the fifteenth century and was taken over by the "ducato" of Venice

(Cipolla, 1956). The British pound sterling played the dominant role in international traded until World War I. The US dollar (USD) became the dominant currency after World War II (Yeager, 1976) .

Trade is an important factor in establishing a currency as an international currency for fulfilling the transaction as a medium of exchange and a unit of account (Auboin, 2012). An international currency is defined as a currency that is used elsewhere beyond its home country. There are two approaches to defining the theory of international; currencies. The common approach in defining an international currency in terms of its functions (Benjamin J Cohen, 1971; Krugman, 1984) and others.

Money or currency performs three basic functions – as a medium of exchange, a unit of account and a store of value. An International currency performs the same three basic functions, except that it has an extended level for private and public transactions and with six roles as depicted in table below (Krugman, 1984).

The functions of an international currency

Function of money	Governments	Private actors
Store of Value	International Reserves	Currency substituition and investment
Medium of exchange	Foreign exchange market	Vehicle currency, invoicing trade and financial transactions, settlement currency
Unit of account	Anchor for pegging local currency	Denominating trade and financial transactions

As a medium of exchange, it is used by private actors to settle international economic transactions (as a vehicle) or by governments to stabilise or defend its national currency via intervention in the foreign exchange market. As a unit of account for invoicing as, it denominates international economic transactions at private level while at public level, its role as an anchor to which governments peg their currencies. As a store of value, it is used as an investment asset at private level, at public level governments used it as a reserve currency (Benjamin J Cohen, 1971).

The second approach references towards political economy factors pioneered by (Strange, 1971), who like (Benjamin J Cohen, 1971) considered sterling in the early 1970s directing attention to the politics of international currencies. Strange group International currencies into four categories: "Master Currencies", "Top Currencies", "Negotiated Currencies" and "Neutral Currencies". She highlights both economic and political factors in shaping the currencies for international use.

A Master Currency is the currency of a hegemonic or imperial state that coerces its use by other states. It thus derives its status from the political relationships between the issuing and the subordinate states. Sterling in the sterling area currency and the French franc in the franc zone in the past were examples.

A Top Currency, in contrast, is one that is most favored by the world market. For various monetary purposes due to its economic factor and it tends to be the currency of the predominant state in the world economy.

A Negotiated Currency occurs when the issuing state bargains or negotiates politically with other states for their use of its currency, offering inducements such as military and diplomatic support or economic benefits. Examples of negotiated currencies include postwar period and the dollar in the 1096s. Strange characterizes a negotiated currency primarily as a currency in

decline, that is, one that has lost or is losing its political dominance as a master currency or its economic dominance as a top currency (Helleiner, 2008), a negotiated currency can also be a currency on the rise. This political economy typology of international currencies provides a useful framework for analyzing the effects of political, as well as economic factors, on international currency status.

However, there is a third approach by (Benjamin J. Cohen, 2011) where he combine both the economic and political factors. He recognizes that there the steep competition of cross-border competition among currencies. Circulation of national currencies no longer confines within territorial frontiers of nation-states. USD, euro dollar (EUR) and others have come to be widely used outside their country of origin, vying directly with local rivals for both media of exchange and investment purposes. Competition is intense and as in most competitions; success is largely a matter of survival of the fittest. The use of currency, outside their country of origin, are categorized for either of two purposes. Transactions between Nations or transactions within foreign states - "currency substitution" or also referred to as "foreign-domestic use".

Commercial and financial reasons are the driving force to determine the preference of currency internationalisation and currency substitution. Currencies such as USD, EUR and the Japanese (JPY) will prevail over other currencies. Money will not come to be used internationally if its issuing state does not already enjoy a significant measure of economic and political standing in the world

From an economic perspective, one of the most familiar benefits of issuing an international currency may be seigniorage, the difference between the face value of a currency and its production cost. Seigniorage is generated at international level when foreigners hold the domestic currency or financial claims denominated in it, in exchange for traded goods and services (Benjamin J Cohen, 2009). International seigniorage also encompasses gains due to the difference between interest paid on foreign assets acquired by the issuing country and that on assets denominated in its currency acquired by foreigners(Chinn and Frankel, 2008). These gains arise, in part, as increased demand by foreigners for the domestic assets tend to reduce the required return on them. The most significant benefit accruing to the state issuing an international currency may be its ability to finance the balance of payments deficits with its currency and the expansion of microeconomic flexibility (Benjamin J Cohen, 1971). As criticized by Valery Giscard d'Estaing, a French finance minister in the 1960s that US "exorbitant privilege" to be able run balance of payments deficits by printing extra dollars (Eichengreen, 2012).

Why would China wish to internationalize renminbi.

Economic and political scientists widely recognized that internationalization can bring enormous benefits to the issuing country. Internationalization of the renminbi will contribute to establishing a more stable international monetary system(Chen, Siregar, & Yiu, 2013; Gregory Chin & Wang Yong, 2012; Gu & Yang, 2009; Walsh, 2014). Economic and political scientists widely recognized that internationalization can bring enormous benefits to the issuing country. Internationalization of the renminbi will contribute to establishing a more stable international monetary system. In the world's major economic regions, the United States has the dollar, the Europe has the euro, and the East Asia region can have renminbi of China. China is the second largest economy in the world, and it has a huge influence in the East Asia region. Therefore, its currency renminbi can contribute to retaining the balance between three major economic regions. With the inclusion of the renminbi as a regional currency, it can establish a stable international monetary system supported by the reasonable economic policies of the United States, Eurozone and China. China can play the role of a leader in East Asia. With the steady increase in trade volume between China and other Asian countries (refer to Table 2), China's renminbi has a greater impact on the exchange rate of East Asian currencies. Improving the international role of the renminbi can contribute to the stability of exchange rates of East Asian currencies, and to the stability of East Asian economies.

Internationalization of Renminbi would reduce the exchange rate risk of Chinese exports and importers. The widespread international acceptance of renminbi means that more foreign trade would be invoiced and settled in the renminbi, so the Chinese exporters and importers can shift exchange risk to their foreign customers. (Chinn & Frankel, 2008) commented that the international role of the US dollar as "the global use of the dollar is like the global use of the English language. This is a natural advantage that American businesspeople tend to take for granted.

Renminbi's internationalization offers China financial institutions more new profit opportunities. It also creates the possibility of developing new financial service businesses for the country's banks and other official institutions and thus would also contribute to improving the competitiveness of Chinese financial institutions. Chinese banks have a comparative advantage at dealings in renminbi, as U.S. banks at dealing in dollars and British banks at dealing in pounds. Furthermore, the domestic non-financial sector would also benefit from the development of China's financial sector because a larger financial sector usually means a lower cost of capital and more financial services.

Seigniorage (Chinn & Frankel, 2008) suggest that seignorage is perhaps the most important benefit of having other countries hold one's currency. With the internationalization of the renminbi, more and more non-residents would hold renminbi for its international functions, and the China's monetary authority would collect seigniorage from these non-residents. Seigniorage is the margin between the denomination of the notes and the cost of issuing the notes obtained by the note issuer. Issuing an international currency is equivalent to levying seigniorage on other countries.(Canzoneri, Cumby, Diba, & López-Salido, 2013; Fielding & Mizen, 2001; Grilli, 1989; Li & Matsui, 2009) etc. The non-residents who use the international currency must give their goods and services or the ownership of the real capital stock to obtain a certain amount of international currency. Currently, since U.S. dollar is the key currency, the United States can collect seigniorage from all over the world. China's renminbi is not expected to replace the status of U.S. dollar in a short period. The internalization of the renminbi could be at least counteracts some seigniorage that China has to pay to the United States.

Political power and prestige – some political scientists have suggested that key role of U.S. dollar has significantly benefited from reserve currency status of the United States. (Benjamin Jerry Cohen, 2010) Political power and prestige – some political scientists have suggested that key role of U.S. dollar has significantly benefited from reserve currency status of the United States. They emphasized that the United States has benefited from this currency status, and the United Sates has disproportionate impacts on the policies and activities of the international financial institutions, such as the International Monetary Fund – IMF. With the rapid growth in an economy, the Chinese authority is pursuing a greater say in the international community. The internationalization of the renminbi is supposed to enhance China's international status and will increase its influence.

The internationalization of the renminbi will contribute to preserving the value of its significant amounts of foreign exchange reserves. China replaced Japan as the biggest holder of foreign exchange reserves in the world since 2006. The vast foreign exchange reserves are wealth to China, but the authority must face the risk of devaluation. All China's foreign exchange are denominated in foreign reserve currencies with the major reserve currency in the U.S. dollar. China has to bear the huge risk of the devaluation of the U.S. dollar. If the United States carried out some loose monetary policies, it could easily inflate away China's dollar reserves. The internationalization of the renminbi would contribute to reducing China's excessive foreign exchange reserves. If the reserves are denominated in the renminbi, China would not need to worry about the loss from devaluation.

All these significant benefits can be obtained by the internationalization of the renminbi. However, there are three major disadvantages as suggested by (Chinn and Frankel, 2008). That is why Germany and Japan are reluctant to internationalize their currencies in the past.

The **"impossible trinity"** – Robert Mundel (1993) pointed out that it was impossible to have all the three of the following at the same time: a fixed exchange rate, perfect capital mobility and an independent monetary policy. For example, if a country would like to maintain a fixed exchange rate and allow free capital flows, it has to give up the independence of its monetary policy. There is an intrinsic incompatibility between three goals. Although currency internationalization does not require the authority to remove all restrictions on capital movements, a significant degree of capital account liberalization and convertibility are prerequisites of internationalization. (Genberg, 2009) Renminbi is one of the most tightly controlled currencies in the world (Benjamin J. Cohen & Chiu, 2013) The authority has to give up one goal among fixed exchange rates and independence of the monetary policy. Hong Kong has abandoned the use of monetary policy and adopted the fixed exchange rates. On the contrary, Singapore Monetary Authority (MAS) has chosen to rely on exchange rate changes to affect domestic economic activity.

Large fluctuations due to demand for renminbi**.** – The internationalization would increase the amount of the currency to circulate beyond the country's borders. If China's asset were made available to non-residents, the demand for renminbi would increase and huge inflows of capital might appreciate renminbi drastically. The significant increase in an exchange rate of the renminbi would render exporters less competitive in the world markets. In another situation, if the foreign holders come to believe that China's asset price may fall sharply, renminbi assets will lead to the depreciation of their prices, and China's domestic investors will suffer losses.

International responsibilities – The internationalization will bring huge benefits to China, at the same time, with more international responsibilities. As in the US dollar, which is the center of the international monetary system, any policy of the U.S. monetary authority would influence the whole global economy. Therefore, the U.S. authority has to take into account the impacts of their policies on the international market. U.S. authority could not solely focus on its domestic objectives but have to consider other countries' benefits. The internationalization of the renminbi would enhance its international status significantly while China enjoys the benefits from renminbi's international role, it also needs to take the corresponding responsibilities.

RESEARCH METHODOLOGY

Data and Empirical Methodologies

In this section, we focus on the empirical methodologies for assessing the extent of influence over the exchange rate and monetary policies in the region. And on the other hand (while remaining the anchor currency in the Asian region) whether US dollar has seemingly been losing its domination status over the selected seven countries. These seven countries made up of approximately 38% of the China's total import in 2014 (refer to Table 2). We identify the importance of renminbi by estimating its weights as a reference currency in respective currency baskets. We analyse the weights on its shifts across two periods, that is before 2005 (Pre-2005) and after 2005 (Post-2005). We will adopt the estimation framework developed by the early works of(Frankel & Wei, 1994).

To determine the defector exchange rate regime of a country is to infer the actual weights of the basket currencies if the regime is believed to be a basket peg. Note that countries might prefer not to disclose the baskets or the weights, and may deviate from the de jure regime. If we assume a certain currency is determined by a currency basket, then regressing the exchange rate of this currency against those of candidate currencies in the basket, would help recover the

actual weights and importance of these candidate currencies in the exchange rate regime. The general model can be written as follows:

$$\Delta e^i_{t,t+s} = c + \Sigma^n_{j=1} \beta_j \Delta e^j_{t,t+s} + \varepsilon_t$$

where e^i_t is the log of the exchange rate of currency *i* at time t; c is the constant; β_j refers the weight of currency j in the currency basket; $e^j_{t,t+s}$ is the log of the exchange rate of currency j at time t; and ε_t indicates the idd residual. To get rid of likely non-stationary, we use the changes of exchange rates, hence $\Delta e^i_{t,t+s}$ indicates changes of exchange rate of currency *i* between time *t* and *t + s*. In this way, the constant term c can also be interpreted as a trend of appreciation or depreciation. The exchange rate is measured against a common currency or numeraire to Swiss franc (CHF) as a stabilizer.

Estimate of β_j, if significant would suggest that currency j has an impact on the exchange rate movement of currency i. Higher β_j would mean larger impact of currency j's movement on currency i. If we capture the right reference currencies in a currency basket, the sum of the weights should be equal to 1, ie $\Sigma^n_{j=1} \beta_j = 1$.

The choice of reference currencies would affect our model specifications and our results. Therefore, we will include the major global currencies, US dollar (USD), Euro (EUR), [British pound (GBP) – [applicable only on Japanese yen(JPY)] and Australian dollar(AUD)], Japanese Yen (JPY) and Chinese renminbi (CNY) (to explore the impact of renminbi).

The renminbi was pegged to USD before 22 July 2005 and despite some liberalization after that, the flexibility of the exchange rate against USD can still be limited. Our data set includes daily exchange rate data for six Asian countries and Australia – that is seven currencies (with the exception of Singapore) with trade deficit balances with China in 2014. The seven countries are Malaysian Ringgit (MYR), the Korean won (KRW), Taiwan dollar (TWH), Thai baht (THB), Singapore (SGD), Japanese yen (JPY) and Australian dollar (AUD). We exclude the Philippines and Indonesia as their trade volume, and trade balances with China are relatively low and also because of non-availability of a daily exchange rate of Philippine's peso and Indonesia's rupiah.

During the sample period, the exchange rate policy of renminbi has experienced substantial changes. Before 22 July 2005, the renminbi was more or less fixed to the US dollar (refer to Graph - 1). After that period, the exchange rate has exhibited more flexibility and had appreciated against the U.S. dollar by approximately 20% to 30% since July 2005.

The daily fluctuation of the exchange rate against the US dollar was still limited to 1 percent. (0.5 percent before April 2012 with exception of a few days where it breached the 0.5 percent but still below +/- 1%) . Except on the 22 July 2005 where the day fluctuation was +2.04%, and the next breach of the 1 percent was on 11 August 2015 when the Chinese government devalue the renminbi[1].

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[1] BEIJING—China's central bank devalued its tightly controlled currency, causing its biggest one-day loss in two decades, as the world's second-largest economy continues to sputter. Wsj- Aug. 11, 2015 12:49 a.m. ET
http://www.wsj.com/articles/china-moves-to-devalue-the-yuan-1439258401

Date	CNY/USD	USD/CNY	% Daily Fluctuation (against previous days rate)
China renminbi fluctuated more than 2% on the 22 July 2005			
21/07/05	8.2765	0.1208	0.00%
22/07/05	8.1111	0.1233	**2.04%**
10/08/15	6.2094	0.1610	-0.01%
11/08/15	6.3232	0.1581	**-1.80%**

Given the changed regime on 22 July 2005, we would first divide our sample into pre-2005 and post 2005 eras. We are interested to see whether the weights of RMB and USD in the respective currency baskets have changed between pre-2005 and post-2005. Out of the seven currencies, the number of currencies that are significantly impacted by the renminbi between pre-2005 and post-2005. And out of the seven currencies the number of currencies that US dollar were losing its impact of influence between pre-2005 and post 2005 period. To answer these questions, we are going to perform a hypothesis testing on the respective seven currencies:

H_{0RMB} : $\beta j^{RMB\ Pre\text{-}2005} < \beta j^{RMB\ Post\text{-}2005}$ – that the renminbi has higher impact on the respective currencies during the post-2005 period over the pre-2005 period.

H_{0USD} : $\beta j^{USD\ Pre\text{-}2005} > \beta j^{USD\ Post\text{-}2005}$ – that the USD has lower impact on the respective currencies during the post-2005 period over the pre-2005 period.

DATA ANALYSIS
Pre-2005

Before July 2005, the Malaysian central bank officially pegged the Malaysian ringgit (MYR) against the U.S. Dollar after the Asian financial crisis in 1997/1999. The exchange rate of Malaysia ringgit against U.S. dollar was retained at around RM3.8 to 1USD, since 1999 to 2005. Therefore, U.S. dollar was significant, and the adjusted R2 was 0.9999 (refer to Table 03).

Singapore weathered the effects of the Asian financial crisis better than its neighbours. Although the stock and property markets took a beating, the economy performed well under the circumstances. Nonetheless, the increase in Singapore's GDP growth for 1998 was 1.5 percent, a slide from an 8 percent rise the year before. The economy rebounded in 1999 with a 5.4 percent growth in GDP. The Singapore dollar was significantly affected by the USD, JPY and AUD and the adjusted R^2 was 0.8874 and need not be pegged like Malaysia ringgit.

From the Table-3 the Chinese renminbi significantly influenced the Taiwanese dollar (TWD) and the Korean won (KRW) as the volume of imports grows from these two countries with settlement of trade via renminbi. Between them they were contributing approximately 22-23% of the total World imports by China during this period as depicted in the table below.

China (Mainland) imports USD billions						
Countries / Year	2000	2001	2002	2003	2004	2005
1 Korea	23.21	23.40	28.58	43.13	62.17	76.87
2 Taiwan	25.50	27.34	38.08	49.36	64.76	74.66
	48.71	50.74	66.66	92.50	126.93	151.53
3 World	225.18	243.57	295.44	412.84	560.81	660.22
4 % China ' import from Korea and Taiwan versus total import from the world	22%	21%	23%	22%	23%	23%
5 Japan	41.52	42.81	53.49	74.15	94.19	100.47
6 % China ' import fromJapan versus total import from the world	18%	18%	18%	18%	17%	15%

However the Japanese yen (JPY) was significantly influenced by U.S. dollar, the pound sterling (GBP) and the Australian dollar (AUD even though its trade export to China were approximately 15-18%. Trade-volume from Thailand was lower than the other countries and was significantly influenced by USD, EUR and AUD only.

The goodness of fit is reasonable for all the countries except for the Japanese yen and Australian dollar with 0.4196 and 0.3022 as these countries are the free float and not pegged to a basket of currencies. The adjusted R2 for Malaysia ringgit was 0.9999 (as it was pegged to the USD since the Asian financial crisis) the adjusted R2 for Singapore Dollar (SGD) was 0.8874, the adjusted R2 for Korean won was 0.6907, the adjusted R2 for Taiwanese Dollar was 0.8240 and the adjusted R2 for Thai baht was 0.8159.

Post-2005

With effective 22 July 2005, the Malaysian central bank (BNM) relaxed its capital control as a measure to complement other macroeconomic initiatives. This measure is to ensure stability in domestic financial markets and to bring about sound and sustained economic development of the country. This action was reflected in the change of the exchange rate after that date as depicted in the table below:

Malaysian ringgit (MYR)i fluctuated after 21 July 2005

Date	CNY/USD	% Daily Fluctuation (against previous days rate)
7/18/2005	3.8000	0.00%
7/19/2005	3.8000	0.00%
7/20/2005	3.8000	0.00%
7/21/2005	3.8000	0.00%
7/22/2005	3.7825	-0.46%
7/25/2005	3.7605	-0.58%
7/26/2005	3.7510	-0.25%
7/27/2005	3.7505	-0.01%
7/28/2005	3.7495	-0.03%
7/29/2005	3.7505	0.03%

The Malaysian central bank has been reviewing the rules from time to time to ensure that the rules or restrictions do not pose as impediments towards achieving greater efficiency in the financial system and business operations. Past periodic reviews of the rules have led to the liberalisation of exchange controls to reduce formalities and facilitate business transactions (refer to graph 2). These measures are aimed at further improving the business environment in Malaysia by according greater flexibility to residents and non-residents in sourcing ringgit funds, in managing their foreign exchange exposure and improving overall operational efficiency. With this liberalization and the increase in trade volume with China, the US dollar even though it is still significant, but the weight is lower than pre-2005. In fact, the other international currencies like Japanese Yen (JPY), Australian dollar (AUD) and the Chinese renminbi (CNY) were very significantly influencing the Malaysian ringgit during the post-2005 period.

China's trade volume with its trading partners in the World increased tremendously since China's liberalisation of its renminbi; (except in 2009 due to the global financial crisis). However, China's recovery was tremendous in the following years but tapered off in 2014. But the share of world's import of the Asian Partners and Australia continued to maintain approximately above 38% as depicted in the table below:

China (Mainland) imports USD billions Countries / Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	Trade Balance 2014
1 Korea	89.82	104.05	112.18	102.50	138.02	161.67	166.59	182.88	190.29	(90)
2 Japan	115.81	133.90	150.81	130.93	176.30	194.41	177.73	162.22	162.69	(14)
3 Taiwan	87.14	100.99	103.33	85.71	115.65	124.90	132.19	156.51	152.31	(106)
4 Australia	19.19	25.76	36.28	39.24	59.70	80.93	78.59	91.56	90.13	(51)
5 Malaysia	23.58	28.74	32.13	32.22	50.38	62.02	58.25	60.05	55.77	(9)
6 Thailand	17.96	22.65	25.64	24.85	33.20	39.04	38.46	38.11	38.21	(4)
7 Singapore	17.67	17.52	20.09	17.74	24.58	27.76	28.43	29.86	30.53	18
8 Philippines	17.68	23.13	19.51	11.94	16.20	17.99	19.68	18.20	21.05	2
Total	388.85	456.73	499.96	445.12	614.03	708.72	699.91	739.40	740.97	(253)
% to China' import from the world	49%	48%	44%	44%	44%	41%	39%	38%	38%	
9 United States	59.33	70.00	81.72	77.77	101.96	119.16	128.64	146.98	154.14	237
10 Switzerland	4.27	5.87	7.38	6.95	8.44	27.30	22.88	56.12	40.62	(38)
11 Hong Kong	10.79	12.82	12.95	8.72	9.50	15.51	17.96	16.23	12.92	350
12 Emerging and Developing Asia	84.57	108.34	120.15	104.77	154.77	193.84	192.24	192.26	202.65	
13 World	791.79	956.26	1,131.92	1,003.89	1,393.91	1,741.43	1,817.34	1,949.30	1,963.11	
China's import growth rate %	20%	21%	18%	-11%	39%	25%	4%	7%	1%	

It has caused the renminbi to be significantly influencing all the Asian countries' and Australia's currencies; with the exception of Korean won and Japanese yen. The US dollar remains to be very significant for all the countries except Thai baht with p-value of 5-10%.

To test the extent of the renminbi, whether the weights of RMB and USD in the respective currency baskets have changed between pre-2005 and post-2005. Out of the seven currencies the number of currencies that were significantly impacted between pre-2005 and post-2005. The result of the hypothesis tests were as follows:

Currencies	RMB		Ho: $\beta_j^{RMB\ Pre-2005} < \beta_j^{RMB\ Post-2005}$	USD		Ho: $\beta_j^{USD\ Pre-2005} > \beta_j^{USD\ Post-2005}$
	Pre-2005	Post-2005		Pre-2005	Post-2005	
Malaysian ringgit (MYR)						
β_1	0.2239	0.5721	accept	0.7759	0.2596	accept
se_1	(0.0011)	(0.0599)***		(0.0011)***	(0.0607)***	
Singapore dollar (SGD)						
β_2	-0.1169	0.3214	accept	0.7616	0.2421	accept
se_2	(0.1031)	(0.0399)***		(0.1039)***	(0.0403)***	
Korean won						
β_3	0.7445	0.0929	reject	0.0092	0.5350	accept
se_3	(0.2178)***	(0.1229)		(0.2194)	(0.1241)***	
Japanese yen						
β_4	-13.9892	-13.1522	reject	55.1329	66.5586	reject
se_4	(20.5451)	(13.4238)		(20.6906)***	(13.4919)***	
Taiwanese dollar (TWH)						
β_5	0.5150	0.3621	reject	0.3451	0.4617	reject
se_5	(0.1448)***	(0.0474)***		(0.1459)**	(0.0479)***	
Thai baht (THB)						
β_6	-0.0280	0.1777	accept	0.740492	0.5991	accept
se_6	(0.1462)	(0.0673)***		(0.1473)***	(0.0680)***	
Australia dollar (AUD)						
β_7	0.2377	0.3831	accept	-0.0557	-0.1967	accept
se_7	(0.2953)	(0.1140)***		(0.2982)	(0.1156)*	

The first hypothesis, $(\beta_j^{RMB\ Pre-2005} < \beta_j^{RMB\ Post-2005})$; we accept four null hypothesis and rejected three null hypothesis.

The second hypothesis, ($ß_j^{USD\ Pre\text{-}2005}$ > $ß_{jUSD}^{\ Post\text{-}2005}$); we accept five null hypothesis and reject only two of the null hypothesis.

Therefore, it means that out of the seven currencies, we have four currencies where the renminbi has higher influence over the respective currencies during the post 2005 than pre-2005; and that in five of the currencies, the USD has lower influence over the respective currencies during the post 2005 than the pre-2005period. Therefore renminbi is gaining its influence over these currencies and US dollar seems to be losing its dominance or influence over these currencies.

CONCLUSION AND DISCUSSION

This paper has presented the empirical evidence that the renminbi's increasing role in determining the exchange rate movements in the Asian region. As China adopted a more flexible exchange rate policies on 22 July 2005 and with a faster pace of liberalization of the capital account, it could push for the renminbi to cross-border as an official international currency. Our analysis shows that renminbi could become the anchor currency for at least some major currencies in the region along with the US dollar as the traditional anchor.

The close trade and financial integration between China and the region are found to be the major force behind the rise of the renminbi. However, the threat to these countries is the non-convertibility of the renminbi. China moves to devalues its renminbi on 11 August 2015 as a one-off step to make the renminbi more responsive to market forces. However, but some critics saw it as a thinly veiled effort to make China's export more competitive and to boost its economic growth. China claimed that the devaluation was to revamp its renminbi. It is an effort to earn a place in the small group of currencies. IMF's currency basket is made up of the U.S. dollar, the Euro dollar, Japanese yen and the British pound. The International Monetary Fund uses this basket of currencies, also known as Special Drawing Rights SDR, to supplement member countries official reserve. With the devaluation, these Asian currencies sharply lose its value effectively on 11 August 2015 (see Graph 03). The devaluation of these currencies could be due to the non-convertibility of the renminbi and the renminbi in the basket of foreign reserves of these countries are "trapped".

This paper only studies one aspect international role of the renminbi as an emerging role of an anchor currency and focuses only on trade. One natural extension of the research would be to study whether renminbi can be an anchor to an optimal currency area. With the assumption that the issue of non-convertibility has can resolve. Another extension would be to expand the sample study in the global implications of the renminbi in a more comprehensive manner that is as a reserve currency.

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Table -1 : China's Trade Balance from 2005 to 2014 in USD billions.

Selected Countries / Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1 Korea	(42)	(45)	(48)	(38)	(49)	(69)	(79)	(79)	(92)	(90)
2 Japan	(16)	(24)	(32)	(35)	(33)	(56)	(47)	(26)	(12)	(13)
3 Taiwan	(58)	(66)	(78)	(77)	(65)	(86)	(90)	(95)	(116)	(106)
4 Australia	(5)	(6)	(8)	(14)	(19)	(32)	(47)	(41)	(54)	(51)
5 Malaysia	(20)	(24)	(29)	(32)	(32)	(50)	(62)	(58)	(60)	(56)
6 Thailand	(6)	(8)	(11)	(10)	(12)	(13)	(13)	(7)	(5)	(4)
7 Singapore	0	6	12	12	12	8	8	12	16	18
8 Philippines	(8)	(12)	(16)	(10)	(3)	(5)	(4)	(3)	2	2
9 United States	114	145	163	171	144	182	206	224	222	243
10 Switzerland	(4)	(4)	(6)	(7)	(7)	(8)	(27)	(23)	(56)	(41)
11 Hong Kong	112	145	171	178	158	209	253	306	369	350
12 World	102	177	262	297	198	185	158	233	261	380

Table 2 - China's Imports from 2000 to 2014 in USD billions

China (Mainland) imports USD billions Countries / Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1 Korea	23.21	23.40	28.58	43.13	62.17	76.87	89.82	104.05	112.18	102.50	138.02	161.67	166.59	182.88	190.29
2 Japan	41.52	42.81	53.49	74.15	94.19	100.47	115.81	133.90	150.81	130.93	176.30	194.41	177.73	162.22	162.69
3 Taiwan	25.50	27.34	38.08	49.36	64.76	74.66	87.14	100.99	103.33	85.71	115.65	124.90	132.19	156.51	152.31
4 Australia	5.10	5.43	5.85	7.30	11.53	16.15	19.19	25.76	36.28	39.24	59.70	80.93	78.59	91.56	90.13
5 Malaysia	5.48	6.21	9.30	13.99	18.16	20.11	23.58	28.74	32.13	32.22	50.38	62.02	58.25	60.05	55.77
6 Thailand	4.38	4.71	5.60	8.83	11.54	13.99	17.96	22.65	25.64	24.85	33.20	39.04	38.46	38.11	38.21
7 Singapore	5.06	5.14	7.05	10.48	14.00	16.53	17.67	17.52	20.09	17.74	24.58	27.76	28.43	29.86	30.53
8 Philippines	1.68	1.95	3.22	6.31	9.06	12.87	17.68	23.13	19.51	11.94	16.20	17.99	19.68	18.20	21.05
Total	111.92	116.99	151.17	213.55	285.41	331.65	388.85	456.73	499.96	445.12	614.03	708.72	699.91	739.40	740.97
% to China' import from the world	50%	48%	51%	52%	51%	50%	49%	48%	44%	44%	44%	41%	39%	38%	38%
9 United States	22.38	26.22	27.25	33.94	44.74	48.99	59.33	70.00	81.72	77.77	101.96	119.16	128.64	146.98	154.14
10 Switzerland	1.47	1.73	2.04	2.69	3.64	3.89	4.27	5.87	7.38	6.95	8.44	27.30	22.88	56.12	40.62
11 Hong Kong	9.43	9.42	10.79	11.12	11.80	12.23	10.79	12.82	12.95	8.72	9.50	15.51	17.96	16.23	12.92
Emerging and Developing 12 Asia	19.03	20.30	27.01	41.90	57.75	69.69	84.57	108.34	120.15	104.77	154.77	193.84	192.24	192.26	202.65
13 World	225.18	243.57	295.44	412.84	560.81	660.22	791.79	956.26	1,131.92	1,003.89	1,393.91	1,741.43	1,817.34	1,949.30	1,963.11

Table 3: The estimation results for Pre-2005 : 1/1/2000 to 22/7/2005

The estimation results for Pre-2005 : 1/1/2000 to 22/7/2005

Currencies	Malaysian ringgit (MYR)	Singapore dollar (SGD)	Korean won (KRW)	Japanese yen (JPY)	Taiwanese dollar (TWH)	Thai baht (THB)	Australian dollar (AUD)
U.S. dollar USD)							
β_1	0.7759	0.7616	0.0092	55.1329	0.3451	0.740492	-0.0557
se_1	(0.0011)***	(0.1039)***	(0.2194)	(20.6906)***	(0.1459)**	(0.1473)***	(0.2982)
Euro dollar (EUR)							
β_2	0.0004	0.0207	-0.0595	-15.0723	0.0110	0.0218	0.6244
se_2	(0.0002)	(0.0259)	(0.0548)	(5.2309)***	(0.0364)	(0.0368)	(0.0737)***
Japanese yen (JPY)							
β_3	-0.0000	0.2336	0.2392	9.199[GBP]	0.0729	0.2286	0.2075
se_3	(0.0001)	(0.0101)***	(0.0215)***	(3.0052)***[GBP]	(0.0143)***	(0.01445)***	(0.0287)***
Australian dollar (AUD)							
β_3	0.0001	0.0658	0.0653	13.0734	0.0328	0.0528	0.2097[GBP]
se_3	(0.0001)	(0.0092)***	(0.0196)***	(1.8310)***	(0.0130)**	(0.0131)***	(0.0430)***[GBP]
Chinese renminbi (RMB)							
β_4	0.2239	-0.1169	0.7445	-13.9892	0.5150	-0.0280	0.2377
se_4	(0.0011)	(0.1031)	(0.2178)***	(20.5451)	(0.1448)***	(0.1462)	(0.2953)
Constant							
β_0	0.0000	-0.0000	-0.0000	0.0081	0.0000	0.0000	-0.0000
se_0	(0.0000)	(0.0000)	(0.0001)	(0.0112)	(0.0000)	(0.0000)	(0.0001)
Asdjusted R_2	0.9999	0.8874	0.6907	0.4196	0.8240	0.8159	0.3022
Observations	1.397	1397	1.397	1397	1.397	1.397	1397

Note: the standard error of the coefficients are in ( ).
*** Very significant p-Value <1%, ** Significant p-Value 1-5%, * p-Value 5-10%

Table 4: The estimation results for Post-2005: 23/7/2005 to 21/8/2015

The estimation results for Post-2005 : 23/7/2005 to 22/8/2015

Currencies	Malaysian ringgit (MYR)	Singapore dollar (SGD)	Korean won (KRW)	Japanese yen (JPY)	Taiwanese dollar (TWH)	Thai baht (THB)	Australian dollar (AUD)
U.S. dollar USD)							
β_1	0.2596	0.2421	0.5350	66.5586	0.4617	0.5991	-0.1967
se_1	(0.0607)***	(0.0403)***	(0.1241)***	(13.4919)***	(0.0479)***	(0.0680)***	(0.1156)*
Euro dollar (EUR)							
β_2	0.0344	0.1858	0.1206	-52.9945	0.0534	0.0667	0.6290
se_2	(0.0190)*	(0.0120)***	(0.0370)***	(8.2538)***	(0.0143)***	(0.0680)***	(0.0349)***
Australian dollar (AUD)							
β_3	-0.0370	0.0632	-0.0584	-8.0270	0.0915	0.0946	0.4540[GBP]
se_3	(0.0124)***	(0.0078)***	(0.0242)**	(4.1759)*	(0.0078)***	(0.0111)***	(0.0289)***[GBP]
Japanese yen (JPY)							
β_3	0.1514	0.1713	0.3492	-8.0270[GBP]	0.0186	0.0517	-0.2491
se_3	(0.0105)***	(0.0066)***	(0.0204)***	(4.1759)*[GBP]	(0.0093)**	(0.0133)***	(0.0220)***
Chinese renminbi (RMB)							
β_4	0.5721	0.3214	0.0929	-13.1522	0.3621	0.1777	0.3831
se_4	(0.0599)***	(0.0399)***	(0.1229)	(13.4238)	(0.0474)***	(0.0673)***	(0.1140)***
Constant							
β_0	0.7762	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000
se_0	(0.0000)	(0.0000)	(0.0001)	(0.0145)	(0.0000)	(0.0000)	(0.0001)
Asdjusted R_2	0.7762	0.8725	0.4882	0.2805	0.8580	0.7427	0.4896
Observations	2535	2535	2535	2535	2535	2535	2534

Note: the standard error of the coefficients are in ( ).
*** Very significant p-Value <1%, ** Significant p-Value 1-5%, * p-Value 5-10%

Graph - 1 USD lost approximately 20 to 30% value since China's liberalization of the renminbi in July

CNY - Renmibi (CNY) Vs USD
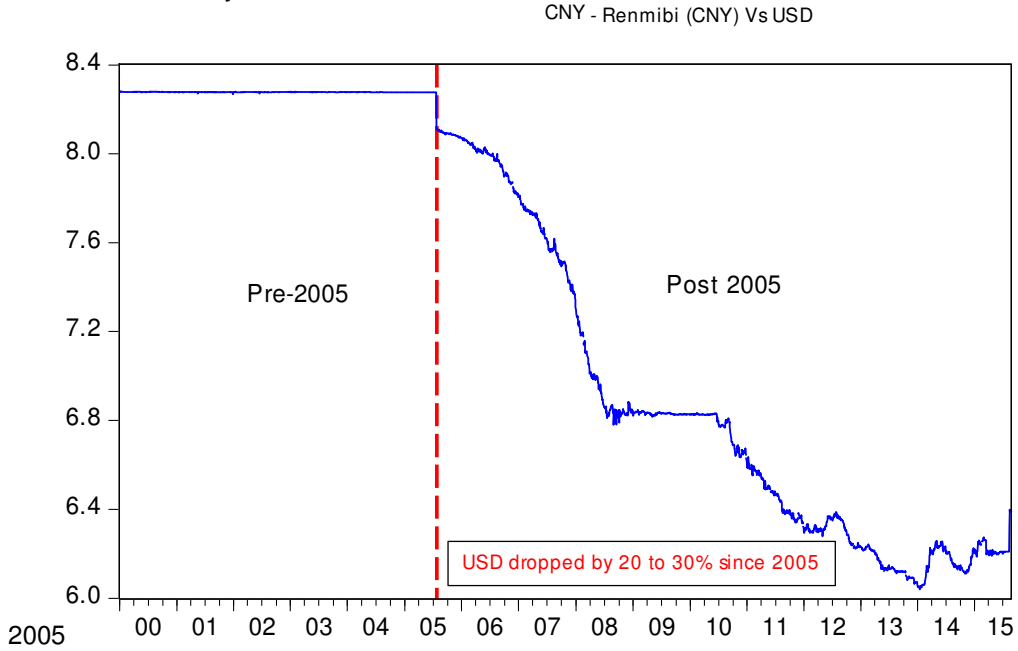
Graph 02 : Malaysian ringgit relaxes it capital control effective 22 July 2005.
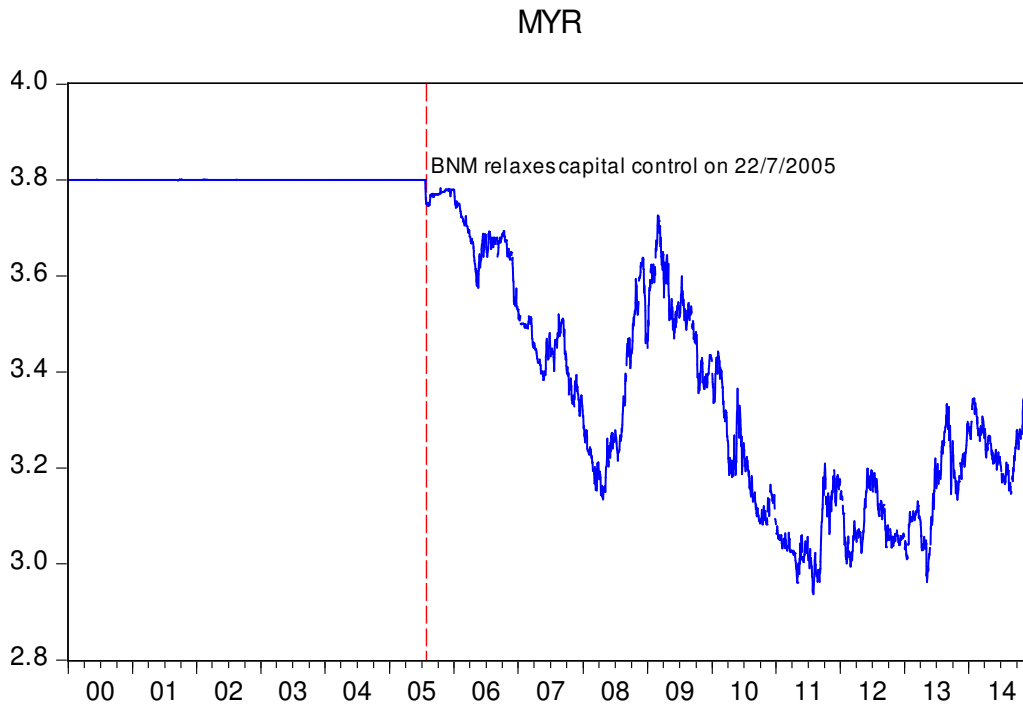
MYR

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Graph 3 : Sharp drop in value of the respective currencies against USD on 11 August 2015 when China devalue its renminbi
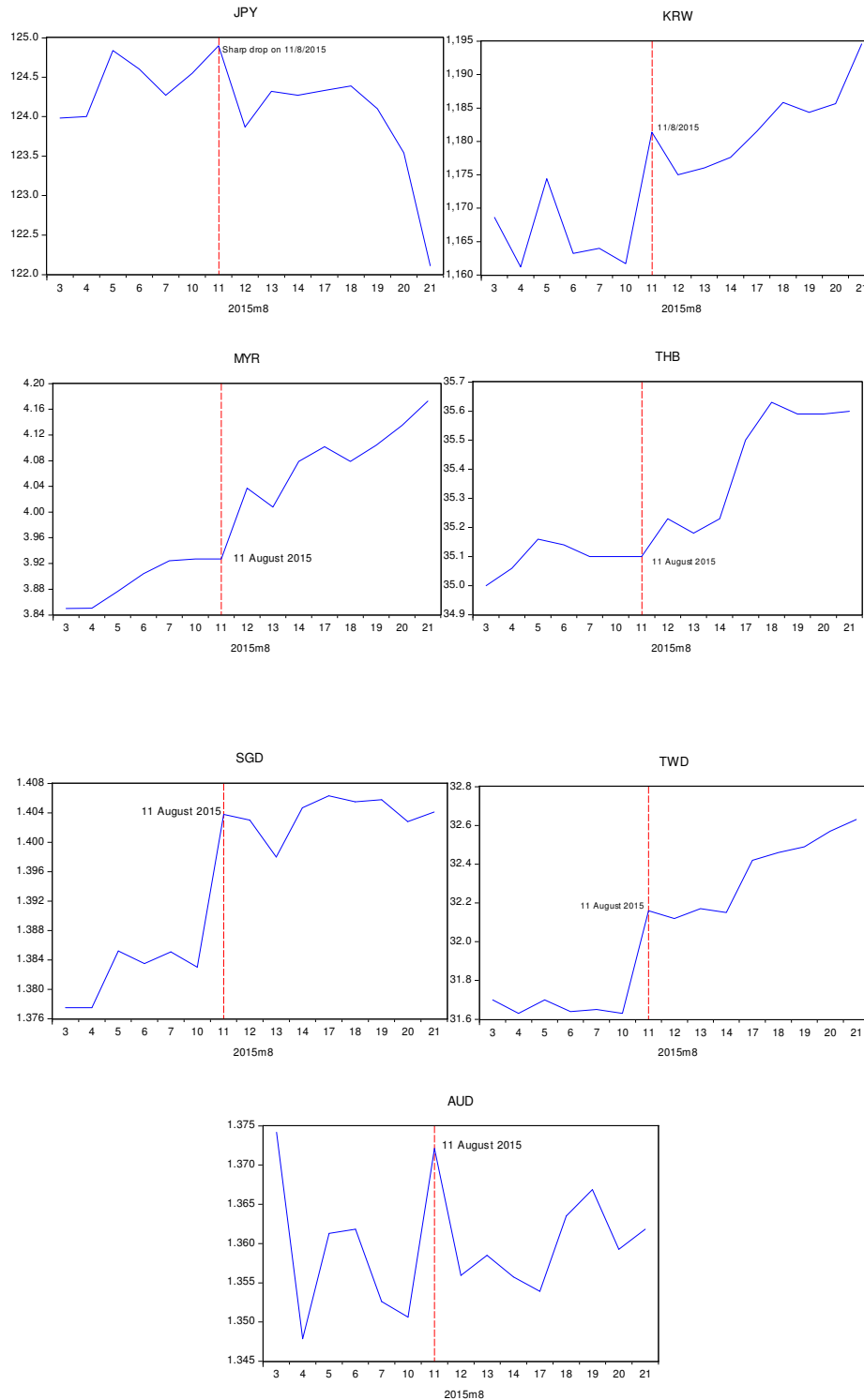
MODELLING STOCK MARKET VOLATILITY AND CAUSALITY: EMPIRICAL EVIDENCE FROM MALAYSIA AND THAILAND

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Abstract

The aim of this paper is to examine and model the volatility of Kuala Lumpur and Thailand Stock Exchange by using the daily closing price from 1st January 2004 until 31st December 2013. The analysis uses the different univariate Generalized Autoregressive Conditional Heteroscedastic (GARCH) family, which is an ordinary GARCH, GARCH-M, EGARCH and TGARCH. Results from both market shows that conditional variance is determined by past innovation and past conditional variance (volatility). In Malaysian market, it is evident that risk premium is presence but no evidence is found in the case of Thailand. Moreover, both markets show existence of leverage effect where bad news increases volatility rather than good news at same magnitude. Both markets can be represented by asymmetric GARCH and the student's t-distribution shows it fits the data well. Last but not least, the analysis vindicates the reason why Thailand stock market was more affected by the global financial crisis 2007-2008 in comparison to Malaysia and there is evidence of bidirectional causality between the two markets.

Keywords: volatility, GARCH, risk premium, leverage, causality, student's-t, VAR

INTRODUCTION

A stock market is defined as a marketplace where trading of equities occur between sellers and buyers while a stock exchange is defined as an organisation which prepare the place for trading activities (Securities Commission, 2000). Two countries' stock markets that will be examined in this paper are Malaysia (Kuala Lumpur Stock Exchange) and Thailand (Stock Exchange of Thailand). Both Malaysia and Thailand are developing countries where both are characterised by similar property: high risk. As countries with higher risk, investors who are risk-takers tend to invest in this countries' stock market to get higher return compared to the countries that have low risk. According to the theory of risk and portfolio return, higher volatility of stock price are associated with higher return (Surianshah et. al., 2014).

Although there is an author, who defined risk as volatility (Markowitz, 1952), there are slightly different interpretations between these two words. Devadason (1997) states that volatility refers to a fluctuation price of an equities or in statistical view, the standard deviation of the return of a security. However, he describes the risk as the squared of standard deviation (variance). Martz (2006) interprets risk as potential loss that investors might receive during investment period while Goudarzi and Ramanarayanan (2011) argue that volatility somehow related to risk but it is not necessarily a risk. Sewell (2011) comes with his volatility definition where he supports the fact that volatility is refer to a standard deviation of the return securities which is used as a proxy for risk. Lim and Sek (2013) also come out with the same definition where risk can be measured by volatility.

In recent years, many financial researchers and academicians did a great contribution on modeling the volatility of stock market and exchange rate due to financial market, which is a key factor for a healthier economy. Modeling volatility of stock market has been a very scrutinized field among researchers and investment analysts since it will give them information with regards to the conditional variance (volatility) of an asset that they hold or analyse, which varies according to time.

An econometric model is found to be adequate if it satisfies the classical assumption on serial correlation, heteroscedasticity and normality. However, dealing with financial time series will violate some assumption as the characteristics of the market which exhibit volatility clustering and leptokurtosis (Sewell, 2011). Thus, to overcome such problems, several models are used in the analysis where one of them, Engle (1982) had introduced the Autoregressive Conditional Heteroscedastic (ARCH) model. Meanwhile, Bollerslev (1986) proposed a Generalized ARCH (GARCH) model, which is the improvement of ARCH model by allowing the conditional variance to be an Autoregressive Moving Average (ARMA) process. Information about the market condition has always been a valuable asset to the investors so that they can strategize in buying or selling their shares. The information (news) can be either good or bad news and both of them have different impacts on the volatility. Thus, Nelson (1991) proposed the Exponential GARCH (EGARCH) model that accounts for the asymmetric effect in the market. Another model that can estimates the asymmetric effect is threshold GARCH (TGARCH) proposed by Zakoian (1994) which is somehow related to GJR-GARCH.

The main objective of this study is to model the volatility and causality of two Southeast Asian countries' stock market, which is Kuala Lumpur Stock Exchange and Stock Exchange of Thailand by using different specifications of univariate GARCH model. Two error distributions are utilized in this paper which is Gaussian and student-t distribution to determine the performance in fitting the market stock index. Last but not least, Vector Autoregressive (VAR) model is used to examine the causality between the two markets. The proxies of this stock market are Kuala Lumpur Composite Index (KLCI) and Bangkok S.E.T price index (SET).

The remaining of this paper is organized as follows: section 2 provides a literature review. Section 3 describes the data and methodology while section 4 discuss on analysis and results. Last but not least section 5 concludes the paper.

LITERATURE REVIEW

Modeling the volatility has been discovered in the last century by Engle (1982) through the variance that is not constant over time. This method which is called Autoregressive Conditional Heteroscedasticity (ARCH) and was improved by including lag conditional variance on the variance equation to make the estimation become more parsimony (Bollerslev, 1986). The proposed model by Bollerslev is the Generalized ARCH (GARCH) which is the most popular method in dealing with financial time series that have a well-known property of leptokurtic distribution.

In recent years, there are vast amount of studies that concentrate on modeling stock market volatility using GARCH model for developing and emerging market. However, there are too little literature regarding ASEAN market such as Malaysia and Thailand. Kalyanaraman (2014) found that GARCH (1,1) are sufficient in modeling the volatility of the Saudi Arabia stock market, which have a non-normal distribution. Meanwhile, Goudarzi and Ramanarayanan (2011) choose a TGARCH (1,1) instead of EGARCH (1,1) in representing Indian stock market. Besides, Abdalla and Winker (2012) found that volatility is an explosive process for Sudan stock market but it is found to be positively correlated with expected return.

For ASEAN markets, Balaban and Bayar (2005) found that there exist a positive relation between monthly stock return and expected volatility in the case of Singapore when using

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GARCH, GJR-GARCH and EGARCH model. The same result of positive relation in Thailand and the Philippines for both weekly and monthly basis using ARCH model. Chancharat et al. (2007) use GARCH-M model to determine factors that influence Thailand stock market and result reveals that Singapore stock return has a positive effect in both pre- and post-1997 crisis. Besides that, Shamiri and Isa (2009) found that daily forecasting for Malaysian volatility could be best estimate with EGARCH model and it is shown that non-normal densities have superiority in fitting in-sample estimation. However, Mohd Nor and Shamiri (2007) found that GJR-GARCH model could be best in forecasting volatility of Malaysian index while EGARCH for Singapore index. Besides, they also found that, t-distribution are more appropriate in modeling both markets.

The suitability of a model that can describe the volatility and it's forecasting performance are very useful in making decisions on option pricing, asset allocation and risk management ((Shamiri & Isa, 2009); (Kalyanaraman, 2014); (Abdalla & Winker, 2012); (Hyup Roh, 2007); (Mohd Nor & Shamiri, 2007)). Thus, the use of heavy tail was first introduced by Bollerslev (1987) to overcome the excess of the fourth moment. Shamiri and Isa (2009) use six error distributions and results shows that asymmetric GARCH perform better with student's-t distribution in case of Malaysian. Same conclusion arises in Israel and it is found that EGARCH model coupled with skewed student-t provide a better forecast than other model (Alberg, Shalit, & Yosef, 2008). Meanwhile, Vošvrda and Žikeš (2004) argue that Black-Scholes pricing option does not hold for Central European stock market which assumes a standard Gaussian distribution. In conclusion, the studies on heavy tails distribution have seek attention on some of the researcher (see (Be, 2000); (Zhang, 2009); (Rahman, Zhu, & Rahman, 2008) and (Mohd Nor & Shamiri, 2007)).

Last but not least, it is found that neighbouring countries can much explain the performance of Thailand stock market rather than non-regional market (Chancharat, Valadkhani, & Havie, 2007). This is confirmed during Asian financial crisis 1997 where it started from Thailand and then spread to other neighbouring countries (Zakaria et. al, 2010).

RESEARCH METHODOLOGY

This paper using different univariate Generalized Autoregressive Conditional Heteroscedastic (GARCH) in modeling the stock return of KLCI and SET starting on 1st January 2004 until 31th December 2013 which resulting in a total 2608 observations. The GARCH model that we employed in this paper are GARCH(1,1), GARCH(1,1)-M, EGARCH(1,1) and TGARCH(1,1). Both GARCH(1,1) and GARCH(1,1)-M are used to determine the symmetric volatility of stock return while EGARCH and TGARCH model are used to measure the asymmetric volatility. For all different specification of GARCH model, there are 2 equations, which were mainly used to carry out an analysis for volatility, which is the mean equation and variance equation. For mean equation, we have an Autoregressive Moving Average (ARMA) model to capture the random walk of the series while for variance equation, it provides estimates of volatility using GARCH itself. Thus, basically this paper carried out an ARMA-GARCH model to analyse the volatility of stock return on KLCI and SET index.

3.1 Symmetric GARCH models

3.1.1 The Generalized Autoregressive Conditional Heteroscedastic (GARCH) model

In this model, the conditional variance is allowed to be an Autoregressive Moving Average (ARMA) process whereby this model is extended from original Autoregressive Conditional Heteroscedastic (ARCH). Now, let consider a simple GARCH(1,1):

Mean equation $rp_t = \mu + \varnothing_1 rp_{t-1} + \varepsilon_t$

Variance equation $\sigma^2_t = \omega + \alpha_1 \varepsilon^2_{t-1} + \beta_1 \sigma^2_{t-1}$

Where $\omega > 0$, $\alpha_1 \geq 0$, and $\beta_1 \geq 0$, and :

rp_t = return of the asset at time t

μ = average return

ε_t = residual return, defined as

$$\varepsilon_t = v_t\sqrt{h_t}$$

where $\sigma^2_v = 1$ and

$$h_t = \theta_0 + \sum_{i=1}^{q} \theta_i\varepsilon^2_{t-i} + \sum_{i=1}^{p} \delta_i\, h_{t-i}$$

where σ^2_t stand for conditional variance. For mean equation, the return is represented as a linear function of its own lag which is lag 1 while the variance equation is depends on previous news and previous volatility (own lag of conditional variance). Besides, the previous news so-called the ARCH term is used to measure the clustering effect and the past conditional variance or known as GARCH term is used to determine the persistency of the volatility.

3.1.2 The Generalized Autoregressive Conditional Heteroscedastic-in-Mean (GARCH-M)[1]

The GARCH-M model is suitable to study on asset market which the return of security may depend on its volatility. This model allowed the conditional variance to be inside the mean equation where risk premium can be estimate. A simple model that can be defined properly is GARCH-M(1,1):

Mean equation : $rp_t = \mu + \emptyset_1 rp_{t-1} + \lambda\sigma^2_t + \varepsilon_t$

Variance equation: $\sigma^2_t = \omega + \alpha_1\varepsilon^2_{t-1} + \beta_1\sigma^2_{t-1}$

The variance equation is same like previous ordinary GARCH model but the mean equation is different. The parameter λ is called the risk premium parameter where the positive value of the parameter indicates higher risk is associated with high return. Meanwhile, the significant of the parameter shows the compensation to investor if they take the risk in holding the asset.

3.2 Asymmetric GARCH model

3.2.1 The Exponential Generalized Autoregressive Conditional Heteroscedastic (EGARCH) Model

The asymmetric GARCH model is used to measure the leverage effect where bad news increases volatility rather than good news at the same magnitude. Simple EGARCH(1,1) model can be written as:

Mean equation: $rp_t = \mu + \emptyset_1 rp_{t-1} + \varepsilon_t$

Variance equation: $ln\sigma^2_t = \omega + \beta_1 ln\sigma^2_{t-1} + \alpha_1\left|\frac{\varepsilon_{t-1}}{\sigma_{t-1}}\right| + \gamma\frac{\varepsilon_{t-1}}{\sigma_{t-1}}$

Parameter γ is a leverage parameter. The sign of γ is expected to be negative and significant so that the negative shock will have greater impact on volatility rather than positive shock.

3.2.2 The Threshold Generalized Autoregressive Conditional Heteroscedastic (TGARCH) Model

Another model that can be used to estimate leverage effect is TGARCH model developed by Zakoian (1994). TGARCH(1,1) has a specification as follow:

Mean equation: $rp_t = \mu + \emptyset_1 rp_{t-1} + \varepsilon_t$

Variance equation: $\sigma^2_t = \omega + \alpha_1\varepsilon^2_{t-1} + \beta_1\sigma^2_{t-1} + \gamma d_{t-1}\varepsilon^2_{t-1}$

Where d_{t-1} is a dummy variable which is:

$$d_{t-1} = 1, \text{ if } \varepsilon^2_{t-1} < 0, \text{ bad news}$$

$$= 0, \text{ if } \varepsilon^2_{t-1} > 0, \text{ good news}$$

Same as EGARCH model where parameter γ measures the leverage effect. Besides the sign is expected to be positive and significant which are different from previous model.

3.3 Error distribution

3.3.1 Normal distribution

The Gaussian distribution is the most popular distribution in each estimation method. The log-likelihood functions as follows:

$$L_{normal} = -\frac{1}{2} \sum_{t=1}^{T} [\ln(2\pi) + \ln(\sigma_t^2) + z_t]$$

where T is the number of observations.

3.3.2 Student-t distribution

The log-likelihood function for student-t distribution as follows:

$$L_{student-t} = \ln\left[\Gamma\left(\frac{v+1}{2}\right)\right] - \ln\left[\Gamma\frac{v}{2}\right] - \frac{1}{2}\ln[\pi(v-2)] - \frac{1}{2}\sum_{t=1}^{T}\left[\ln\sigma_t^2 + (1+v)\ln\left(1+\frac{z_t^2}{v-2}\right)\right]$$

where v is the degrees of freedom which lies between 2 and ∞ or can be written as 2 < v < ∞. As v approach ∞, the t-distribution follows a normal distribution.

RESULT AND ANALYSIS

4.1 The Data and Basic Statistics

4.1.1 The data Used for the Analysis

The time series data that were used in this paper are the daily closing price of Kuala Lumpur Composite Index (KLCI) and Bangkok Stock Exchange of Thailand (SET) starting from 1st January 2004 until 31th December 2013 resulting in 2608 observations. Returns of both KLCI and SET are being modeled rather than closing price since the returns basically shows a stationary process.

Daily return, rp_t were calculated as follows:

$$rp_t = [\log(close_t) - \log(close_{t-1})] \times 100$$

Where,

$Close_t$ = closing price at the current time (t)

$Close_{t-1}$ = closing price at the previous day (t-1)

4.1.2 Descriptive Statistics of KLCI and SET return series

Descriptive statistics give information about the series which consist of mean value, standard deviation, kurtosis, and others. The valuable information can shows the normality of the series, skewness and also the data either it is clustered around mean value or dispersed.

Table 1 shows descriptive statistics of KLCI and SET return series. Mean value of both RPKLCI and RPSET are positive which indicate a positive return when investing in both markets. Besides, descriptive statistics also show that average return in KLCI is slightly higher than SET which means investor can gain higher return when investing in Malaysia compared to Thailand. Although average return of KLCI slightly higher than SET, there is a period where investors can gain higher profit by investing in SET. This is shown by maximum return percentage of SET which is about 10.6% compared to KLCI which is about 4.3%. Even though Thailand offers a higher return in certain period, they also can make investors lose for about 16.5%, which is greater than Malaysia (10%).

Table 1. Descriptive Statistics of KLCI and SET return series

	RPKLCI	RPSET
Mean	0.032786	0.019937
Median	0.02164	0
Maximum	4.258654	10.57703
Minimum	-9.97851	-16.0633
Std. Dev.	0.757863	1.368104
Skewness	-1.16246	-0.9114
Kurtosis	18.3329	16.48147
Jarque-Bera	26134.68	20111.24
Probability	0	0

Furthermore, both markets have negatively skewed distributions associated with high kurtosis (leptokurtic). This phenomenon is consistent with other studies thus sometimes it is called a stylized fact of the financial market. Statistical theory states that, a distribution is said to follow a normal distribution if the value of kurtosis is 3 and the value of skewness is 0. Since both markets have a fat tail distribution with negatively skewed distribution, we expect that the return series is not normal. Probability of jarque-bera which is less than 0.05 confirming the rejection of null hypothesis indicating both markets are not normally distributed.
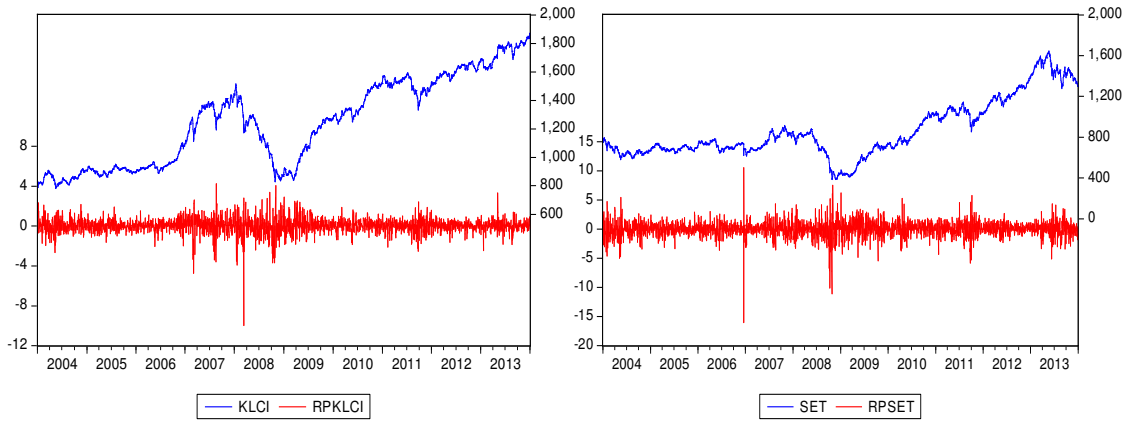
Figure 1: price and return series of KLCI and SET

Figure 1 shows graphical analysis of KLCI and SET. From figure above, year 2004 until early 2007 show both markets exhibit a tranquility period before they crash at the end of 2007. This is because of the Subprime Crisis that occurs in United States which then spill to other countries. From this graph we can also observe the existence of volatility clustering where increase in return is followed by increase in return and decrease in return is followed by decrease in return. Besides, this graph suggests that leverage effect seems to exist in both markets where bad news increases volatility rather than good news at the same magnitude.

4.1.3 Quantile-Quantile (Q-Q) Plots

The Q-Q plots that have quantile of normal (vertical axis) is used to determine the sample observation whether they follow a normal distribution or not. The data is said to follow normal distribution if it is scattered along the red line.
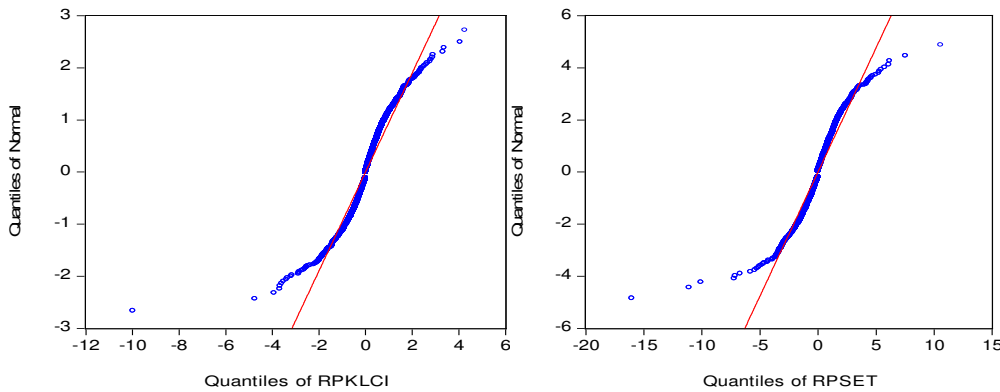
Figure 2. Q-Q plot for KLCI and SET return

Figure 2 shows Q-Q plot of return series for both KLCI and SET. A red line which about 30 degree shows the normal distribution line. The distribution are said to follow are normal distribution if the distribution scattered along the red line. Since both graph shows the deviation of return series from the red line, KLCI and SET are exactly do not follow the normal distribution, which are consistent with the result of descriptive statistics. Moreover, from Q-Q plot, it could be that another type of distribution matches the return series rather than normal distribution.

4.1.4 Testing for Stationarity

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Table 2. Unit root test

SERIES		LEVEL		SPECIFICATION
		ADF	PP	
KLCI	PRICE	-1.8312	-1.8278	TREND AND INTERCEPT
	RETURN	-45.3478***	-45.3300***	INTERCEPT
SET	PRICE	-1.9739	-1.9778	TREND AND INTERCEPT
	RETURN	-34.3517***	-51.3518***	INTERCEPT

***indicates significant at 1% significant level

Table 2 shows unit root test of return and price series for both KLCI and SET. Unit root test is used to determine the stationarity of the series. Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) which are the extension of Dickey-Fuller (DF) were used to test the order of integration of the series. Null hypothesis of both tests indicates series are non-stationary series. Results from table 2 reveals that price of KLCI and SET are non-stationary series while the returns of are stationary. Thus, Autoregressive Moving Average (ARMA) that needs the series to be stationary can be employed.

4.1.5 Mean Equation and Diagnostic Checking on Return Series

Return shows some characteristics of stationary series. Hence, Autoregressive Moving Average (ARMA) is used to determine the best model to capture the returns series. Note that both return percentage series depend on its past values since there exist correlation with current value from correlogram of autocorrelation function[2].

Table 3. Mean equation and diagnostic checking

INDEX	MEAN EQUATION	LM TEST nR^2	ARCH TEST nR^2	NORMALITY JARQUE-BERA	SKEWNESS	KURTOSIS
KLCI	AR(1)	7.187362 (0.2071)	147.1410*** (0.0000)	26669.65*** (0.0000)	-1.0724	18.5216
SET	AR(2)	8.075883 (0.1521)	275.0951*** (0.0000)	19814.28*** (0.0000)	-0.8733	16.3951

***denotes significant at 1%. Number in parenthesis is p-value

Goodness of fit which is Akaike Information Criteria (AIC), Schwarz Information Criteria (SIC), Hannan-Quinn (HQ) and Log-Likelihood were utilized to determine the best model that represents the mean equation of both markets. AIC, SIC and HQ determine the best order of AR by looking at the lowest value of the model while LL vice versa. Results from table above shows that AR(1) and AR(2) process are appropriate in representing KLCI and SET. To ensure mean equation satisfy the neoclassical Ordinary Least Square (OLS) assumption, residual diagnostic had been done to the mean equation using Breusch Godfrey Serial correlation Lagrange-Multiplier (LM) test, Autoregressive Conditional Heteroscedasticity (ARCH) test and Jarque-Bera (JB) test..

Table 3 shows diagnostic checking of autocorrelation, ARCH effect and normality on mean equation in both markets. Results from table 3 shows that assumption of no autocorrelation cannot be rejected at all conventional level indicating AR(1) and AR(2) are sufficient to model the mean equation of return series for both KLCI and SET. However, assumption on homoscedastic variance and normal distribution can be rejected easily at 1% significant level implying mean equation having an ARCH effect and non-normal distribution. Hence, to solve the ARCH effect

that appeared in mean equation, Generalized Autoregressive Conditional Heteroscedastic (GARCH) model need to be propose in this paper as well as student's-t distribution which is believed to be appropriate in capturing leptokurtic distribution.

4.2 Empirical Result

4.2.1 Stock Market Modelling

Table 4 and 5 shows estimation result of KLCI and SET return series using different GARCH model. Column two shows estimation of return KLCI using GARCH(1,1) where variance equation is modeled like an ARMA process. The significant of coefficient AR(1) and AR(2) in both market shows that current return is determine by its past value one and two period. Significant of the ARCH term (α) and GARCH term (β) indicates the conditional variance depends on past news about volatility and past volatility at one period before. Besides, the sign of α and β should be positive where it is defined in the empirical results. Furthermore, the summation of ARCH term and GARCH term ($\alpha + \beta$) measure the persistency of the volatility either it is an explosive process or mean reverting process. For GARCH (1,1), the summation of both term are nearly one indicating the volatility of the KLCI and SET are quite persistent. Dummy variable is include in variance equation of SET where value 1 is used to account a sharp decline of SET price on 19th December 2006 (policy on capital control) and 0 on other days.

Variance equation: $\sigma^2_t = \omega + \alpha_1 \varepsilon^2_{t-1} + \beta_1 \sigma^2_{t-1} + DUM$

Inclusion of dummy variable have a significant impact on volatility whereby its positive value means volatility is increasing when the Bank of Thailand (BOT) announced a capital control on stock market in the evening of 18th December 2006 to curb the foreign speculation on Thai baht. Same as before where residual diagnostic are implement on GARCH (1,1) to ensure the model is adequate in modeled the conditional variance (volatility). Diagnostic checking on GARCH (1,1) shows non-rejecting of homoscedastic variance and no autocorrelation at 5% significant level. Hence, GARCH model have sufficiently solve the heteroscedastic problem. On top of that, value of kurtosis and skewness become smaller after employing a GARCH model.

GARCH-in-Mean so called GARCH(1,1)-M is employ in this analysis to measure the risk premium in the market by allowing the conditional variance in the mean equation. For the case of KLCI, the positive value of risk premium indicates that higher risk is associated with higher return but the insignificant of the coefficient indicates investor is not being compensated when bearing the risk. Different conclusion is arises in SET where the risk premium is negative which contradict with the portfolio theory. Negative value of the risk premium parameter indicated higher risk is associated with lower return. Same as GARCH(1,1), GARCH(1,1)-M for KLCI and SET is free from autocorrelation and heteroscedasticity problem and the volatility is quite persistent.

Furthermore, to determine the existence of leverage effect, Exponential GARCH or EGARCH(1,1) model is used in this analysis. The leverage effect is measure by the gamma (γ) coefficient where the significant and negative value of the coefficient shows asymmetric effect is exists such that bad news increases volatility for next period rather than good news at the same magnitude. Empirical result from table 4 shows that the value of the γ is -0.0682 and it is significant which means KLCI return have leverage effect. Besides, table 5 also shows that market return of SET also exhibit leverage effect since the negative and significant of the leverage parameter. However, after implying asymmetric GARCH on Thailand stock market, there exist ARCH effects at lag 10 but no evidence at lag 5.

Another GARCH model that could estimate an asymmetric effect is Threshold GARCH (TGARCH). The sign of the γ is expected to be positive which differ from EGARCH model. Empirical result shows that the value of γ is positive and significant indicating leverage effect exist in both markets. This result is consistent with EGARCH model where KLCI and SET exhibit leverage effect thus asymmetric GARCH model could be the best in representing the Malaysian and Thailand market. Overall results from four different univariate GARCH model suggest that

TGARCH model is suitable in representing the structure of the volatility for Malaysian market while EGARCH model for Thailand market. Besides, it is well known that GARCH model with normal distribution cannot capture the excess kurtosis in the financial series. Thus, this analysis have been improved by employing a student's-t distribution instead of normal distribution because it is believe to be more superior in capturing the leptokurtic distribution.

Student's-t distribution is utilized in best model, which is TGARCH(1,1) for case of KLCI. Results from TGARCH(1,1)-t shows that degrees of freedom is significant indicating employing student's-t is appropriate in GARCH model. Besides, goodness of fit shows a better result where the increasing value of Log Likelihood. We employ same procedure in SET and found that EGARCH(1,1)-t is better from standard EGARCH(1,1). Next, this analysis allows the conditional variance of TGARCH(1,1)-t to be in the mean equation of KLCI return. Results from table 4 shows same conclusion arise when using asymmetric GARCH where the risk premium parameter still taking positive value and insignificant. Thus, empirical evidence shows that AR(1)-TGARCH(1,1)-t is an appropriate model in modeled the stock market volatility of KLCI return. On top of that, table 5 shows the risk premium is significant in SET but still taking a negative value. Even though higher risk is associated with lower return in Thailand market, investor will be compensated for bearing the risk. Besides that, as we can see, after employing a student's-t distribution in SET, current return does not determine by previous return which mean Thailand market is efficient rather than Malaysian market. As a conclusion, AR(0)-EGARCH(1,1)-M-t is the appropriate to model the market return in Thailand. Moreover, diagnostic checking on standardized residual of Thailand markets shows no evidence of serial correlation and ARCH effect up to lag 5 at 5% significant level as well as KLCI up to lag 10.

Furthermore, figure 3 shows return of KLCI and SET under normal distribution and student's-t distribution. From all diagram, student's-t shows a better performance in fitting the leptokurtic distribution. The superior of t-distribution is confirming by the Q-Q plot in figure 4 where the distribution slightly deviate from the red line instead of normal line that have greater departure.

Table 4. KLCI estimation

coefficient	GARCH(1,1)	GARCH(1,1)-M	EGARCH(1,1)	TGARCH(1,1)	TGARCH(1,1)-t	TGARCH(1,1)-M-t
Mean equation						
μ	0.0505***	0.0337*	0.0443***	0.0365***	0.0437***	0.0333**
ø	0.1402***	0.1401***	0.1488***	0.1444***	0.1057***	0.1061***
λ	-	0.0537	-	-	-	0.0336
variance equation						
ω	0.0115***	0.0113***	-0.1535***	0.0126***	0.0091***	0.0092***
α	0.1070***	0.1062***	0.1780***	0.0642***	0.0733***	0.0744***
β	0.8747***	0.8757***	0.9753***	0.8724***	0.8895***	0.8895***
γ	-	-	-0.0682***	0.0832***	0.0533***	0.0499**
v	-	-	-	-	4.5163***	4.5068***
α+β	0.9817	0.9819	-	0.9366	0.9628	0.9639
LL	-2547.922	-2546.779	-2539.172	-2535.619	-2424.933	-2424.278
skewness	-0.3445	-0.3409	-0.2712	-0.2782	-0.3116	-0.3099
kurtosis	6.5381	6.5286	6.1470	6.0970	6.2767	6.2838
Residual Diagnostic						
ARCH (5)	0.9224	0.9091	0.4301	0.9857	0.9756	0.9722
ARCH (10)	0.7988	0.7889	0.4346	0.7760	0.7528	0.7498
Q (5)	0.228	0.170	0.231	0.245	0.036**	0.025**
Q (10)	0.278	0.225	0.188	0.282	0.074*	0.056*

***,**,* denotes significant at 1%, 5% and 10%

Table 5. SET estimation

***,**,* denotes significant at 1%, 5% and 10%
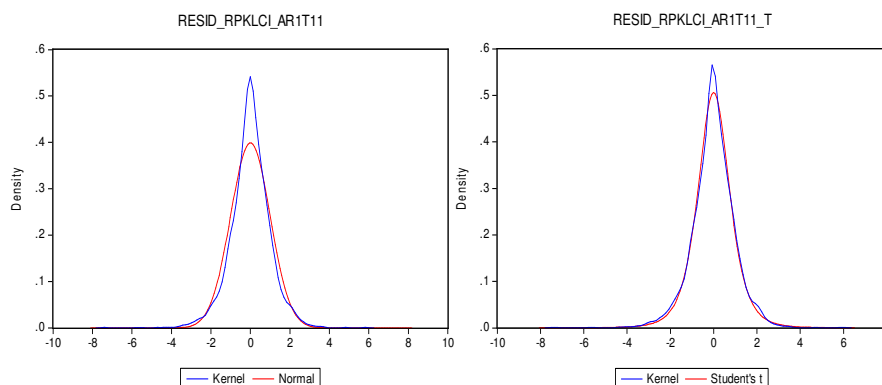
coefficient	GARCH (1,1)	GARCH-(1,1)-M	EGARCH (1,1)	TGARCH (1,1)	EGARCH (1,1)-t	EGARCH (1,1)-M-t	EGARCH (1,1)-M-t
Mean equation							
μ	0.0886***	0.1011***	0.0595***	0.0571**	0.0667***	0.0605***	0.0675***
ϕ_1	0.0389*	0.0384*	0.0552***	0.0422*	0.0368*	0.0301	-
ϕ_2	0.0392*	0.0390*	0.0515***	0.0423**	0.0317*	0.0239	-
λ	-	-0.0119	-	-	-	-0.0724**	-0.0887**
Variance equation							
ω	0.0358***	0.0357***	-0.1395***	0.0460***	-0.1418***	-0.1421***	-0.1412***
α_1	0.1126***	0.1124***	0.1948***	0.0546***	0.2023***	0.2025***	0.2019***
β_1	0.8665***	0.8668***	0.9621***	0.8620***	0.9531***	0.9582***	0.9592***
DUM	30.6931***	30.9001***	4.1702***	31.6475***	4.0965***	3.9621***	3.9012***
γ	-	-	-0.0822***	0.1048***	-0.1036***	-0.1038***	-0.1000***
ν	-	-	-	-	6.4920***	6.4096***	6.2315***
$\alpha+\beta$	0.9791	0.9792	-	0.9166	-	-	-
LL	-4076.230	-4076.008	-4056.753	-4057.669	-4008.626	-4006.711	-4013.146
skewness	-0.1708	-0.1730	-0.1144	-0.1468	-0.1091	-0.1139	-0.1227
kurtosis	4.3047	4.3016	4.4380	4.3674	4.6241	4.6592	4.6674
Residual diagnostic							
ARCH (5)	0.4358	0.4306	0.2318	0.2115	0.2094	0.1952	0.1652
ARCH (10)	0.1783	0.1775	0.0032***	0.0254**	0.0005***	0.0006***	0.0003***
Q (5)	0.583	0.611	0.672	0.525	0.392	0.476	0.097*
Q (10)	0.129	0.128	0.147	0.134	0.099*	0.073*	0.017**
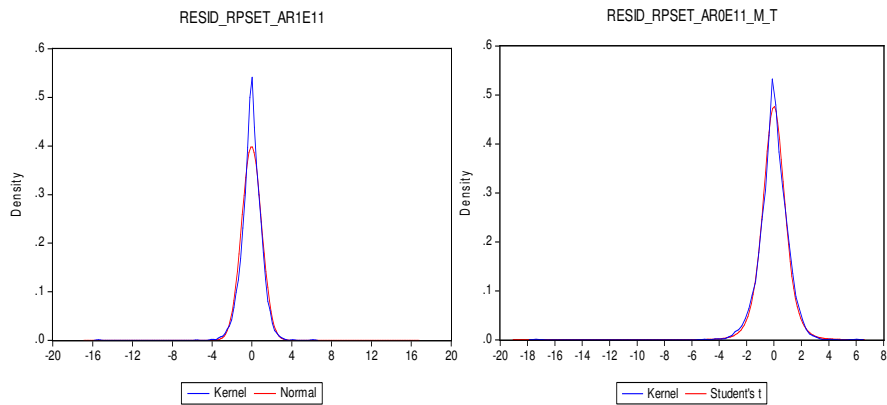
Figure 3. Normal and Student's-t residual kernel density plot of KLCI and SET
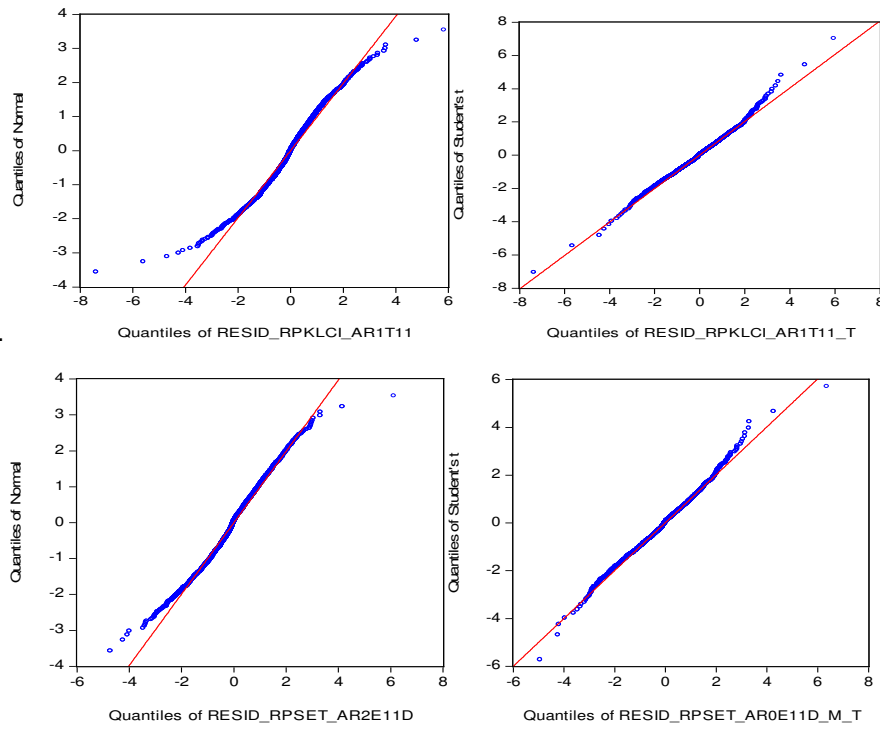
Figure 4. Q-Q plot of normal and student's-t residual of KLCI and SET

4.2.2 Volatility Profile
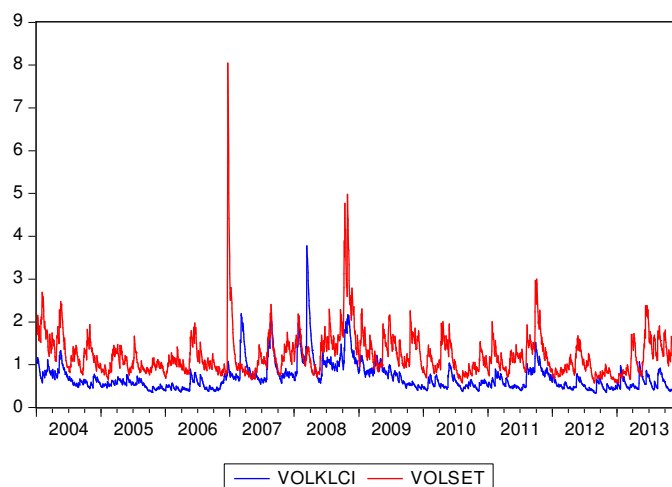
Figure 5. Volatility profile of KLCI and SET

Figure 5 shows a volatility profile for both Malaysian and Thailand market. Volatility profile is used to determine the period where the market are highly volatile. Both figure shows that, there market are highly volatile during period 2007 until 2008. This is mainly due to the global financial crisis 2007-2008 which is spill from United States to all over the world. Besides, this graph also indicates that stock market of Thailand is more affected from the global financial crisis rather than Malaysian stock market due to higher degree of capital account liberalization (Suttacheep, 2008). Moreover, during 19th December 2006, Thailand market shows a greater volatile rather than period of financial crisis due to the new policy of capital control to curb speculation on baht.

Causality of volatility between both markets is being examined using monthly volatility by averaging the volatility series. The idea behind using monthly volatility is that the causality estimation could be bias and inconsistent due to the noisy in the series that use daily frequency. First step that need to be taken in determine the causality is stationary test on volatility series.

4.2.3 Testing for Stationary

Table 6. Unit root test

***denotes significant at 1%.

ADF and PP unit root test are used to determine the integration of both Malaysian and Thailand volatility series. Result from table 6 shows that null hypothesis on non-stationary series can easily be rejected easily at 1% significant level indicating both series are integrated of order 0 or I(0). Hence, a Vector Autoregressive (VAR) model is performed to determine the short run causality between the two markets.

4.2.4 Short-run causality

Table 7. Granger causality of KLCI and SET volatility series

Independent variable

Dependent variable	VOLKLCI	VOLSET	Serial Correlation	White heteroscedasticity
VOLKLCI	-	13.3706* (0.0636)	6.2155 (0.1836)	85.9105 (0.4217)
VOLSET	22.1366*** (0.0024)	-		

***,* denotes significant at1% and 10%. Number in parenthesis is p-value.

Analysis of causality between volatility series of both markets is shown in table 7. Note that, the analysis is run using lag 7 which are chosen by 3 out of 5 selection criteria[2]. Empirical result shows that there exist bidirectional causality between volatility of KLCI (VOLKLCI) and SET (VOLSET). VOLSET found to be granger cause VOLKLCI only at 10% significant level while VOLKLCI granger causes VOLSET at 1% significant level. This finding suggests that any shock in Malaysian market could give impact on Thailand market and vice versa. Recalled on July 1997, Asian financial crisis 1997-1998 started from Thailand because of the speculative attack on baht which then spread to Malaysia and other East Asia region (Zakaria et al., 2010).

SUMMARY AND CONCLUSION

This paper studies the volatility of Kuala Lumpur Composite Index (KLCI) and Bangkok Stock Exchange of Thailand (SET) return using univariate Generalized Autoregressive Conditional Heteroscedastic (GARCH) model covering period from 1st January 2004 until 31th December 2013. Different GARCH model were employed in this study such as symmetric GARCH, which is an ordinary GARCH and GARCH-M model. The asymmetric GARCH is also utilized in this paper which is Exponential GARCH and Threshold GARCH where it is used to measure the leverage effect. Based on the empirical results, we found that GARCH model is suitable in modeling the volatility since it can overcome the heteroscedasticity problem in both markets. Besides that, the significant of the ARCH term (α) and the GARCH term (β) in every model shows that the future volatility depend on its past innovation and also past volatility. Furthermore, the summation of ARCH term and GARCH term ($\alpha + \beta$) measures the persistency of the volatility. Both KLCI and SET have persistence volatility where it takes long-term to die off. Besides, the positive risk premium parameter in KLCI model shows that higher risk is associated with higher return but the insignificant of the parameter indicates investors will not be compensated when they take the risk. Different results for SET where a higher risk is associated with lower return but an investor will be paid for bearing the risk. On top of that, findings from both EGARCH and TGARCH model show leverage effect exists in KLCI and SET. Moreover, the significance of dummy variable suggests that the new policy on stock market have an impact on volatility. The well-known properties of financial market which is high kurtosis was investigated and we found that student's-t distribution superior in fitting the data than normal distribution. Furthermore, empirical evidence shows that the volatility of KLCI can be represented by AR(1)-TGARCH(1,1)-t while SET is represented by AR(0)-EGARCH(1,1)-M-t. Thailand market is found to be an efficient market through efficient market hypothesis (EMH) since the current return does not determine by past return. Last but not least, Thailand market was affected more from financial crisis 2007-2008 compared to the Malaysian market and there is enough evidence to conclude that bidirectional causality exists in both markets.

Briefly, this paper suggest that: 1) Thailand market is more efficient in comparison to Malaysian market, 2) any new policy on stock market will give impact to index price as well as volatility. Thus, policy maker should be aware in implementing any policy that could turndown the market, 3) Thailand market were more affected from global financial crisis 2007-08 due to higher degree of capital account liberalization compared to Malaysian market, and finally 4) Thailand and Malaysian market have a dynamic interdependence relationship whereby crash in any market could affect another market.

ACKNOWLEDGEMENT

NOTES

1. The equation of TGARCH-M and EGARCH-M are not shown in this paper due to lack of space.
2. The results are not reported in this paper to save space. However, it is available upon request.

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DECISIONS FROM DESCRIPTION AND DECISIONS FROM EXPERIENCE: A MINI REVIEW IN VIETNAM STOCK MARKET

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Abstract

Numerous psychological studies revealed that human decisions are conducted based on the information sources that people have or attempt to find out from their own experiences or the descriptive data. Motivated by that, this paper presents a brief review of the main theories on decisions from description and decisions from experience. This research is carried out relied on four previous works in the relevant field to evaluate and compare them in terms of methodology and result. The aim is to observe how the theories are relatively developed. Moreover, we characterize the behavior of lottery buyers and investors' actions in Vietnam Stock Market as some practical applications based on the best understanding from the theory. Finally, the relationship of the information sources and enterprises' performances is also explored and discussed principally based on several behavioral researches.

Keywords: Decision from description, decision from experience, rare event, ambiguity, behavior, enterprise.

INTRODUCTION

Nowadays, people always have to waver at the fork to determine whether the daily issues are risky or not. From buying a lottery ticket, Bungee jumping, pouring money into an investing channel or even posting a status on Facebook, they will try their effort to identify and select options considered as the best in certain circumstances. As described by Hertwig et al. (2004), decisions from description can be defined as those based on specific depictions of possible outcomes and probabilities; decisions from experience, on the other hand, are relied on previous encounters without any statistics. This research is carried out based on the previous works of Herwig et al. (2004), Erev et al. (2010), Abdellaoui, L'Haridon and Paraschiv (2011), and Palma et al. (2014) to evaluate the reflection of differences and significant impacts of those dimensions of decisions.

Have you ever been unendurably looking everywhere for losing $10 but felt nothing if picking up the same amount on the street? This happened because of the negative correlation between gains and losses in our feelings. In 1979, Amos Teversky and Daniel Kahneman – Nobel Prize Winner in Economics proposed the "Prospect Theory" assumed that the views of people about earnings and losses served as the basis of observing issues were distinctive. No sooner had prospect theory been public; it was a premise for many other researching studies explained the social and economic behaviors. Hertwig et al. (2004) did point out the distinctions between choices through examining the reaction of experimental subjects toward rare events. If the expected-utility theory had showed that the judgment of human about proportion of risky prospects was nearly absolute (Neumann and Morgenstern, 1947); then through surveys, Hertwig substantiated the presence of respondent's awareness of rare events subject to the ways of acquiring information. Moreover, Hertwig et al. (2004) not only proved that rare events were overweighted in decisions from description and have less impact in decisions from experience,

but also analyzed some other factors influencing on determination such as direct experience, repeated decisions, and recency effect.

However, what Hertwig demonstrated in the survey of six problems seems to be robust but not yet overall. Erev et al. (2010) continued the problem presented by Hertwig et al. (2004) but they interpreted the results in more detail. Through the behavior of choosing randomly 120 problems, Erev et al. (2010) succeeded in revealing and generalizing the significant gap between decisions from description and ones from experience. In spite of sharing the idea of one non-zero-outcome aspect, Erev et al. (2010) pushed the experiments to higher level with more quantity of problems. Hence, these economic scientists paid attention in one-shot/ repeated decisions from experience and one-shot decisions from description based on two datasets: Estimation and Competition. Although their study cannot completely submit the standard models of behavior, in total, it still highlighted the roles of counterexamples/ quantitative models and somehow reached noticeable achievements for future research.

Based on the Prospect Theory, Abdellaoui, L'Haridon and Paraschiv (2011) continued the research on the discrepancies of two types of decisions. For the first time, all components of prospect theory which are inclusive of utility, loss aversion and probability weighting element, were elicited at an individual level with both of decisional dimensions. Keeping on the track of Hertwig et al. (2004), the French economists moved further in analyzing factors with adjustments in method as using two general outcomes instead of one non-zero parameter. Additionally, by informing the outcomes to subjects after sampling (but before the selection), Abdellaoui, L'Haridon and Paraschiv (2011) would be able to compare the probability weighting throughout contexts in terms of uncertainty as well as risky issues. Consequently, the exhibitions of respondents toward loss and gain in relevant to description-based decisions and experience-based ones should be revealed obviously.

Clearly, the paradigm used in Hertwig et al. (2004) which is composed with various experimental setups, has been in the spotlight and created a basic tendency for others. Nevertheless, what will happen if decision from description is put in ambiguity conditions instead of precise descriptions quoted probabilities and outcomes? Palma et al. (2014) presented the issues which were discussed among many other advisable theoretical points. Concurring with the assessment of Abdellaoui, L'Haridon and Paraschiv (2011), their research also expressed the lack of awareness of respondents about rare events remained in Hertwig's experiment. Acquiring with wise economic knowledge, they, experts in studying people's behaviors, did examine some prior interpretations to propose mechanisms for facilitating related researches hereafter.

Based on our best knowledge and understanding withdrawn from the above articles and the literature of description-based decisions and experience-based ones, in this research, we characterize the behaviors of lottery buyers and investors' action in Vietnam Stock market. Then, the relationship of the information sources and enterprises' performance is explored mainly based on the behavioral researches presented by Lejarraga and Pindard-Lejarraga (2013).

RESEARCH METHODOLOGY

The first work was conducted by Hertwig et al. (2004). In their research, the sample included 100 students classified into two categories with the same percentage such as description group and experience one. They tended to test 6 problems in terms of the proportion of choosing option H (see in Table 1). Three of six problems were positive and the others were negative. Rare event was one with the probability less than or equal to 0.2. In each group, 25 candidates dealt with three problems, and the others faced the three remaining cases. Description group would sit in front of computer screen, seeing the outcome distribution with its probability to choose one of the two options. For experience group, in each problem, participants were not given information about the probability. They thus sampled the outcomes by clicking the

button on the screen for different replacements. They sampled them until they felt confident enough to decide whether they should select option H, and leave for the next problem.

Example for problem 2: Option H showed 4 with prob = 0.2, 0 with prob = 0.8. Option L showed 3 with prob = 0.25, 0 with prob = 0.75. Rare event in this case was 4 with prob = 0.2.

In other research presented by Erev et al. (2010), the survey and method were much more complex and expended in terms of the number of tested problems and sample size than the first one of Hertwig et al. (2004). The study comprised of two contents relating to estimation data and competition data that took into account three conditions such as description, experience-sampling (E-sampling), experience-repeated (E-repeated). Both estimation and competition included 60 random decision problems with the features as follows:

- Safe choice: M with 100% probability.
- Risky choice: H with prob = Ph; L with prob = (1 − Ph).

Table 1: The decision problems and results (extracted from Hertwig et al. (2004))

Decision problem	Option		Expected value		Percentage choosing H		Rare event	Predict-ion for H choices	Difference between groups
	H	**L**	**H**	**L**	**Description group**	**Experience group**			
1	4, .8	3, 1.0	3.2	3	36	88	0, .2	Higher	+52 (z = 3.79, p = .000)
2	4, .2	3, .25	0.8	0.75	64	44	4, .2	Lower	-20 (z = 1.42, p = .176)
…	…	…	…	…	…	…	…	…	…
6	32, .025	3, .25	0.8	0.75	64	12	32, .025	Lower	-52 (z = 3.79, p = .000)

Rare event was the one with probability less than 0.1. They tried to produce the set of 60 problems in each study relied on random distribution so that it maintained 1/3 of the problems concerned with rare high income, 1/3 concerned with rare low income; and 1/3 related to gain, 1/3 related to loss. We summarize the method for estimation data as described in Table 2.

Table 2: The explanation of method in estimation study (adapted from Erev et al. (2010))

Condition	Number of respondents	Explanation
Description	The number of candidates was 20.	Respondents were before the computer screen, showed with the outcomes and their objective probability. They were asked to choose between the safe outcome and the risky choice.
E-sampling	The number of candidates was 40. While 20 of them were for 30 problems, and the others were for the remaining ones. Each problem occurred in only one of the two sets.	There were two desks to be sampled. One was safe outcome, the other was risky choice. The candidates did not know the probability. They sampled them by clicking on the button for the event frequency. After that, they would make a decision on choosing which choice when they were optimistic enough.

E-repeated	100 students were divided into 5 sub-groups.	Each student was at computer, depicted with each of 12 problems though a set of 100 trials. The guy was forced to select one among two buttons such as one illustrating safe payoff, one relating to risky gamble.

For completion study, the method to identify the random problems was the same with estimation study. This part also included 160 participants different from those in estimation part. The measure used to access the different models was Mean squared distances (MSD), analyzed as the equivalent number of observations (ENO). MSD could be considered as a criterion in regression and t-statistic index.

It is clear that the work of Erev et al. (2010) was more innovative with many models considered to appraise the theory than the one of Hertwig et al. (2004). Besides, Abdellaoui, Haridon and Paraschiv (2011) concentrated on the components of prospect theory, for example, utility, loss aversion, weighting function in description-based decisions and experience based decision. Sixty-one students from a technology institution in Paris, France participated in this experiment. They were categorized into two sub-groups of 30 and 31 members respectively that were paid with various fees and prize. The aim of this was to check whether the prize encouragement impacted candidates' behavior. The method design was basically like that of Hertwig et al. (2004), but the different thing was that participants faced a chance tree and could ask for a break time in each session. In addition, they were also requested to define the certainty equivalent of risky prospect. And the game constructer could reliably check the selection by telling participants to select between the option one more.

The study chooses p* = 0.25. This experiment employs 14 certainty questions to find out the gain utility function, 14 alike ones for loss utility function. The decision weighs are discovered for p = 0.05 to 0.95 with each break interval equal to 0.05, utilizing $\left|x_*^s\right| = \$200$.

The latest work proposed by Palma et al. (2014) did not include the experiment. Their aim was to test the gap between description and experience-based decisions by reviewing the key knowledge in previous papers of Herwig et al. (2004), Erev et al. (2010), Abdellaoui, L'Haridon and Paraschiv (2011), interpreting errors, and connecting the description-based decision with experience-based ones in terms of ambiguity.

RESULTS

It is clear that the consequences improved and were more complex. In particular, Hertwig et al. (2004) found that there maintained the clear distinguish between experience based decisions and description based decision. For instance, 64% of decision groups chose option H in problem 3, while this number for experience one was only 28%. More implicitly, in decision from description people tended to overestimate rare event and took normal and high probability cases less important than their real reflections. In decision from experience, they, meanwhile, under-responded to uncommon event. Underweighting rare event was due to small sample. It caused rare event to not occur or happen with less frequency, and sometimes to be ignored by participants. Their other contribution was recent effect stated that the more recent sampled outcomes were, the more they affected candidates' behavior. Even though, respondents predicted approximately the probability through sampling outcomes with a large number of trials, the recent effect still appeared to be much significant. Another interesting note of Hertwig et al. (2004) is that experience-based decisions of human were similar to those of animals like bumblebees which experience-learning was limited due to memory restraint.

Erev at al. (2010) showed a deeply result for implication of description-experience gap. It revealed the correlations between various decision conditions: corr(Description, E-sampling) = -

0.74 (< 0.001); corr(Description, E-repeated) = -0.66 (< 0.001). This meant the percentage of choosing risky choices in decision group and experience ones were statistically together contrary with 99% confidence interval. Additionally, the *R-rate* in description group was a decreasing function with *Ph* meaning the probability of high payoff, compared to the other conditions arguing that *R-rate* increases with *Ph*. The direction is more emphasized if *Ph* is near to zero, or one.

Erev at al. (2010) constructed the models with different parameters to clearly distinguish decision from description and those from experience. Thus, they considered many different standard (or baseline) models for each condition to choose the best one. For instance, description condition was implemented with cumulative prospect theory (CPT), stochastic cumulative prospect theory (SCPT); E-sampling and E- repeated conditions faced Primed sampler method, primed sampler with variability, explorative sample, explorative sampler with recency. Their first discussion was to underscore the result discovered by Hertwig et al. (2004). Their other key contribution was to demonstrate the description-experience gap. For example, the ENO of SCPT was high in description group, but low in experience conditions. It indicated that it was very pessimistic for scientists to attempt to establish a decision making theory in the case of occurring phenomena inconsistent with fact theories such as underweighted rare events. More especially, decision from experience may be more various from description-based decision in term of type than in terms of the model parameters. SCPT continued to highlight this point since it succeeded in description condition but did not perform well in the conditions of experience.

If Erev at al. (2010) focused on how description-experience gap was expressed, then Abdellaoui, Haridon and Paraschiw (2011) immediately tries to identify the utility for gain, loss, decision weight, and low aversion (see in Table 3).

Table 3: Comparing description-based decisions and experience-based decisions *(adapted from Abdellaoui et al. (2011))*

	Description-based decision	**Experience-based decision**
Utility for gains and losses	Median coefficient for gains was 0.79, statistically different from 1. This figure for losses was 0.96. The utility was concave in gains rank and convex in losses one.	Both utility for gains and losses were concave. But the level of concavity for losses was less than for gains. It was near to linearity.
Loss aversion	There existed a loss aversion in each individual.	There existed a loss aversion in each individual since the aversion coefficients were more than 1.
Decision weights	The median rank was suitable to the inverse-S-shaped weighting function. The probability of 0.05 was overestimated for gain and loss. It was in line of that the probabilities 0.05, 0.75, 0.95 were underestimated.	As a function of objective probability For gains: it was various from experienced probability. For losses: it was the same as objective probability for p = 0.25. As a function of corresponding probability It was different from the sampling probability for gains and losses (except the case $f = 0.25$).

Palma et al. (2014) reviewed the theory and looked for what motivated description-experience gap, and linked the problems with ambiguity. According to Prospect theory, the utility function appeared to be concave for gains and convex for losses (see Figure 1). This caused

people to be risk-averse for gains and risk-seeking for losses. In addition, the probability had a much more weight than itself for the rank of near-zero that described rare event (see Figure 2).

Figure 1: Utility function of Prospect theory (Palma et al., 2014)
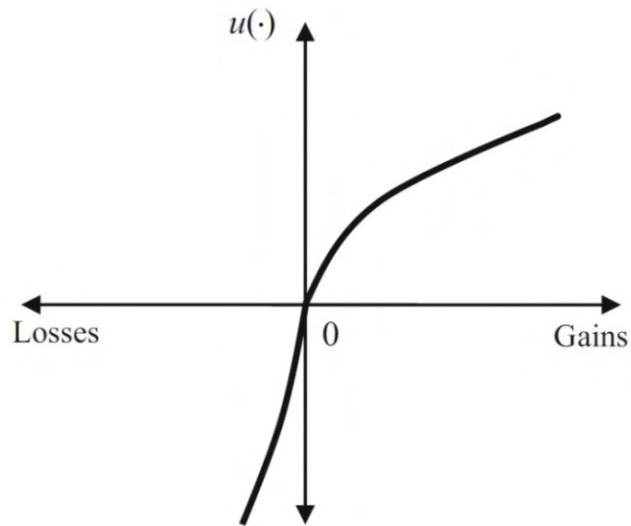
Figure 2: Probability weighting function *(Palma et al., 2014)*
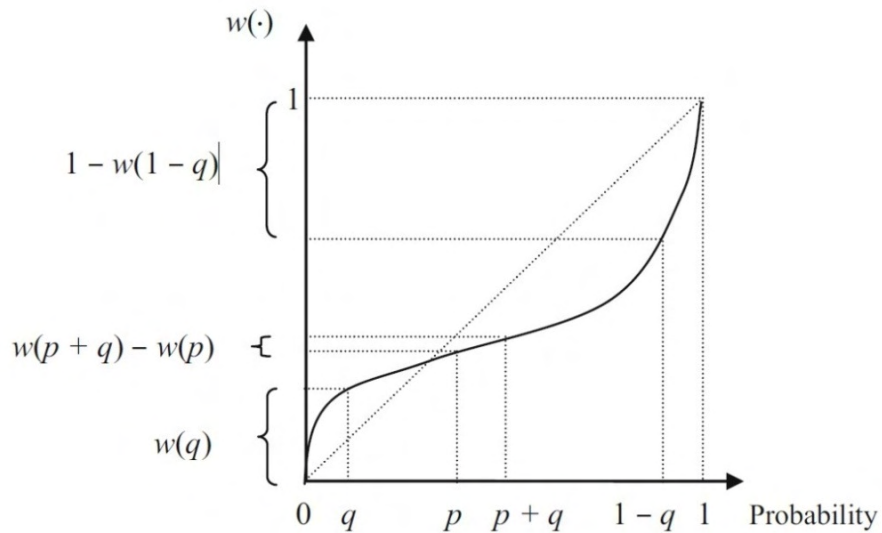
There were five elements causing the gap between the two conditions. The first one was the error in sampling and absolute unknowingness of rare events' presence. The unawareness of rare event happened when people sampled the outcome, but rare case did not appear. In order to decrease the gap, respondents should experience a large number of trials to make it visible. The second was trust in only some of past experiences. The idea was that due to memory restraint, we tended to remember just some of recent outcomes sampling result. The third was tallying. As a consequence, the gap was larger in the case that candidates frequently stopped sampling a prospect to leave for the other instead of experiencing more times for it. The forth element was mere-presentation effect and the last one was unpacking-repacking.

Palma et al. (2014) also suggested that it was more interesting to employ the ambiguity theory to distinguish experience-based decision with description-base one. Indeed, if people found ambiguous probability more pessimistic than risky probability, the prospect would be more describable when its outcome distribution was clear to them than in the case it is assessed from sampling.

PRACTICAL APPLICATIONS

In this section, we will utilize the theories on description-based and experience-based decisions to interpret the lottery-buyers' behavior, investors' behavior in Vietnam Stock Market and the influence of information source on enterprises' performance.

Lottery-buyers' behavior

The lotteries operation is quite popular in Ho Chi Minh City (HCMC). For understanding the behavior of lottery-buyers, HCMC Lotteries Limited Liability Company (HCM-LLL) is considered as an example (see in Appendix 1). The director board may realize that buyer's decision depends on their information source they already have or try to find out. In detail, people not buying tickets make a decision from experience. When facing the offer from sellers, in customer's mind, he will do sampling the lottery events around him, his relatives and neighbours. He may find that they have rarely or never won any prizes in spites of purchasing a lot of lotteries.

This thinking leads him not to buy lotteries as a consequence of underestimating the rare event (winning chance) and overweighting the common case (not wining).

In contrast, the buyers may decide based on description or experiences. For people with description-based decision, they have enough knowledge to know that the statistical winning probability is very low, even zero (see in Appendix 2). But the important observation is that the cost of only VND 10,000 per ticket is pretty puny and insignificant, compared to several enormous prizes in spite of their zero-near-probability. So, they overweight the winning probability and buy lotteries. In addition to note above, some buyers also act due to experience. The experience here is not of buyers, but that of sellers. The buyer firstly hesitates, tending not to buy ticket. After that he is convinced by the seller with expressions like "This number is very beautiful and lucky. Ever, I see that the tickets with such type of digit orders are easy to get winning". Obviously, it is the seller's experience from realistic observations, and directly transferred into the buyer's awareness. The buyer is attracted to learning form seller's event-sampling. For him now, the rare event changes from winning case to non-winning one. He thus underestimates the non-winning case as believed in the seller's advice and purchase the goods.

Based on the analysis above, we think that HCM-LLL as well as other lottery-business firms should concentrate on behavior marketing to each individual through the sellers. For instance, the training courses on how to persuade customers by seller's experience are really essential to motivate the enterprises to obtain the optimal profit.

Investor's behavior in Vietnam stock market

Vietnam Stock Market has been growing considerably with the high number of listed companies and the market capitalization in last few years. However, this market sometimes does not reflect well Vietnam current economic situation due to investor's behavior. Indeed, there are several reasons why investor's behavior effects the implication of Vietnam stock market.

The first is ambiguity aversion. In Vietnam, investors do not have enterprises' exact and sufficient financial information. Although the financial statements and annual reports are publicized on some security websites such as *www.cophieu68.vn*, and *www.vietstock.vn*, these databases are much adjusted, compared to firms' real financial health. Additionally, the number of law violations on information transparency rises gradually in recent years. All of these lead investors to be ambiguous in evaluating the stock prices. Because of ambiguity aversion (Ellsberg, 1961), they thus may not invest in the security despite its real good state. Secondly, when facing ambiguity, investors tend to learn from their recent experience to make decisions. The ambiguity with experience can be considered as described ambiguity (Palma et al., 2014). They will sample the past events about the security, for example, the stock returns, loss, gain, the economic shock in recent time to decide whether or not they should invest in it. Malmendier and Nagel (2011) depicts that people experiencing the low rates of return in the stock market during their life time are much gloomier about the future returns and invest less in the stock.

The third reason is due to herd behavior that is, from our opinion, assessed as the result of decision from experience in ambiguity circumstance. When investors do not know firms' exact fiscal information, they will communicate and learn from cross-experience together. In particular, young investors will tend to duplicate the buying or selling actions of experienced ones. This leads to a domino effect, which is able to cause the stock price to rise or reduce suddenly although there is only little change in firms' financial situation.

In conclusion, three factors such as ambiguity aversion, learning from experience, and herd behavior sometimes cause Vietnam Stock Market to be not in line of the current economic state.

Information source affecting enterprises' performance

According to Lejarraga and Pindard-Lejarraga (2013), the beginning expectation and information sources at the time new firms are established such as descriptive information or experienced one may also influence on the firms' behavior. This means that industrial organizations will act adaptably to their first prediction of failure risks. In adverse industrial situations with high rivalry level, failure or bankruptcy is frequent, and success is a rare event. Inexperienced organizations relied on descriptive information think that bankruptcy is less likely to occur than its true probability. They thus under-evaluate the shortcomings of their strategies. This leads to much risks happening in their performance. Under heavy competition pressure, inexperienced firms will look for and invest in risky projects offering high return despite its excessive risk. As a result, when these firms are motivated to take risks, they may primarily follow short-term strategic choices to maintain their daily survival. In contrast, experienced entrepreneurs having accessed the market in unfavorable conditions, based on their experience may behave more carefully since they over-respond the bankruptcy risk and underweight the rare successful case. In potential and advantage industrial environment, where success is common, experienced enterprises will have more confident actions, compared to ones without experience that act more watchfully by frequently pursuing the mean signals of the industry.

CONCLUSION AND DISCUSSION

Decisions from description are different from decisions from experience in terms of type rather than model parameters. Any statistical models are not much significantly proper to clearly classify the two kinds of making decisions. People tend to overweight the rare events in decisions from description, and under-estimate or even ignore them in the other. The description-experience gap is caused by sampling with small sample, recent effect, error in sampling, unawareness of rare event, the trust in past experiences. The statement above is withdrawn based on the prospect theory, but it is also interesting to apply the ambiguity theory to distinguish the gap. If people find ambiguity probability more pessimistic than risky probability, the outcome would be preferred in the case that its distribution is clear, compared to when it is assessed by sampling. Back to some applications, it is clear that lottery-buyers make decision based from descriptive information or the seller's experience. This leads to that marketing training course on customer's behavior is appropriate for lottery-companies to understand their clients and gain profit. Learning from experience is also considered as the feature of investors' behavior in Vietnam Stock Market, besides ambiguity aversion, and herd behavior. They together sometimes make the market be not in line of the current economic state. Another look is on firms' performance. In adverse industrial situations, inexperienced firms often invest in risky projects, while experienced companies can behave more carefully. By contrast, in advantage industrial environment, experienced enterprises will have more confident actions, but the others act more watchfully by frequently pursuing the mean signals of their business.

However, there are several shortcomings existing in this research. Only one firm employed such as HCM-LL is insufficient to demonstrate the theory for a more general view. Besides that, the stock investors' behavior is mainly pointed out relied on the best overall understanding about this market with lack of figures. Further researches on Vietnam Stock Market related to this field should be analyzed more deeply and be involved many statistical criteria and mathematical models.

ACKNOWLEDGEMENT

APPENDIX

Appendix 1: The lottery ticket information of HCM-LLL

HCM-LLL lottery tickets are featured with various orders of six numbers that are randomly taken from zero to nine. For instance, ticket number 237914 is different from 327914. The prize structure includes a rank from prize 8 to special prize as described in Table A1.

Table A1: The prize structure of HCM-LLL lottery tickets *(extracted from HCM-LLL website, accessed on July 15, 2015)*

Prize	Number of swiveling times	Number of exact digits from ending	Prize value
01 prize: Special	1	6	VND 1,500,000,000
10 prizes 1	1	5	VND 30,000,000
10 prizes 2	1	5	VND 20,000,000
20 prizes 3	2	5	VND 10,000,000
70 prizes 4	7	5	VND 3,000,000
100 prizes 5	1	4	VND 1,000,000
300 prizes 6	3	4	VND 400,000
1,000 prizes 7	1	3	VND 200,000
10,000 prizes 8	1	2	VND 100,000
09 Consolation prize 1	Compared to prize *special*	It is wrong with only one digit in the hundreds of thousands.	VND 100,000,000
45 Consolation prize 2	Compared to prize *special*	The first digit is exact, and it is only wrong with one other digit.	VND 6,000,000

The value of total prizes is VND 5 billion.

Appendix 2: Some information on computing the statistical winning probability

Generally, we can compute the number of lottery tickets as $10^6 = 1,000,000$ tickets. HCM-LLL Company distributes this ticket amount to its subsidiaries in some districts in HCMC. Following this, the tickets are again dispensed to each dealer who will often walk along on most of streets to directly sell them to customers. From our visual inspection by asking several sellers on the streets, the good is sold very briskly. This leads to the assumption in general that all the tickets are completely sold every day. With the ticket price at VND 10,000; the revenue of HCM-LLL with such gamble business, thus, is $10,000 \times 10^6 = 10$ billion VND. As a consequence, the benefit is around VND 5 billion (equal to $(10-5)$), equivalent to an income rate at 50%, assuming tax is not taken into account. According to Vietnamese law, HCM-LLL as well as other companies with such business operation belongs to the nation. The government can use the net income to improve public services.

Indeed, we can also calculate the statistical winning probability as 0.012 (equal to the total number of prizes, 11,565, over 10^6). The index here takes into account all the prizes. But actually, most of buyers always expect a high one, except prize 6, 7, and 8. The hopeful wining probability is near to zero, illustrated by a very small number of desirable prizes, at 265,

compared to 10^6, which is the total lotteries number. Until now, the purchasers can absolutely get information and deduct this state.

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INFORMATION SPILLOVER BETWEEN CRUDE OIL AND MALAYSIAN STOCK MARKETS

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Abstract

This study examines on how subsidies cut for RON95 affect information spillover between Brent crude oil and Malaysian stock markets. In this regard, the sample period is separated into the periods of pre-announcement (September 3, 2013-October 1, 2014) and post-announcement (October 2, 2014-November 28, 2014). Based on forecast error variance decomposition, result reveals that crude oil market dominates the role of information spillover instead of stock market during the post-announcement period. This study concludes that government announcement on oil prices cause investors to be more sensitive towards information about oil market when making decision in stock market.

Keywords: Oil-stock relationship, information spillover, variance decomposition

INTRODUCTION

Crude oil prices have exhibited exceptional volatility since 2008. The Brent crude oil price recorded its highest at $116.12 per barrel in early September 2013 and fell to its lowest at $94.16 per barrel in early October 2014. The fact that crude oil is one of the world's most essential commodities in international trade, any price movements on this natural source of energy are being constantly scrutinized by policymakers and market players. In addition, the scaling demand for oil caused by economic development, coupled with its depletion at an alarming rate, have further amplified the crude oil price sensitivity. Earlier studies focused on the effects of crude oil price movement on macro-economic factors (Chang & Wong, 2003; Cunado & Perez de Gracia, 2005; Filis, 2010; Ahmed & Wadud, 2011; Ju et al., 2014). Later studies on crude oil price movement have diverged to model specifically the impact of oil prices on stock returns (Jones & Kaul, 1996; Chen, 2010; Narayan & Narayan, 2010; Arouri, 2011; Aloui et al., 2012).

In view of the crucial role oil plays in a country's development, any variation to the oil price is expected to bring causality impact to the country's aggregate growth, amongst others, the capital market performances. Earlier findings that revealed negative impact of crude oil price volatility on stock returns include Jones and Kaul (1996) in the United States and Canada, Filis (2010) in Greece, Arouri et al. (2011) in Europe and United States. Nonetheless, positive significant relationships were also established by Aktham (2004) in emerging markets, Narayan and Narayan (2010) in Vietnam, Abhyankar et al., (2012) in Japan and Sahu et al. (2014) in India. The magnitude and sign of effects on oil price to stock returns vary from one market to another and the market's level of dependency on fuel consumption. These past empirical studies imply that any variation in oil price leads to a change in investors' investment behaviours, thus indirectly affecting the stock market performance.

The volatility of crude oil price continues to be a concern among governments, traders, producers and consumers (Du et al., 2011). High oil price leads to slower pace of economic activities and higher inflation, affecting consumers and producers alike by dampening consumption and investment, and adversely affects the stock market (Fowowe, 2013). This is supported by Chen (2010), who reported that the higher the oil price, the higher the probability of recession of the stock market (bear market).

By establishing the linkage between the crude oil market and stock market, investors are able to hedge their exposure properly and regulator can take actions to stabilize the markets in a timely manner (Ding & Pu, 2012). Hence, this study examines on how shocks of Brent crude oil affect the Malaysian stock market under the influence of government's announcement of subsidy cut of RON95 fuel price from September 3, 2013 to November 28, 2014. The reasoning is few past studies emphasize on the impact of government's announcement on information spillover between the crude oil and Malaysian stock markets.

1.1 Linkage between Crude Oil and Stock Market in Malaysia

Malaysia accounted for more than 90 percent of global oil production (Lam et al., 2009). In addition, Malaysia, as a net exporter of oil amidst a narrowed gap between domestic consumption and production, is highly correlated with crude oil price movement. Malaysia, a former agriculture-based country economy has, in the process of aging, turned into an industrial-based economy and moving forward, to becoming a developed country by 2020.

During the transformation process, consumption of crude oil is expected to increase correspondingly. Variation on oil price is expected to bring repercussions to Malaysia capital market (Ibrahim & Ahmed, 2014). The authors also highlighted that oil price volatility influences the aggregate investment behaviours of Malaysia. Their empirical findings proved that robust oil volatility accounts for the plunges in Malaysia's aggregate investment during the period. The recent volatility of global crude oil prices may imply lower or higher price on the pump to the man on the street, however effects on stock performances are still in question.

1.2 Fuel Pricing Models in Malaysia

The retail prices of fuel and refined products of crude oil in Malaysia were regulated under the Automatic Price Mechanism (APM) since 1983, where the prices remained unaffected at a pre-determined level set by the government, disregard to changes in production costs. Any difference between the prices and costs were absorbed by government in the form of subsidies to the nation.

On October 1, 2014, the Domestic Trade, Cooperatives and Consumerism Ministry had made an announcement pertaining to the retail pricing for RON95 petrol of an increase by RM0.20 per liter from RM2.10 per liter to RM2.30 per liter with effect from October 2, 2014. The subsidy cut is in line with the government's subsidy rationalization plan to ensure country's finance to remain strong and to prevent fuel smuggling as well as to ensure that the current subsidies of commodity is not abused by irresponsible parties (The Malaysian Insider, 2014).

Within two months, the Ministry made further announcement on November 21, 2014 where the retail pricing for RON95 petrol and diesel officially went on a managed float mechanism with effect from December 1, 2014. Under the new pricing mechanism, retail prices for the fuel will reflect and gauge on the global market price of crude oil. The prices of the fuel for any single month are determined by the monthly average price of the preceding month. This denotes that an increase in global market price of crude oil will entail the retail prices of all fuel products to rise accordingly and vice-versa.

At this backdrop, the change of subsidy policy in Malaysia is expected to trigger responses from all levels of market players, both in the short- and long-run analysis window. Accordingly, this study is motivated to analyze the roles of oil price volatility in explaining Malaysia's stock market performance surrounding the event of change of the subsidy cut. The rest of study is organized as follows. Section 2 reviews the literature pertaining to the effects of fluctuation crude oil price on stock market. Sections 3 and 4 explain the data and methodology employed in this study respectively. Section 5 discusses the result of the study and conclusion.

LITERATURE REVIEW

Empirical studies have been conducted to assess the impact of oil price volatility on stock returns in different levels of markets and sectors. Arouri et al. (2011) looked into the extent of the oil price shocks and volatility spillover to Europe and U.S. stock markets by sectors over the period from 1998 to 2009, using VAR-GARCH model. Their finding provided strong evidence that volatility on oil price crosses over to stock market in the countries under review. The transmission of the volatility is apparent to sensitive sectors, in particular oil and gas and industrial sectors. The authors further suggested that adding the oil asset to a well-diversified portfolio of European and U.S. stocks improves its risk-adjusted performance and the exposure to oil shocks can be hedged effectively.

The empirical results from Chen (2010), in investigating whether higher oil price will lead to a bullish or bearish stock market, using time-varying transition-probability Markov switching model, over monthly data spreading from 1957 to 2009 covering U.S. stock market, reported that higher the oil price, higher the probability of recession of the stock market (bear market). The study also documented that the bearish market take a longer reversion period, compared to bullish market reversal due to drop in oil price.

Negative relationship between oil prices and U.S. stock markets are also evidenced by Malik and Ewing (2009), where they concluded that three most significantly affected sectors are technology, health care and consumer. Filis et al. (2011) revealed that the lagged correlation results in their study show that oil prices have a negative effect in all stock markets without taking into account of the origin oil price shock. In addition, Miller and Ratti (2009) also revealed that in the long run, the stock market indices respond negatively to increases in oil price due to stock market bubbles.

Notwithstanding the empirical studies recognizes the negative causal relationship between crude oil price volatility on stock returns in a market, the results from such studies cannot be generalized to others. The intense development in the emerging markets on recent decades infers high consumption of crude oil. Thus, unfavourable price variation will lead to erosion of profits and cash flow, which are the prominent markers for stock performance. Aloui et al. (2012) investigated the impact of oil price volatility on 25 emerging countries, employing conditional asset pricing models, covering 10 years study ending 2007. Their study found that oil price shock is a risk factor to stock markets of emerging countries. The sensitivity of oil movement, namely the beta, has direct and asymmetric impact to stock returns. Thus, the results indicated that higher oil price sensitivity (price risk) equivalents to higher beta, leading to a higher stock return, consistent with trade-off theory. On contrary, Aktham (2004) reported that the shock from oil price variation does not have significant impact on stock index return of 22 emerging economies by employing VAR analysis on daily data for the period 1998 to 2004. The author reasoned that the results may due to inefficient transmission of new information in the emerging economies under study and the importance of oil price shock are over-estimated. Another research applying a vector error correction or vector autoregressive models reveals that the international stock market returns does not have significant influences on the oil market shocks (Apergis & Miller, 2009).

Fowowe (2013) has investigated the impact of crude oil price to stock market in Nigeria. GARCH-jump models have been used to investigate the relationship between oil prices and

return on the Nigerian Stock Exchange and to take account of the effect of extreme news events on returns. The empirical result shows negative but insignificant effect of oil prices on stock return. Filis (2010) reported that stock market in Greece responses negatively and significantly to oil prices, by employing VAR for a period of 1996 to 2008, mainly due to bi-directional relationship between stock returns and macro-economic factors such as inflation and industrial production index. In another study by Papapetrou (2001) in Greece also found that oil price is an essential variable to determine the stock price movement.

The study by Narayan and Narayan (2010) on oil prices and stock prices in Vietnam for the period of 2000-2008 using estimation techniques such as residual based tests, reported oil price increase is accompanied by a growth of stock market in Vietnam during the period, establishing a positive and significant relationship between the variables, which is inconsistency with theoretical expectations. The bullish stock market was contributed by different and unique factors at the time when oil price was increasing. These unique factors comprise the increase of foreign portfolio investments inflows and the change of preferences of market participants from holding foreign currencies and domestic bank deposits to stocks investing.

Oil price shocks have a significant effect on the real stock return in the same month as well as world-wide (Basher & Sardosky, 2006). Similarly, applying a multifactor market model, there is a positive relationship between oil prices and stock returns on oil and gas firms with few macro variables such as exchange rates and interest rates as the determinants in the research of Sadorsky (2001). El-Sharif et al. (2005), however using a sector-based analysis displayed there is a significant positive relationship between oil prices and oil related stock returns on London Stock Exchange.

DATA

The daily data for FTSE Bursa Malaysia Composite Index (KLCI) and Brent crude oil prices from September 3, 2013 to November 30, 2014 are used in this study. The data source for daily KLCI and Brent crude oil prices are retrieved from Thomson Reuters Datastream. To reduce variation of series, both prices are transformed into the natural logarithmic form $(\ln P_t)$. The sample period of both series are separated into the pre-announcement (September 3, 2013-October 1, 2014) and post-announcement (October 2, 2014-November 28, 2014). The timeline for this study is shown in Figure 1.

Figure 1: The Periods of Pre and Post-announcement on Subsidy Cut for RON95 Fuel Price in Malaysia.

Sept 3, 2013   Oct 2, 2014   Nov 28, 2014
Dec1, 2014
          1 year   2 months
                                                Weekend
   RM2.10   RM2.30
RM2.26
          Pre-announcement   **Post- announcement**
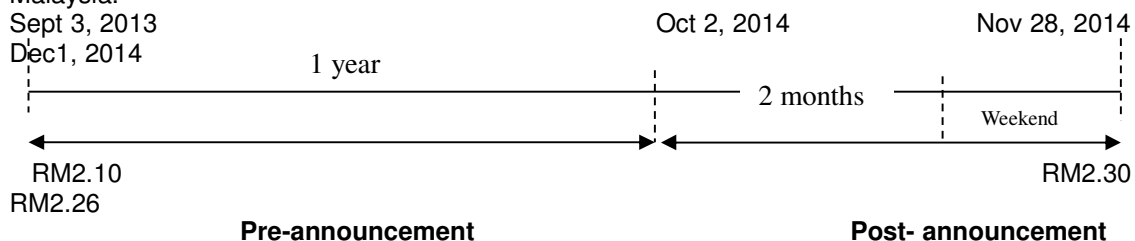
RESEARCH METHODOLOGY

Unit Root Test

According to Granger and Newbold (1974), an existence of non-stationary series in regression model will contribute to spurious result. To avoid misspecification problem in making inferences, preliminary step of analysis is to examine existence of unit root in a series. In this

regard, augmented Dickey-Fuller model with constant (μ) without time trend (t) and as well as with constant and time trend are used to access the validity of stationarity for crude oil and stock prices, respectively. Both models are stated as Equations (1) and (2).

$$\Delta \ln P_t = \mu + \delta \ln P_{t-1} + \sum_{i=1}^{k} \alpha_i \Delta \ln P_{t-i} + \varepsilon_t \qquad (1)$$

$$\Delta \ln P_t = \mu + \beta t + \delta \ln P_{t-1} + \sum_{i=1}^{k} \alpha_i \Delta \ln P_{t-i} + \varepsilon_t$$

(2)
where

$\Delta \ln P_t$ is first difference for daily prices in natural logarithmic form at particular time,

$\Delta \ln P_{t-1}$ is first difference for daily prices in natural logarithmic form at preceding time, and ε_t is error term.

The inclusion of the lagged k of dependent variable into Equations (1) and (2) is to reduce serial correlation significantly. The optimal lag length for this test is chosen based on the lowest value of Schwarz Information Criterion (SIC). The null hypothesis of a unit root $(\delta = 0)$ is rejected if coefficient of δ is significantly less than zero. To achieve stationary of a series, these daily prices are transformed to daily change in the logarithmic prices (R_t).

Cointegration Regression

Given that both prices follow the process of integrated order at one in the level form and they have long-run relationship. With a single equilibrium relationship connecting the element of a non-stationary series, the disequilibrium measure is written as Equation (3).

$$\pi = \underset{\smallsmile}{\alpha} . \underset{\smallsmile}{\beta}^{'}$$

(3)
where

α is speed of adjustment coefficient in equilibrium between stationary series, and
β is denoted as the long-run coefficient matrix.

Cointegration Test

To determine the number of cointegrating vectors (r) between both non-stationary series, Johansen's (1988) and Johansen and Juselius' (1990) vector error correction model (VECM) as shown in Equation (4) is used by assuming $\delta_1 = \delta_2 = 0$. This test involves estimation of the cointegrating vector matrix in examining information about the long-run relationship between two series.

$$\Delta Y = r_1 \Delta Y_{t-1} + ... + r_{k-1} \Delta Y_{t-k} + \alpha \begin{pmatrix} \beta \\ \mu_1 \\ \delta_1 \end{pmatrix} \begin{pmatrix} Y_{t-1} & 1 & t \end{pmatrix} + \mu_2 + \delta_2 t + \varepsilon_t \qquad (4)$$

There are two likelihood ratio test statistics, namely trace (Equation (5)) and maximum eigenvalue (Equation (6)) statistics are used to test the null hypothesis of r in the π. If rank of π is reduced rank $(r = 1)$, implying that existence of one cointegrating vector between two series. It is otherwise if full rank $(r = 2)$ or no rank $(r = 0)$.

$$\lambda_{trace(r)} = -T \sum_{i=r+1}^{m} \ln(1 - \hat{\lambda}_i) \tag{5}$$

$$\lambda_{nax(r)} = -T \ln(1 - \hat{\lambda}_{r+1}) \tag{6}$$

Estimating Dynamic Models

Given that both prices are not cointegrated, the number of lags for crude oil and stock prices is included into the vector autoregressive (VAR) model to capture information on short-run dynamic between two series. In this regard, optimal lag length for dependent and independent variables (SR_{t-k} and OR_{t-k}) are incorporated into VAR framework to ensure that $\varepsilon_{1,t}$ and $\varepsilon_{2,t}$ follow white noise process. This model is written as Equations (7) and (8).

$$SR_t = \alpha_0 + \sum_{k=1}^{p} \delta_k SR_{t-k} + \sum_{k=1}^{p} \lambda_k OR_{t-k} + \varepsilon_{1,t} \tag{7}$$

$$OR_t = \alpha_1 + \sum_{k=1}^{p} \theta_k SR_{t-k} + \sum_{k=1}^{p} \rho_k OR_{t-k} + \varepsilon_{2,t} \tag{8}$$

Conversely, if both prices are found to be cointegrated, lagged one of error correction term (ECT) is included into VAR framework to form the VECM. The model is written as Equations (9) and (10).

$$SR_t = \alpha_0 + \sum_{k=1}^{p} \delta_k SR_{t-k} + \sum_{k=1}^{p} \lambda_k OR_{t-k} + \tau_1 ECT_{t-1} + \varepsilon_{1,t} \tag{9}$$

$$OR_t = \alpha_1 + \sum_{k=1}^{p} \theta_k SR_{t-k} + \sum_{k=1}^{p} \rho_k OR_{t-k} + \tau_2 ECT_{t-1} + \varepsilon_{2,t} \tag{10}$$

Granger-Causality Analysis

The null hypothesis of causality test (Engle & Granger, 1987) is formed to state that set of interested coefficients ($\delta_k, \lambda_k, \theta_k$ and ρ_k) are insignificantly different from zero. This null hypothesis is rejected when Wald- F test statistic (Equation (11)) greater that critical value from F distribution ($F_{\alpha, (K_U - K_R), (n - k_U)}$), indicating that there is Granger causality between two markets.

$$F = \frac{[RSS_R - RSS_U]/[k_U - k_R]}{RSS_U/[n - k_U - 1]} \tag{11}$$

where

RSS_R is sum square of residuals for restricted model,

RSS_U is sum square of residuals for unrestricted model,

K_R is the number of independent variables in restricted model,

K_U is the number of independent variables in unrestricted model, and

n is the number of observations.

In addition, significance of the short-run adjustment towards the long-run equilibrium can be tested by using t-test through coefficients of τ_1 and τ_2 from Equations (9) and (10). The rejection of null hypothesis of these coefficients equal zero implies that steady state relationship exists between stock and crude oil prices in the long run.

4.6 Forecast Error Variance Decomposition

To analyze proportion of explanation in forecast error in one market by fluctuation in other market, variance decomposition is used to examine the effect of shock variance in both markets. Based on the VAR and VECM models, the h-step forecast errors are written as Equation (12).

$$y_{T+h} + y_{T+h|T} = \varepsilon_{T+h} + \phi_1\varepsilon_{T+h-1} + ... + \phi_{h-1}\varepsilon_{T+1}$$

(12)

Expressing this error in terms of the structural innovations $\varepsilon = (\varepsilon_{1t},...,\varepsilon_{Kt}) = B^{-1}A\varepsilon_t$ gives as Equation (13).

$$y_{T+h} + y_{T+h|T} = \psi_0\varepsilon_{T+h} + \psi_1\varepsilon_{T+h-1} + ... + \psi_{h-1}\varepsilon_{T+1}$$

(13)

Based on Equation (13), $\psi_j = \phi_j A^{-1}B$. If the ij th element of ψ_n is denoted by $\psi_{ij,n}$, the k th element of the forecast error vector becomes Equation (14).

$$y_{T+h} + y_{T+h|T} = \sum_{n=0}^{h-1} (\psi_{k1,n}\varepsilon_{1,T+h-n} + ... + \psi_{kK,n}\varepsilon_{K,T+h-n})$$

(14)

Given that the ε_{kt} s are contemporaneously and serially uncorrelated and constructed to have unit variance, its corresponding forecast error variance is given by Equation (15).

$$\sigma_k^2(h) = \sum_{n=0}^{h-1} (\psi_{k1,n} + ... + \psi_{kK,n}) = \sum_{j=1}^{K} (\psi_{kj,0}^2 + ... + \psi_{kj,h-1}^2)$$

(15)

The term $(\psi_{kj,0}^2 + ... + \psi_{kj,h-1}^2)$ is interpreted as the contribution of variable j to the h-step forecast error variance of variable k. This interpretation makes sense if the ε_{it} s are viewed as shocks in variable i. Then, the preceding terms is divided by $\sigma_k^2(h)$ in order to obtain the percentage contribution of variable j to the h-step forecast error variance of variable k gives. This can be done by using Equation (16).

$$\omega_{kj}(h) = (\psi_{kj,0}^2 + ... + \psi_{kj,h-1}^2)/\sigma_k^2(h)$$

(16)

EMPIRICAL RESULTS

The result of unit root test based on augmented Dickey-Fuller with two different auxiliary models is presented in Table 1. The result indicates that non-rejection on the null hypothesis of both stock and oil prices exhibit a unit root in the level form. Based on the form of first difference, this null hypothesis for both series is rejected at the 1 percent level. This suggests that both prices follow process of integrated order of one.

Table 1: Augmented Dickey-Fuller Unit Root Test

Panel A: September 3, 2013 – October 1, 2014				
	KLCI		Brent	
	Level	First Difference	Level	First Difference
Constant with Trend	-2.5305 (15)	-14.5880*** (15)	-1.0736 (15)	-19.9709*** (15)
Constant without Trend	-2.8544 (15)	-14.5030*** (15)	-0.4578 (15)	-19.9608*** (15)
Panel B: October 2, 2014 – November 28, 2014				
	KLCI		Brent	
	Level	First Difference	Level	First Difference
Constant with Trend	-2.1650 (9)	-5.7268*** (9)	-1.2459 (9)	-5.5284*** (9)
Constant without Trend	-1.7433 (9)	-5.8265*** (9)	0.5603 (9)	-5.4155*** (9)

Notes: Panel A denotes as the pre-announcement. Panel B denotes as the post-announcement. The optimal lag length is reported in the parentheses. *** denotes as the null hypothesis of unit root is rejected at 1%. The form of daily price in both markets is natural logarithmic form.

Table 2 reports the descriptive statistics of oil and stock prices, respectively. The table shows that there are significant differences between two sub-periods (Panels A and B). For example, mean of oil prices decreases from -0.0007 to -0.0069 after the announcement. The standard deviation for oil price increases from 0.0096 to 0.0184, suggesting that volatility of oil prices is rising. This indicates that the rationale of the subsidy cut announcement is made concurrent to the high volatility in the global oil prices.

Meanwhile, mean of the stock prices changes from 0.0003 to -0.0012. Hypothetically, investors are in expectation that increasing oil price will provide higher probability of gaining abnormal return in the oil market. Such attraction entails a switch of investment from stock market to oil market. Consequently, the stock market under-performs. As compared between the pre- and post-announcement periods, the standard deviation of stock prices is found to change slightly from 0.0061 to 0.0072. This result suggests that there is little impact of announcement on volatility in stock market. Furthermore, correlation coefficient of 0.4566 between oil and stock prices during the period of post-announcement is significantly stronger as compared to correlation of -0.0645 during the period of pre-announcement. This suggests that investors' sensitivity towards information on oil price volatility is elevated by the government announcement pertaining to the subsidy cut and accordingly, steer investors to be more conscious to information on oil prices when making investment decision.

Table 2: Descriptive Statistics for Daily Stock and Crude Oil Price Changes

	Panel A: September 3, 2013- October 1, 2014		Panel B: October2, 2014- November 28, 2014	
	Brent	KLCI	Brent	KLCI
Mean	-0.0007	0.0003	-0.0069	-0.0012
Standard deviation	0.0096	0.0061	0.0184	0.0072
Correlation coefficient	-0.0645		0.4566	
Observations	279		41	

Notes: Panel A denotes as the pre-announcement. Panel B denotes as the post-announcement. Brent denotes as a daily Brent crude oil prices. KLCI denotes as a daily KLCI prices. *** denotes as rejection of the null hypothesis of normal distribution at the 1%.

Since both daily prices exhibit same integrated order of one, Table 3 presents Johansen-Juselius test in examining the number of cointegrating vectors of both series. For Panel A, trace test statistic of 14.7552 shows that the null hypothesis of no cointegating vector is not rejected at the 5 percent because its value less than critical value of 15.4947. Subsequently, higher maximum eigenvalue of 14.3436 than critical value of 14.246 provides rejection of the null hypothesis at the 5 percent.

Next, the null hypothesis of one cointegrating vector is not rejected due to maximum eigenvalue of 0.4116 lesser than critical value of 3.8415. Since both test statistics provide different number of cointegrating vectors, this study concludes that both series exhibit one cointegrating vector. This suggests that both prices exhibit the long-run equilibrium in the period of pre-announcement.

In Panel B, both trace and maximum eigenvalue test statistics of 10.3916 and 9.437, respectively failed to reject the null hypothesis of no cointegrating vector. This suggests that both prices are not cointegrated even they have comovement in the period of post-announcement.

Table 3: Johansen-Juselius Cointegration Test

Panel A: September 3, 2013 – October 1, 2014				
	Test statistic		Critical value (5%)	
	Trace	Max-Eigen	Trace	Max-Eigen
$r = 0$	14.7552	14.3436	15.4947	14.2646
$r \leq 1$	0.4116	0.4116	3.8415	3.8415
Panel B: October2, 2014 – November 28, 2014				
	Test statistic		Critical value (5%)	
	Trace	Max-Eigen	Trace	Max-Eigen
$r = 0$	10.3916	9.437	15.4947	14.2646
$r \leq 1$	0.9546	0.9546	3.8415	3.8415

Notes: Panel A denotes as the pre-announcement. Panel B denotes as the post-announcement. r= the number of cointegating vectors. For Panel A, cointegration test is implemented with the optimal lag length of 2.

Table 4 reports the VAR estimation across KLCI and Brent crude oil markets. Since both daily stock and crude oil prices are found to be cointegrated in Panel A, the VAR framework is extended to become VECM framework. The result indicates that coefficient of -0.0353 for lagged one of error correction term in the KLCI prices equation is significant at the 1 percent, indicating that crude oil prices adjust significantly in eliminating disequilibrium in the short run in order to have the long-run relationship with stock prices. This finding suggests that crude oil prices adjust

by 3.53 percent per day toward the equilibrium level. This adjustment further requires approximately 1 month for crude oil prices to have the long-run relationship with stock prices. However, there is no Granger causality exists during in the same sub-period.

In Panel B, estimated result based on VAR framework shows that coefficient of 0.1841 for Brent crude oil prices to the KLCI prices equation is significant at the 1 percent level. This indicates that crude oil prices Granger cause stock oil prices. In the Brent crude oil prices equation, no Granger causality is found from stock to crude oil prices. As compared to the result of Granger causality in Panel A, the announcement leads to causal direction is turned to be unidirectional which from crude oil market to KLCI market.

Table 4: Vector Autoregressive Estimations

	Panel A: September 3, 2013 – October 1, 2014		Panel B: October2, 2014 – November 28, 2014	
	Brent	KLCI	Brent	KLCI
ECT (-1)	-0.0036 (0.0157)	-0.0353*** (0.0099)	-	-
Brent(-1)	-0.1871*** (0.0599)	0.0023 (0.0378)	0.1005 (0.1677)	0.1841*** (0.059)
KLCI(-1)	-0.0311 (0.0929)	0.129** (0.0586)	0.1941 (0.4392)	-0.0037 (0.1544)
Constant	-0.0008 (0.0006)	0.0002 (0.0004)	-0.0061 (0.0032)	-4.78E-05* (0.0011)
F-statistics	3.2599**	6.1373***	4.8737**	0.2806
Adjusted R-squared	2.39%	5.27%	16.5728%	-3.8304%

Note: Panel A denotes as the pre-announcement. Panel B denotes as the post-announcement. In Panels A and B, the variables are Brent crude oil and KLCI prices. (-1) denotes as the lagged one of a series. All standard error of estimators are reported in the parentheses. *** denotes as significance level at the 1%. ** denotes as significance level at the 5%.* denotes as significance level at the 10%.

Variance decomposition is used to identify the main channels of information flow between the two markets. Table 5 presents the variance decompositions of the 2-day, 4-day, 6-day, 8-day and 10-day ahead forecasted error for each variable based on the VAR framework. As result, it is found that the error variance of the market explains the innovation with large percentage of proportion. However, result of the pre-announcement indicates that there is less than 1 percent for proportion of forecast error variance explained by other markets across different horizons. This suggests that dynamic interaction between stock and oil markets is limited during the pre-announcement period.

During the post-announcement, percentage for proportion of forecast error variance in stock market explained by innovations in oil market increases rapidly with 21-22 percent. Meanwhile, explanatory power of forecast error variance in stock market on oil market increases from 0.0366 percent to 0.7581 percent in the 4-day onwards, but the percentage is still remain low. From the result, it is suggested that oil market dominants the role of information flow because it is able to explain a large proportion of forecast error variance of stock market. This finding is found as consistent with the result of Granger causality as reported in Table 4.

Table 5: Variance Decomposition

Market explained	Horizon (in days)	By innovations in	
		Brent	KLCI
Panel A: September 3, 2013-October 1, 2014			
Brent	2	99.9633	0.0366
	4	99.9632	0.0367
	6	99.9632	0.0367
	8	99.9632	0.0367
	10	99.9632	0.0367
KLCI	2	0.4112	99.5887
	4	0.4117	99.5882
	6	0.4117	99.5882
	8	0.4117	99.5882
	10	0.4117	99.5882
Panel B: October 2, 2014-November 28, 2014			
Brent	2	99.2491	0.75091
	4	99.2420	0.75805
	6	99.2419	0.75809
	8	99.2419	0.75809
	10	99.2419	0.75809
KLCI	2	21.4721	78.528
	4	21.6394	78.3606
	6	21.6405	78.3596
	8	21.6405	78.3595
	10	21.6405	78.3595

Notes: Panel A denotes as the pre-announcement. Panel B denotes as the post-announcement. All figures are denoted as the percentage for the forecast error variance (2-day, 4-day, 6-day, 8-day and 10-day) for each market is explained by innovations from two markets.

CONCLUSION

The announcement on subsidy cut for RON95 fuel price in Malaysia has distinct implication to investors. Hence, this study attempts to examine on information spillover between the Brent crude oil and Malaysian stock markets across the pre- and post-announcement periods. The result of correlation between crude oil and stock price changes indicates that the linkage between both markets is stronger during the post-announcement period. This dramatic change in correlation after the announcement further contributes to changes in direction of information transmission between both examined markets.

Based on VAR model that consists of crude oil and stock prices changes as endogenous factors, empirical result shows that crude oil market requires approximately 1 month to eliminate disequilibrium in order to achieve the long-run relationship with stock market in the pre-announcement period. However, during the post-announcement period, this short-run adjustment is disappeared, but dynamic causality happened from oil market to stock market. This finding further supports that the shock from crude oil market provides large percentage in explaining the shock in stock market.

As overall, empirical result concludes that crude oil market dominates the role of information spillover instead of stock market during the post-announcement period. In light of this finding, investors can use information from the Brent crude oil market as the benchmark of government intervention on fuel price for hedging purposes in Malaysian stock market. From investors' behavioral perspective, they are able to tradeoff between oil and stock markets in order to maximize their wealth.

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THE INFLUENCE OF INFORMAL GOVERNANCE ON THE RELATIONSHIP BETWEEN CORPORATE DIVERSIFICATION AND FIRM VALUE: THE MALAYSIAN EVIDENCE

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ABSTRACT

The aim of this study is to examine the influential effects of some informal governance characteristics on the value of diversification among Malaysian listed firms. Based on the sample of the entire 845 listed firms in Bursa Malaysia over 2001- 2012, our results show that diversification reduces firm value where diversified firms have lower Tobin's q than non-diversified firms. The informal governance variables such as business group affiliation particularly the larger groups and government's substantial ownership are able to mitigate the discounted value of diversification. Our results also show that if a diversified firm with high ownership concentration and foreign-controlled ownership, the diversification discount become larger. The political-connected board only will exert influence on the value of diversification when board is less active, but when firms diversify in more business segments, political board induces higher diversification discount when there are less independent directors, more active board, and less institutional shareholders monitoring.

Keywords: firm value, diversification, informal governance, Malaysia

INTRODUCTION

The relationship between diversification and firm value continues to be heavily studied amid the conflicting empirical evidence and theoretical disagreement documented in the extant empirical finance and strategic management literature. One thrust that could possibly reconcile the disagreement may lies in the issues of corporate governance structure. These investigative efforts were instigated by the widely-believed argument that private benefits of managers or controlling shareholders are the main motivation behind the firms' diversification strategy. Essentially, agency theory has been the central theoretical explanations offered for the value impacts of diversification; more specifically to provide some acute explanations for the discount value of diversification found in many prior studies (eg., Mock et al., 1988; Servaes, 1996; Denis et al., 1997; Lins and Servaes, 1999, 2002; Fauver et al., 2003; Stein, 2003; Delios et al., 2008; Chen and Yu, 2011).

In East Asian countries, issues of corporate governance only began to receive great attention after the Asian Financial Crisis in 1997, where in the subsequence years a series of codes of corporate governance were designed generally adopted from their Western counterparts to guide firms to the "best practice" of corporate governance. Nonetheless, concerns were raised of how effective these Western corporate governance standards can be applied to a different institutional setting and cultural norms of East Asian countries. Literally, the perceived norms of "best practices" of corporate governance in East Asian countries may not necessarily be the same standard as their Western counterparts. Furthermore, the formal institutional environment in many East Asian countries is generally considered to be weak and inefficient, and this has often led to

the emergence of variouse forms of informal institutions at the firm level such as the formation of diversified business group comprising of a number of firms. This phenomenon exists for firms to work around the weak and inefficient formal market-supporting institutions in these countries (George and Kabir, 2012). Thus, can diversification simply a legitimate response to the "institutional voids" exist in the emerging markets as claimed by Khanna and Palepu (2000)? If this argument holds, what are the informal institutions formed at the firm level that motivate firms to undertake diversification strategy and in turn bring significant effect to the firm value?

Though the informal institutional structure is not corporate governance mechanism per se, many studies have suggested that the informal institutional structure in the emerging markets have strong bearing on the corporate governance (CG) standard and practices among firms. North (1990) contends that most emerging economies depend more on the informal rules than the formal rules in shaping their local corporate culture, and economic development at large. Steier (2009) argues that family-controlled ownership is the major form of governance coupled with business group affiliation in many emerging economies. This implies that under the weak external market structure, legal and judicial systems, family connection is highly essential in shaping firm's governance.

Malaysia offers a unique environment for examining the relationship between diversification and firm value for numerous reasons. First, the high degree of diversification among Malaysian firms would act as a good platform for further exploration of this topic. Second, Malaysia provides an interesting institutional setting to examine the value of corporate diversification with its small and open economy, and the capital markets are not as developed as those in the developed countries. Third, the common creation of informal institutions at the firm level might provide us different insights into the literature of this research area.

In a World Bank assessment report (World Bank, 2005), over 60% of the outstanding shares are owned by the top five largest shareholders in five out of ten largest publicly listed firms in Malaysia. In addition, Fazilah et al. (2002) reveals that the largest shareholder of a typical publicly listed firm in Malaysia (with the majority of them family shareholders) on average holds close to one-third of the firm's shares and the top five shareholders own around 60% of the firm's shares. Furthermore, like most East Asian countries, Malaysia is a marketplace where family business affiliated group is a common form of organizational structure. Claessens et al. (2006) state that 56% of publicly listed firms in Malaysia are group affiliated. In addition, Gomez (2006) reveals that 70% of the largest business groups in Malaysia are family-controlled, while the other 30% are state-controlled. According to another study by Chang (2006), business groups in Malaysia accounted for 25% of the total market capitalization value in the Bursa Malaysia. It is in fact the interlocking directorships and pyramiding contributed to the growth of business affiliated group structure in Malaysia.

Moreover, political patronage is another important and unique specification contributing to the Malaysia's current institutional environment and in turn the corporate governance norms and practices among the Malaysian firms. One most significant form of political patronage was created through the implementation of National Economic Policy (NEP) of 1971; an affirmative action aims to redistribute the national wealth and reduce the income and asset ownership disparity across ethnic lines in Malaysia. Through the NEP policy, many politically-linked conglomerates have emerged in Malaysia, and political economic factors were considered as the main driving force of the conglomerates waves in the 1980s (Gomez and Jomo, 1997). One such significant evidence of political patronage or connection is the regular appointments of politicians or top government officials to sit in the board of directors or to a greater extent appointed as chairman of the board. This type of appointment is deliberately made to enable the firms to gain access to key information not available to the competitors, to receive favourable tax rate, special

protection of market, subsidies, special loan, and government contracts (Faccio, 2006). However, these firms are generally perceived to have poorer governance and higher agency problems (Gomez and Jomo, 1997; Johnson and Mitton, 2003).

Unlike many prior studies where the value impact of diversification is examined either through the theoretical lens of some formal corporate governance variables (Hoechle et al., 2012) or solely focused on business group to explain the informal institutional effects (Khanna and Palepu, 2000; Lins and Servaes, 2002; George and Kabir, 2012), this study further explores the influential roles of a few more significant informal corporate governance variables that are considered as important in the Malaysia's institutional settings. Like many other emerging markets, the institutional voids are discernible in Malaysia. The informal institutional setting that has shaped the corporate structure among Malaysian publicly listed firms can be generally characterized by; high ownership concentration, family business group affiliation, and political inclined business environment.

The contributions of this research are threefold. First, the paper argues that the informal governance institutions at the firm level play important moderating roles on the diversification-firm value relationship in Malaysia as one of the emerging countries. This study goes beyond the solely used business group that is associated with informal institutional perspective in prior studies. Second, the empirical findings will add to the literature of this research area particularly from the perspective of the emerging markets. Third, this paper uses multi-theoretic approach (agency, resource, and institutional theories) in examining the value impacts of diversification which differs from many prior studies that only based on a particular unitary theory.

The rest of this paper is organized in the following manner: Section 2 briefly reviews the relevant literature. Section 3 describes the sample data collection procedures and methodology. Section 4 reports the empirical findings of this study and discusses the significance of the results. Section 5 concludes the paper.

LITERATURE REVIEW

2.1 How can diversification premium/discount be explained?

Firms' diversification undertakings are expected to generate additional benefits and costs, whereby firm valuation is ultimately depends on how these firms achieve a balance between the benefits and costs obtained. There has been considerable academic effort during the last four decades to search for the potential beneficial factors that encourage firms to diversify, in which the diversification strategies can lead to long term competitive advantage for the firms. At the firm level, various theoretical arguments have been put forward to advocate the benefits of diversification through; the creation of coinsurance effect (Lewellen, 1971; Shleifer and Vishny, 1992), economies of scale and scope (Chandler, 1977; Teece, 1980), market power (Scott, 1982; Tirole, 1995; Villalonga, 2000), and internal capital markets (Williamson, 1970; Stulz, 1990; Gertner et al., 1994: Stein, 1997). These benefits have long been proposed as value enhancement to a diversified firm.

On the contrary, the benefits of corporate diversification can be overshadowed by the additional costs of managing the complexity of a larger and diversified firm associated with coordination, information asymmetry, and incentive misalignment between various stakeholders (Chen and Yu, 2011). One such important cost is the misallocation of capital in which the allocations of funds could be misappropriated for deserving business segments or divisions. Another cost of complexity may come from the misalignment of interests between shareholders

and managers, or between controlling shareholders and minority shareholders. Managers (or controlling shareholders) may choose to engage in diversification strategies for their own private benefits. Both of these costs of diversification are considered to be inherited in the agency problems.

Apart from the resource-based and agency-based perspectives, the institutional-based view can offer to further analyze the value of diversification particularly in the context of emerging markets such as Malaysia. The informal institutions can play an important role in setting "rules of the game" in business (North, 1990) and also incidentally encourage firms to diversify their businesses to fill in the institutional void by extracting the benefits from diversification in the emerging markets (Khanna and Palepu, 2000). Thus, the value impacts of diversification may also change under the different business environment.

2.2 The institutional perspective: Relationship between corporate governance, diversification, and firm value

Formal institutions are referring to government-related bodies including courts, legislatures, and bureaucracies that set rules and regulations on various economic and political facets (Helmke and Levitsky, 2004). On the other hand, informal institutions are actual but unofficial and unwritten rules that are being enforced on the parties concerned (North, 1990). There are two opposing arguments; informal institutions can either serve to compensate for the weaknesses of the formal institutions or deteriorate the existing formal institutions. Informal institutions also act as an important corporate governance mechanism (North, 1990; Helmke and Levitsky, 2004; Estrin and Preveser, 2011). The insights of the role of informal institutions are of particularly important in emerging markets where the formal corporate governance institutions such as minority shareholders' right protection and ownership rights are still weak and not well enforced, in which it is often termed as "institutional void" (Khanna and Palepu, 2000). Some firms with certain specific characteristics may be able to close this institutional void. Diversified business group are particularly in the better position to fill up these institutional voids because of their bigger capability to raise funds and transfer resources ranging from technical know-how to talented managers among group member firms. However, institutional voids may lead to greater agency problems.

Essentially, the ownership structure and institutional context are the main determinants of corporate governance structure of East Asia economies (North, 1990; La Porta et al., 1998; 2000; Claessens and Fans, 2003; Wright et al., 2005; Morck et al., 2005; Young et al., 2008; Peng and Jiang, 2010). North (1990) and Wright et al. (2005) reveal that the institutional context of emerging economies makes the enforcement of governance mechanisms according to the conventional agency theory costly and problematic. Thus, the current two widely-accepted corporate governance systems better known as; Anglo-American system (practice in the US) and Continental European system (practice in the Europe and Asia Pacific) are neither can be fully applicable to East Asia firms. The formation of informal institutions such as business group affiliation, family connections, and government relationship has become ever more important for understanding corporate governance practices in East Asian firms.

Given the different institutional contexts (or different corporate governance structure) between emerging countries and Western counterparts, it is argued that the costs and benefits of diversification in East Asia economies may not necessarily of the same magnitude relative to the

Western economies. For example, Lins and Servaes (2002) reveal that the discounted value of diversification in several East Asian countries is attributed to the business group affiliation and certain ownership structure. On the contrary, Khanna and Palepu (2000) find premium value of diversification in India due to business group affiliation, and George and Kabir (2012) also find premium value of diversification particularly for large business group affiliated firms.

Khanna and Palepu (1999) opine that diversification can add value to the firms in emerging markets because of higher market imperfections. This argument is further supported by Stein (1997), who shows that diversification should bring benefits to firms if greater information asymmetries exist. However, the higher market imperfections can increase the likelihood of agency problems associated with diversification as well. With greater information gap, managers and controlling shareholders alike can easily expropriate the firms' resources for their own private benefits. Especially, given that corporate governance is relatively weak in many of the emerging countries including Malaysia, it is easier for firms engage in detrimental empire building (Jensen, 1986; Stulz, 1990). Heugens et al. (2009) concur with the argument that higher ownership concentration can become an efficient corporate governance mechanism amid weak institutions.

Numerous studies have examined the relationship between diversification and firm value utilized agency theory as the theoretical lens. However, agency theory may only presents a partial view of the relationship between diversification and firm value. Alternatively, a multi-theoretic approach should be used; integrating agency theory, resource-based theory, and institutional theory in studying this linkage. Essentially, the multi-theoretic approach by combining these three theories would yield a richer and more in-depth understanding of the influence of corporate governance on the relationship between diversification and firm value. More specifically, by incorporating the institutional theory, the study has the potential to fill the research gap by introducing the social aspect such as socio-cultural norms, values and beliefs in influencing the organizational structure and firm behaviour.

SAMPLE DATA AND METHODS

3.1 The Baseline Model: The Impact of Diversification on Firm Value

To estimate the value impact of diversification, Model 1 is formed to regress Tobin's Q value which used as a proxy for firm value against the estimated coefficient of industrial diversification dummy and a range of control variables serving as a baseline model as shown below.

Tobin's Q = f (Growth, Size, Intangible Asset, Dividend, Leverage, Industrial Diversification)

To estimates the above model empirically, the sample firms are pooled together to estimate the following regression Model (1):

$$\text{Tobin's Q}_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6 D^{\text{Diversification}}_{,it} + \varepsilon_{it}$$

$$(1)$$

where:
For each firm (i) and each year (t),
Tobin's Q_{it} = Ratio of market value of assets and replacement value of assets.

$D^{Diversification}_{it}$	=	Industrial diversification dummy is equal 1 for multi-industrial firm and equal to 0 for focused firm.
AG_{it}	=	Percentage change in total assets to represent growth.
LTA_{it}	=	Log of total asset used to represent the firm size.
IA_{it}	=	Ratio of Intangible assets to total assets.
DIV_{it}	=	Dividend dummy that equal to 1 if firm declares a cash dividend.
LEV_{it}	=	Ratio of debt to common share equity proxies for firm leverage status.

Following Model (1), the diversification dummy as a measure for industrial diversification is replaced by the alternative measures for industrial diversification level, namely, number of segments based on two-digit SIC-codes ($N^{Diversification}_{it}$) and Herfindahl index constructed from sales ($Herfindahl_{it}$) to form Model (2) and (3), respectively.

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ N^{Diversification}_{it} + \varepsilon_{it}$$
(2)

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ Herfindahl_{it} + \varepsilon_{it}$$
(3)

3.2 Moderating Role of Informal Governance Variables on the Value of Diversification

The informal institutional setting that has shaped the corporate structure among Malaysian publicly listed firms can be generally characterized by; high ownership concentration (Fazilah et al., 2002), family business group affiliation (Claessens et al., 2006; Chang, 2006; Gomez, 2006), and political inclined business environment (Gomez and Jomo, 1997; Johnson and Mitton, 2003; Faccio, 2006).

In Model 4, ultimate ownership ($Control_{it}$) is added to the baseline regression Model 1. In addition, an interactive term between industrial diversification and Control, $D^{Diversification}_{it}*Control_{it}$ is included. The significance of the coefficient of the interaction effect implies whether the ownership concentration level influence the value of industrial diversification.

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6 D^{Diversification}_{it} + \beta_7 Control_{it} +$$

$$\beta_8 D^{Diversification}_{,it}(Control_{it}) + \varepsilon_{it} \qquad (4)$$

where (in addition to Model 1):

$Control_{it}$ = Control rights of the ultimate owner of the largest shareholder comprise of direct and indirect shareholdings proxies for ownership concentration.

Model (5) extend Model 1 by adding $D_{Foreign}$ and $D_{Government}$ and their interactive terms with the industrial diversification dummy as shown in the following:

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ D^{Diversification}_{it} + \beta_7 D^{For}_{it} +$$
$$\beta_8 D^{Gov}_{it} + \beta_9\ D^{Diversification}_{,it}(D^{For}_{it}) + \beta_{10}(D^{Diversification}_{it})(D^{Gov}_{it}) + \varepsilon it$$

(5)
where:

$D^{Fam}_{,it}$ = $D^{For}_{,it}$ = 0 and D^{Gov}_{it} = 0 if the largest shareholder is a family member (set as a benchmark).

$D^{For}_{,it}$ = Dummy = 1 if the largest shareholder is a foreigner; 0 otherwise.
D^{Gov}_{it} = Dummy = 1 if the largest shareholder is a government; 0 otherwise.

In Model 6, business group membership ($Bgroup_{it}$) is added to Model 1. In addition, interactive terms between industrial diversification and business group membership, $D^{Diversification}_{it}*Bgroup_{it}$ is included. The significance of the coefficient of the interaction effect indicate whether business group affiliated firms can create higher value from industrial diversification.

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ D^{Diversification}_{,it} + \beta_7 Bgroup_{it} +$$

$$\beta_8(D^{Diversification}_{,it})(Bgroup_{it}) + \varepsilon_{it} \qquad\qquad (6)$$

where:

$Bgroup_{it}$ = Dummy = 1 if firm is not a business group; 0 otherwise.

In Model 7, size of business group (N^{BGroup}_{it}) is added to Model 1. Interactive terms between industrial diversification and size of business group, $D^{Diversification}_{,it}* N^{BGroup}_{it}$ is included. The significance of the coefficient of the interaction effect indicate whether business group affiliated firms can create higher value from industrial diversification.

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ D^{Diversification}_{,it} + \beta_7 N^{BGroup}_{it} +$$

$$\beta_8(D^{Diversification}_{,it})(N^{BGroup}_{it}) + \varepsilon_{it} \qquad\qquad (7)$$

where:

N^{BGroup}_{it} = Number of member firms in a group.

In Model 8 and Model 9, political-connected directors (P^{PBoard}) and political-connected Chairman dummy (Pchair) are added to Model 4, respectively. The two interaction variables, $D^{Diversification}_{,it}*P^{PBoard}_{,it}$ and $D^{Diversification}_{,it}*Pchair_{,it}$ are generated. The significance of the coefficient of the interaction effects indicates whether the major board characteristics can influence the value of industrial diversification.

$$Tobin's\ Q_{\ it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ D^{Diversification}_{,it} + \beta_7\ P^{PBoard}_{,it} +$$
$$\beta_8(D^{Diversification}_{,it})(P^{PBoard}_{,it}) + \varepsilon_{it} \qquad\qquad (8)$$

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 LTA_{it} + \beta_3 IA_{it} + \beta_4 DIV_{it} + \beta_5 LEV_{it} + \beta_6\ D^{Diversification}_{,it} + \beta_7\ Pchair_{it} +$$
$$\beta_8(D^{Diversification}_{,it})(Pchair_{it}) + \varepsilon_{it} \qquad\qquad (9)$$

where,

$P^{PBoard}_{,it}$ = ratio of politically connected directors to the total number of directors on the board of a firm.

$Pchair_{it}$ = Dummy = 1 if Chairman is political connected; 0 otherwise.

3.3 Data and sample selection

Our main data source is the Datastream/Worldscope and company annual reports. Our initial sample covers the entire 845 publicly listed firms in the Malaysian stock exchange (Main Board of Bursa Malaysia). We use Datastream/Worldscope database to collect panel set of annual company financial data from 2001 to 2012. The sample period of this study from 2001 is selected because it was the first year of the implementation of mandatory disclosure of the extent of compliance (or noncompliance) with the Malaysian Code on Corporate Governance (MCCG) adopted in 2000. This is also to ensure the availability of the governance data in the annual reports and to ensure uniformity of corporate governance practices of all Malaysian listed firms. In order to be consistent with the previous established studies (eg., Berger and Ofek, 1995; Lins and

Servaes, 1999; Fauver et al., 2003, 2004), firms in the financial services industry are excluded from our sample because of their irregular sales reporting. Also, any firms that have missing data and cannot be traced in any way throughout the twelve-year period will be removed from the initial sample. We follow Fauver et al. (2004) to use two-digit SIC codes to classify industrial segments from Datastream/Worldscope database. According to Companies Act 1965, all firms must disclose their sale turnover and before-tax profit for each class of business segment. In addition, Accounting Standard (IAS 14) requires all publicly listed firms to disclose information regarding to their industrial and geographical segments which their consolidated sales, assets or net profit have more than ten percent.

Ownership characteristics, business group (including group size), and political-connected board directors and chairman data are all manually hand-collected from the company annual reports for the year 2001-2012. The ownership data of the ultimate owner is obtained from the list of substantial shareholder in the annual reports of the sample firms. In this process, the largest shareholder of the firm is selected as the ultimate owner. In the case of public listed firm is the immediate largest shareholder of a firm, that particular listed firm is traced from the annual reports in order to identify the ultimate owner. In another case of firms where the privately-held firms are their largest shareholder, the notes that disclosed under the list of substantial shareholders will be used to identify the ultimate owner. However, in some cases, the ownership of the ultimate owner on the privately-held firms is not disclosed, these firms will still be included in the sample as long as the identity of the ultimate owner (assuming is the largest shareholder) is disclosed. In the process to identify the ultimate owner, control rights of the ultimate owner can be obtained for these firms based on the assumption made. Once the ultimate owners are identified, we will classify them as either family, government, or foreign-controlled. However, without the complete ownership information, there is a limitation in computing the cash flow rights of the ultimate owner for some of the firms. Only when there is a lack of information to trace the ultimate owner, then the respective firm is excluded from this study.

The data of business group affiliated firms are first traced based on the ultimate ownership data collected to identify firms that are sharing the same ultimate owners. Secondly, we use the annual reports under the sections "Corporate Structure" and "Director's Profile" to manually find the identity of the largest shareholders and then match firms with the same largest shareholders. This process will enable us to link one firm to other affiliated firms that we group them as business group affiliated firms. The size of the business group will be based on the number of firms in the group. For political-connected directors and chairman data, we manually identify them based on the definition of political connection, that is, a director (and chairman) who is a current or former politician or government top official (Assistant Director General and above) provided in the company annual report under the section "Director's Profile".

Table 1 Descriptive Statistics

Variable	Mean	Median	STDev	Min	Max	N	(1) Diversified Firm Mean	N	(2) Non-Diversified Mean	N	(3) Difference between (1) and (2)
Dependant Variable											
Tobin's Q	1.055	0.902	0.717	0.208	13.075	8782	0.999	6207	1.193	2575	-0.194***
Control Variables											
Growth	0.082	0.037	0.377	-0.973	9.003	8713	0.085	6166	0.076	2547	0.009
Size	12.887	12.648	1.491	5.694	20.017	9059	13.085	6407	12.407	2652	0.679***
Leverage	0.240	0.200	0.280	0.000	6.721	9048	0.252	6399	0.211	2649	0.041***
Intangible	0.040	0.003	0.097	0.000	0.991	8987	0.039	6364	0.042	2623	-0.002
Dividend	0.589	1.000	0.492	0.000	1.000	8750	0.574	6208	0.626	2542	-0.053***
Main Variables of Interest											
$D^{Diversification}$	0.708	1.000	0.455	0.000	1.000	9132	1.000	6463	0.000	2669	Nil
$N^{Diversification}$	2.675	2.000	1.553	1.000	9.000	9132	3.367	6463	1.000	2669	2.367***
Herfindahl	0.245	0.186	0.240	0.000	0.807	9132	0.346	6463	0.000	2669	0.346***
BGroup	0.289	0.000	0.454	0.000	1.000	6821	0.322	4799	0.212	2022	0.110***
N^{BGroup}	0.758	0.000	1.734	0.000	10.000	6821	0.832	4799	0.583	2022	0.249***
PBoard	0.262	0.000	0.440	0.000	1.000	5079	0.285	3621	0.205	1458	0.080
P^{PBoard}	0.591	1.000	0.492	0.000	1.000	4273	0.596	3093	0.580	1180	0.016***
PChair	0.131	0.111	0.142	0.000	0.833	4273	0.136	3093	0.118	1180	0.018***
Control	0.358	0.000	0.480	0.000	1.000	4982	0.350	3610	0.382	1372	-0.032**
$P^{Control}$	0.419	0.426	0.181	0.000	0.984	4982	0.417	3610	0.424	1372	-0.007
D^{Gov}	0.110	0.000	0.313	0.000	1.000	4988	0.124	3616	0.074	1372	0.050***
D^{For}	0.105	0.000	0.307	0.000	1.000	4988	0.068	3616	0.203	1372	-0.134***

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White *robust standard errors; which handles cross-section clustering and heteroskedasticity.*

RESULTS AND DISCUSSION

4.1 Preliminary evidence for the effect of diversification on firm value

Table 1 provides summary statistics for the firms in our sample that was divided into diversified firms and non-diversified firms. The results show that Tobin's q for diversified firms and non-diversified firms is 0.999 and 1.193, respectively. The two sample t-statistic for the difference in sample means is -0.194 significant at 1%. This indicates that on average non-diversified firms has higher value than the diversified firms. Table 3 also shows that diversified firms differ significantly from non-diversified firms in almost all other variables.

Table 2 reports the estimates of our baseline model. We pooled the firm data across years to conduct OLS regression on equation (1) with different within-cluster corrections to ensure valid statistical inferences. As suggested by Petersen (2009), we compare the White-adjusted standard error, standard errors clustered by firm, clustered by time and clustered by both dimensions. As we have three different measures for firm's industrial diversification; a binary variable $D^{Diversification}$, and two proxies for the degree of diversification: an ordinal variable $N^{Diversification}$, and a numerical variable, Herfindahl index, we report a total of 12 columns of estimates grouped by the three different diversification measures. We can see that all the different standard errors do not differ by two to four times, a rule of thumb prescribed by Petersen (2009), so we shall proceed to use the White clustered standard errors for the subsequent estimates.

The results in Table 2 show that there is a strong statistical evidence of diversification discount regardless of the types of measures for diversification. Although the magnitudes of the three different diversification measures are differing, the significant levels are quite consistent across the four different types of robust standard errors. The estimates sign of all the control variables reported in Table 4 are highly consistent and they are in correct sign according to the literature; i.e. firm size and book-to-market value are positively associated with firm performance while leverage and firm age are negatively associated with firm performance.

4.2 Further estimates for the effect of diversification on firm value with informal governance variables

Table 3 reports the estimates of the baseline model adding the informal governance characteristics including business group, political connected director, political connected board chairman, ultimate control of the owners, and types of owners. Consistent with Table 1 and 2, on average diversified firms have lower Tobin's q than non-diversified firms. With regard to the moderating effect of informal governance variables, the result implies that diversified firms with business group affiliation significantly improve the firm value as the interaction term in column (1) is showing positive significant at 1%. However, both political connected director and chairman do not seem to have any effect on diversification discount. In column (4), the significant of the negative interaction term implies the firms with controlling owner (more than 50% controlling shares) will also have higher diversification discount. On the identity of the controlling owners, the results in column (5) indicate that relative to family firms, government firms has less diversification discount while foreign firms has larger diversification discount.

We repeat the estimates by replacing the diversification dummy $D^{Diversification}$ with the ordinal proxy $N^{Diversification}$ and numerical proxy Herfindahl and report the result in Table 6 and Table 7, respectively. A highly consistent set of results is observed.

Table 2 Baseline Model

	Diversification Dummy ($D^{Diversification}$)				Diversification with Number ($N^{Diversification}$)				Diversification with Herfindahl			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
_cons	0.9506***	0.9506***	0.9506***	0.9506***	0.7608***	0.7608***	0.7608***	0.7608***	0.8265***	0.8265***	0.8265***	0.8265***
	(0.0700)	(0.1601)	(0.1420)	(0.2022)	(0.0750)	(0.1606)	(0.1551)	(0.2103)	(0.0717)	(0.1487)	(0.1466)	(0.1961)
assetg	0.0668***	0.0668**	0.0668**	0.0668**	0.0622***	0.0622*	0.0622**	0.0622*	0.0627***	0.0627*	0.0627**	0.0627*
	(0.0224)	(0.0299)	(0.0277)	(0.0340)	(0.0219)	(0.0298)	(0.0274)	(0.0341)	(0.0221)	(0.0307)	(0.0276)	(0.0349)
lnasset	-0.0012	-0.0012	-0.0012	-0.0012	0.0166**	0.0166	0.0166	0.0166	0.0047	0.0047	0.0047	0.0047
	(0.0064)	(0.0138)	(0.0122)	(0.0173)	(0.0070)	(0.0143)	(0.0139)	(0.0187)	(0.0065)	(0.0126)	(0.0123)	(0.0164)
Leverage	0.6606***	0.6606***	0.6606***	0.6606***	0.6658***	0.6658***	0.6658***	0.6658***	0.6667***	0.6667***	0.6667***	0.6667***
	(0.1137)	(0.1141)	(0.1490)	(0.1493)	(0.1148)	(0.1181)	(0.1506)	(0.1532)	(0.1143)	(0.1171)	(0.1500)	(0.1521)
intangiblea	0.5147***	0.5147***	0.5147*	0.5147*	0.4761***	0.4761***	0.4761	0.4761	0.5076***	0.5076***	0.5076*	0.5076*
	(0.1253)	(0.1323)	(0.3042)	(0.3072)	(0.1224)	(0.1352)	(0.2953)	(0.3008)	(0.1227)	(0.1342)	(0.2958)	(0.3007)
Dividend	0.1332***	0.1332***	0.1332***	0.1332***	0.1327***	0.1327***	0.1327***	0.1327***	0.1330***	0.1330***	0.1330***	0.1330***
	(0.0189)	(0.0256)	(0.0324)	(0.0367)	(0.0191)	(0.0257)	(0.0323)	(0.0366)	(0.0190)	(0.0261)	(0.0323)	(0.0369)
$D^{Diversification}$	-0.2134***	-0.2134***	-0.2134***	-0.2134***								
	(0.0217)	(0.0145)	(0.0505)	(0.0479)								
$N^{Diversification}$					-0.0707***	-0.0707***	-0.0707***	-0.0707***				
					(0.0055)	(0.0058)	(0.0131)	(0.0133)				
Herfindahl									-0.4282***	-0.4282***	-0.4282***	-0.4282***
									(0.0320)	(0.0259)	(0.0739)	(0.0715)
Firm Cluster	No	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Year Cluster	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year Dummies	No	No	No	No	No	No	No	No	No	No	No	No
N	8399	8399	8399	8399	8399	8399	8399	8399	8399	8399	8399	8399
r2_a	0.0797	0.0797	0.0797	0.0797	0.0819	0.0819	0.0819	0.0819	0.0812	0.0812	0.0812	0.0812

| r2 | 0.0804 | 0.0804 | 0.0804 | 0.0804 | 0.0825 | 0.0825 | 0.0825 | 0.0825 | 0.0819 | 0.0819 | 0.0819 | 0.0819 |

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

Table 3 Informal Governance Characteristics and Diversification Discount (Diversification Measured in Binary Variable)

	(1)	(2)	(3)	(4)	(5)
$D^{Diversification}$	-0.3095***	-0.1972***	-0.1848***	-0.0795***	-0.0914***
	(0.0318)	(0.0418)	(0.0271)	(0.0254)	(0.0189)
BGroup	-0.2248***				
	(0.0478)				
BGroup x $D^{Diversification}$	0.2601***				
	(0.0461)				
PBoard		0.0185			
		(0.0522)			
PBoard x $D^{Diversification}$		-0.0383			
		(0.0558)			
PChair			0.0703		
			(0.0516)		
PChair x $D^{Diversification}$			-0.0241		
			(0.0543)		
Control				0.4508***	
				(0.0672)	
Control x $D^{Diversification}$				-0.4438***	
				(0.0703)	
D^{Gov}					-0.0600
					(0.0533)
D^{Gov} x $D^{Diversification}$					0.1973***
					(0.0578)
D^{For}					0.9196***
					(0.1166)
D^{For} x $D^{Diversification}$					-0.6889***
					(0.1263)
Observation	6345	4178	4964	4837	4842
Adjusted R^2	0.0523	0.0415	0.038	0.0844	0.1397
R^2	0.0535	0.0434	0.0396	0.0859	0.1415

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

Table 4 Informal Governance Characteristics and Diversification Discount (Diversification Measured in Ordinal Variable)

	(1)	(2)	(3)	(4)	(5)
$D^{Diversification}$	-0.1063***	-0.0866***	-0.0683***	-0.0480***	-0.0443***
	(0.0087)	(0.0112)	(0.0076)	(0.0068)	(0.0051)
BGroup	-0.2190***				
	(0.0436)				
BGroup x $D^{Diversification}$	0.0678***				
	(0.0102)				
PBoard		-0.0227			
		(0.0482)			
PBoard x $D^{Diversification}$		0.0087			
		(0.0132)			
PChair			0.0401		
			(0.0471)		
PChair x $D^{Diversification}$			0.0049		
			(0.0133)		
Control				0.4077***	
				(0.0596)	
Control x $D^{Diversification}$				-0.1062***	
				(0.0155)	
D^{Gov}					0.0517
					(0.0518)
D^{Gov} x $D^{Diversification}$					0.0119
					(0.0140)
D^{For}					1.1494***
					(0.1341)
D^{For} x $D^{Diversification}$					-0.2859***
					(0.0369)
Observation	6345	4178	4964	4837	4842
Adjusted R^2	0.0539	0.0494	0.0419	0.0859	0.1502
R^2	0.0551	0.0512	0.0434	0.0875	0.152

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

Table 5 Informal Governance Characteristics and Diversification Discount (Diversification Measured in Hefindahl Index)

		(1)	(2)	(3)	(4)	(5)
$N^{Diversification}$		-0.5529***	-0.3241***	-0.3742***	-0.2646***	-0.3095***
		(0.0481)	(0.0585)	(0.0414)	(0.0383)	(0.0309)
BGroup		-0.1151***				
		(0.0335)				
BGroup $N^{Diversification}$	x	0.3074***				
		(0.0670)				
PBoard			0.0378			
			(0.0331)			
PBoard $N^{Diversification}$	x		-0.1553**			
			(0.0770)			
PChair				0.0534*		
				(0.0318)		
PChair x $N^{Diversification}$				0.025		
				(0.0718)		
Control					0.2982***	
					(0.0439)	
Control $N^{Diversification}$	x				-0.6781***	
					(0.1000)	
D^{Gov}						0.0124
						(0.0407)
D^{Gov} x $N^{Diversification}$						0.2866***
						(0.0974)
D^{For}						0.8005***
						(0.0950)
D^{For} x $N^{Diversification}$						-1.3668***
						(0.2094)
Observation		6345	4178	4964	4837	4842
Adjusted R^2		0.0471	0.043	0.0379	0.0822	0.1427
R^2		0.0483	0.0448	0.0395	0.0837	0.1445

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

Table 6 reports the estimates of the baseline model adding quantitative proxies for the 3 different types of informal governance characteristics. First, on business group, we use the number of firms under the business group where the firm is affiliated with i.e. N^{BGroup} to proxy for the size of the business group. The positive and significant interaction term in column (1) implies a consistent result is obtained where the size of the business group is also a moderating variable on diversification. On political profile, we calculated the percentage of directors in the board that has a political profile denoted as P^{PBoard} to measure the degree of political connection in the board. The estimate for the interaction variable of this variable in column (2) is also not significant. On ownership issue, we replace the controlling-owner binary variable with the degree of controlling shares hold by the owners both direct and indirectly to proxy for the degree of

controlling ownership. The estimate of the interaction term in column (3) is negative and significant also consistent with the previous results that powerful owner will elevate diversification discount.

Table 6 Informal Governance Characteristics in Quantitative Proxies

	(1)	(2)	(3)
$N^{Diversification}$	-0.2907***	-0.2890***	0.0891*
	(0.0295)	(0.0435)	(0.0492)
N^{BGroup}	-0.0358***		
	(0.0102)		
$N^{BGroup} \times N^{Diversification}$	0.0625***		
	(0.0114)		
P^{PBoard}		-0.0396	
		(0.0668)	
$P^{PBoard} \times N^{Diversification}$		0.0702	
		(0.0662)	
$P^{Control}$			0.8040***
			(0.1314)
$P^{Control} \times N^{Diversification}$			-0.7956***
			(0.1434)
Observation	6345	3496	4837
Adjusted R^2	0.0521	0.0502	0.0677
R^2	0.0532	0.0523	0.0692

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

4.3 Further Issues: informal governance and diversification discount with various degree of formal governance

To explore further how formal governance elements interact with the informal governance variables on the valuation impacts of diversification, we repeat the estimates for the previously mentioned model by sub-sample divided by formal corporate governance including strong independent directorship vs. weak independent directorship (50% independent directorship as threshold), active and inactive board (more than 95% average meeting attendance versus less than 90% average meeting attendance), and large and small group of institutional shareholders (more than 50% vs. less than 50%).

Table 7 indicates that a business group structure further reduces the diversification discount when there are more than 50% independent directors in the board and less than 50%

shareholders are institutional. However, when firms diversify into more segments and gain more market share in the diversified industries (measured by Herfindahl index), we find that business group structure leads to higher diversification discount when board meeting is less than 90% (inactive), and firm has less than 50% institutional shareholders monitoring.

Secondly, firms with political board but less active board has less diversification discount. However, with more segments of diversification, political board induces higher diversification discount when there are less independent directors, more active board, and less institutional shareholders monitoring. The same effects remained when a firm has gain market share in the diversified industry. In addition, political board also induces higher diversification discount in firms dominated by independent directors, and more institutional shareholders monitoring. On the other hand, political-connected board chairman show no effect whether firm diversify or not, but the more segments the firm diversify, diversification discount become significant in firms with less active board and less institutional shareholders monitoring. When the firm gain more control on the diversified market, diversification discount become significantly larger in firms with more active board and less institutional shareholders monitoring.

Thirdly, higher ownership control or ownership concentration induces higher diversification discount when firms have lower independent directors and lower institutional shareholders monitoring. The diversification discount seems to be quite close between active and less active board. When firm diversified into more segments, or gain more control on the diversified industries, the result is consistent.

Fourthly, government firms enjoys lower diversification discount than family firms when there is less independent directors, less active board and more institutional shareholders monitoring. When firm

Table 7 Informal Governance and Diversification Discount with the Various Degree of Formal Governance: A Summary Results

	Independent directors less than 50%	Independent directors more than 50%	Directors' meeting less than 90%	Directors' meeting more than 90%	Local institutional owners less than 50%	Local institutional owners more than 50%
Panel A Interaction Term with Diversification Measured by Dummy Variable						
BGroup x $D^{Diversification}$	0.3096***	0.1884***	-0.2102	0.3176***	0.1866***	0.5001***
	(0.0595)	(0.0707)	(0.1623)	(0.0479)	(0.0569)	(0.0947)
PBoard x $D^{Diversification}$	-0.0804	0.0463	0.3211**	-0.1008*	-0.0989	0.1078
	(0.0715)	(0.0823)	(0.1307)	(0.0610)	(0.0606)	(0.1300)
PChair x $D^{Diversification}$	-0.0432	-0.0214	0.0229	-0.0386	-0.0715	0.123
	(0.0854)	(0.0611)	(0.1226)	(0.0601)	(0.0670)	(0.0910)
OControl x $D^{Diversification}$	-0.5943***	-0.1757**	-0.4362**	-0.4416***	-0.4966***	-0.3883***
	(0.0994)	(0.0711)	(0.2090)	(0.0751)	(0.0870)	(0.1165)
D^{Gov} x $D^{Diversification}$	0.2504***	0.1172	0.2865***	0.1789***	0.1408**	0.3239***
	(0.0762)	(0.0989)	(0.1107)	(0.0678)	(0.0553)	(0.1247)
D^{For} x $D^{Diversification}$	-0.5364***	-0.8318***	-1.0312**	-0.6549***	-0.6253***	-1.0736***
	(0.1446)	(0.2261)	(0.5105)	(0.1325)	(0.1292)	(0.3596)
Panel B Interaction Term with Diversification Measured with Numerical Variable						
BGroup x $N^{Diversification}$	-0.0121	0.0369**	-0.0584***	0.0186**	-0.0214**	0.0756***
	(0.0098)	(0.0154)	(0.0160)	(0.0093)	(0.0092)	(0.0195)
PBoard x $N^{Diversification}$	-0.0599***	-0.0164	-0.0076	-0.0473***	-0.0554***	-0.0184
	(0.0131)	(0.0121)	(0.0170)	(0.0099)	(0.0101)	(0.0170)
PChair x $N^{Diversification}$	-0.0269	-0.0048	-0.0633**	-0.0164	-0.0335***	0.0137
	(0.0176)	(0.0185)	(0.0248)	(0.0135)	(0.0128)	(0.0301)
OControl x $N^{Diversification}$	-0.1666***	-0.0612***	-0.1146***	-0.1212***	-0.1529***	-0.0791***
	(0.0204)	(0.0198)	(0.0329)	(0.0154)	(0.0174)	(0.0212)
D^{Gov} x $N^{Diversification}$	-0.0172	-0.0139	-0.0308	-0.0119	-0.0356***	0.0515
	(0.0192)	(0.0255)	(0.0253)	(0.0163)	(0.0130)	(0.0437)
D^{For} x $N^{Diversification}$	-0.3130***	-0.2099***	-0.3826***	-0.2915***	-0.2857***	-0.3774***
	(0.0507)	(0.0493)	(0.1304)	(0.0375)	(0.0386)	(0.0909)
Panel C Interaction Term with Diversification Measured by Herfindahl Index						
BGroup x $N^{Diversification}$	-0.1102	0.1085	-0.2904**	0.0484	-0.0953	0.2832***
	(0.0843)	(0.0878)	(0.1194)	(0.0647)	(0.0700)	(0.1097)
PBoard x $N^{Diversification}$	-0.3780***	-0.1986***	0.0359	-0.3531***	-0.3254***	-0.1892*
	(0.0813)	(0.0732)	(0.1131)	(0.0581)	(0.0597)	(0.1068)
PChair x $N^{Diversification}$	-0.1544	-0.0706	-0.1931	-0.1504**	-0.1865***	-0.0352
	(0.0945)	(0.0868)	(0.1366)	(0.0675)	(0.0674)	(0.1407)
OControl x $N^{Diversification}$	-0.9838***	-0.4127***	-0.8056***	-0.7355***	-0.9206***	-0.4213***
	(0.1283)	(0.1060)	(0.2175)	(0.0950)	(0.1115)	(0.1201)
D^{Gov} x $N^{Diversification}$	0.0856	0.1815	-0.0248	0.1236	-0.0038	0.5317**
	(0.1553)	(0.1519)	(0.2270)	(0.1064)	(0.1035)	(0.2554)
D^{For} x $N^{Diversification}$	-1.3295***	-1.4601***	-1.4549**	-1.4975***	-1.3454***	-2.4336***
	(0.2569)	(0.3480)	(0.7129)	(0.2114)	(0.1983)	(0.7062)
Panel D Interaction Term with Diversification Measured by Dummy Variable and Informal Governance Measured by Numerical Variable						
N^{BGroup} x $D^{Diversification}$	0.0386***	0.0685***	0.015	0.0692***	0.0518***	0.1355***
	(0.0138)	(0.0180)	(0.0284)	(0.0123)	(0.0127)	(0.0300)
P^{PBoard} x $D^{Diversification}$	0.044	-0.2891	0.4865	-0.2649	-0.1692	0.0108
	(0.2641)	(0.2393)	(0.3841)	(0.1914)	(0.1823)	(0.3804)
$P^{Control}$ x $D^{Diversification}$	-1.3307***	-0.1839	-0.7642	-0.7996***	-0.9598***	-0.4579*
	(0.2333)	(0.1703)	(0.5227)	(0.1483)	(0.1882)	(0.2389)

Note: (*)(**)(***) denotes (10%)(5%)(1%) statistically significance. Figure in the parenthesis is probability values based on White robust standard errors; which handles cross-section clustering and heteroskedasticity.

diversified into more segments, diversification discount become larger in firms with less institutional shareholders monitoring. But when firm gained more control on the diversified industries diversification discount become significantly larger in firms with more institutional shareholders monitoring. On the other hand, foreign firms have higher diversification discount than family firms especially when there is more independent directors, less active board and more institutional shareholders monitoring. When firm diversified into more segments, the diversification discount is lower in firms with more independent directors, more active board, and less institutional shareholders monitoring. But when firm gained more control on the diversified industries diversification discount become significantly larger in firms with more independent directors, more active board and more institutional shareholders monitoring.

In summary, the results show that business group structure can have lower diversification discount when there is stronger formal governance mechanism. The number of directors with political profile does not show any significant impact on diversification discount, while the higher degree of ownership concentration leads to a significantly larger diversification discount when there are less than 50% independent directors in the board, more active board and less than 50% institutional shareholders monitoring.

CONCLUSION

This study examines the moderating effects of informal governance variables on the relationship between corporate diversification and firm value among publicly listed firms in Malaysia as one of the emerging markets using multi-theoretic approach. The main findings of this study can be summarized as follows:

On first sight, on average, diversified firms have lower Tobin's q than non-diversified firms. However, interesting results were observed when informal governance variables were considered. The study finds that diversified firms are able to mitigate the discounted value if they were affiliated with business group. The findings demonstrate the support to the conjecture based on the resource-based view that firms affiliated with business groups are able to transfer resources among member firms effectively. Another informal governance variable that reduces the diversification discount is government-controlled type of ownership. Again, the result is aligned with the resource-based view that the state funds and other benefits from the government ownership are able to be used by diversified firms to mitigate the discount value of diversification.

On the contrary, if a diversified firm with ultimate owner possesses more than 50% total shares, the diversification discount become larger. This has supported the agency-based view that when control rights are more concentrated in the hands of major shareholders, governance becomes a great concern. Interestingly, the results show that foreign-controlled ownership will increase the diversification discount as compared to family-owned, which is not expected from the earlier conjecture.

On the other hand, the results of this study cannot empirically prove that political connection through either the board directors or chairman have any moderating effect on the relationship between diversification and firm value. However, this study shows that firms with political-connected board if board is less active has lower diversification discount. In addition, when firms diversify in more business segments, political board induces higher diversification discount when there are less independent directors, more active board, and less institutional shareholders monitoring.

Despite that the study produces some interesting results; a few extensions of analysis can be further built to validate the results found in this current study. Firstly, any future study can consider using cross country data to make meaningful comparison between different emerging markets will further validate the importance of informal governance variables in moderating the relationship between diversification and firm value. Secondly, issues of endogeneity can be incorporated to provide robustness of the analysis.

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A STUDY OF THE RUN LENGTH DISTRIBUTION OF THE RUN SUM $\bar{X}$ CHART

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Abstract

It is well known that the design of the run sum $\bar{X}$ chart is traditionally based on the average run length (ARL) criterion. However, the shape of the run length distribution changes according to the process mean shift, from highly-right skewed when the mean shift is small or in-control to almost symmetric when the mean shift is large. Therefore, interpretations based on ARL alone can be misleading. Indisputably, it is important for us to investigate the entire run length distribution of a control chart; thus, an in-depth understanding of the control chart will be obtained before implementing the chart in process monitoring. In this paper, we examine the percentiles of the run length distribution for the run sum $\bar{X}$ chart. Knowledge of the percentiles of the run length distribution will provide practitioners with a complete understanding of the shape, skewness and behavior of the chart.

Keywords: Run length distribution, run sum $\bar{X}$ chart, average run length and percentiles

INTRODUCTION

In this fast moving and highly competitive globalization and industrial era, the quality of products and services become ever-increasingly vital in many fields. In order to satisfy customers' needs and requirements, manufacturers should produce quality products and services with an acceptable quality level. Quality improvements have become important criteria in the industrial and service sectors. The demand for continuous improvement and better quality tends to remain as a permanent characteristic of business nature.

In real life applications, the processes are usually unspecified. Hence, there are no processes which can be in a stable condition forever. Statistical process control (SPC) is the most popular statistical technique to improve quality characteristics of products. Indisputably, SPC provides an objective means of controlling quality in any transformation process. Due to an increasingly competitive international marketplace, there are many research activities related to SPC. SPC has wide applications in manufacturing and service areas. For example, the monitoring of the flow width measurement of wafers in a semiconductor manufacturing company, the improvement of suppliers' process in checking the quality of products produced by machine tools and the monitoring of the costs of processing loan applications in a bank (Montgomery, 2009). Control charts are systematically viewed as the simplest and most powerful tools in SPC. They are built to check the quality of products in order to study whether the process is in the in-control state.

The average run length (ARL) is commonly used to measure the control chart's performance. However, the shape of the run length distribution is highly skewed to the right when the process shift is in-control or small, to approximately symmetric when the process shift is large. Nevertheless, the design of a control chart solely based on the ARL measure was highly criticized by many researchers

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(see Bischak and Trietsch, 2007; Charkraborti, 2007; Teoh et al., 2014). In order to overcome the weakness of the ARL as the sole measurement of a control chart's performance, Khoo and Quah (2002), Shmueli and Cohen (2003), Khoo (2004), Radson and Boyd (2005) and Charkraborti (2007) suggested using a more credible measure, i.e. the percentiles of the run length distribution as an alternative measure of a control chart's performance. The percentiles, such as the 50th percentile of the run length (i.e. the median run length, MRL), provide more information than the ARL. For example, when the in-control MRL is 250, practitioners will justify that in 50% of the time, a control chart will certainly detect a false alarm at the 250th sample. This will increase practitioners' confidence when they encounter a few short runs without assignable causes. Other percentiles such as the 5th and 95th percentiles provide important information about the spread of the run length distribution.

In this paper, we consider the run sum $\bar{X}$ chart, which is a simple and effective SPC tool in detecting small mean shifts. The run sum control chart was first introduced by Roberts (1966) to increase the sensitivity of the basic chart, i.e. the Shewhart $\bar{X}$ chart with supplementary runs rules. The research was further studied by Reynolds (1971), who examined the run sum control chart consisting of eight regions with four on each side of the center line. Jaehn (1987) suggested that the zone control chart is a special case of the run sum chart. Davis et al. (1990) claimed that the zone control chart with the scores 0, 2, 4, and 8 is similar to the scores 0, 1, 2, and 4. A general model of the zone control chart with the fast-initial-response (FIR) feature was presented by Davis et al. (1994). Champ and Rigdon (1997) demonstrated the optimal ARL-based run sum $\bar{X}$ chart by using the Markov chain approach. They concluded that the run sum $\bar{X}$ chart offers better statistical efficiency than the Shewhart $\bar{X}$ chart with supplementary runs rules. Besides, they also indicated that by adding more regions or scores, the run sum $\bar{X}$ chart is competitive in terms of detection speed with the cumulative sum (CUSUM) and exponentially weighted moving average (EWMA) charts. Davis and Krehbiel (2002) compared the performance of the Shewhart $\bar{X}$ chart with runs rules and the zone control chart in the presence of linear trend.

A number of researchers (see Acosta-Mejia and Pignatiello, 2010; Aguirre-Torres and Reys-Lopez, 1999; Ho and Case, 1994) have contributed to the field of univariate run-sum-type control charts. The effects of parameter estimation on the performance of the run sum $\bar{X}$ chart with the weights (0, 1, 2, 4) were investigated by Teoh and Khoo (2012). Furthermore, Khoo et al. (2013) discussed a run sum Hotelling's χ^2 chart which achieves better performances than that of the synthetic χ^2 chart and various χ^2 charts with supplementary runs rules. Besides, the sensitivity of the run sum Hotelling's χ^2 chart is also competitive to the multivariate EWMA (MEWMA) chart. Recently, the run sum t chart, which is more robust against changes in the process variance compared to the run sum $\bar{X}$ chart, was studied by Sitt et al. (2014). Acosta-Mejia and Luis Rincon (2014) introduced the continuous run sum chart with FIR.

In this paper, we investigate the percentiles (5th, 10th, 20th, 25th, 30th, 40th, 50th, 60th, 70th, 75th, 80th, 90th and 95th percentiles) of the run length distribution for the 4 regions run sum $\bar{X}$ chart. Note that, the percentiles of the run length distribution are computed with the optimal chart's parameters having a desired in-control ARL (ARL0) value which is 370.40. The organization of this paper is as follows: In Section 2, the operation of the run sum $\bar{X}$ chart is outlined. Section 3 studies the run length properties of the run sum $\bar{X}$ chart. The performances of the run sum $\bar{X}$ chart based on the ARL, standard deviation of the run length (SDRL) and percentiles of the run length distribution, are examined in Section 4. Finally, conclusions are drawn in Section 5.

THE RUN SUM $\bar{X}$ CHART

The run sum $\bar{X}$ chart divides the zones or regions between the upper and lower control limits around the center line and assigns scores to each region. An out-of-control signal is detected when a cumulative positive score is greater than or equal to a positive triggering score and a cumulative negative score is less than or equal to a negative triggering score.

The samples {$X_{i,1}$, $X_{i,2}$,…, $X_{i,n}$} are taken at time i = 1, 2, 3, …, where n is the sample size. Assume that the observations of the quality characteristic X follow a normal distribution, $X_{i,n} \sim N(\mu_0 + \delta\sigma_0, \sigma_0^2)$ and there is independence between and within samples. Here, μ_0 is the in-control mean and σ_0 is the in-control standard deviation. When shift δ = 0, the process is statistically in-control; otherwise, the process is out-of-control if δ ≠ 0. The 4 regions run sum $\bar{X}$ chart is divided into eight regions, i.e. four regions above and below the center line, μ_0. The statistic of the run sum $\bar{X}$ chart is based on the following cumulative sums

$$U_i = \begin{cases} U_{i-1} + S_i, & \text{if } \bar{X}_i \geq \mu_0 \\ 0, & \text{if } \bar{X}_i < \mu_0 \end{cases}$$

(1)

and

$$L_i = \begin{cases} L_{i-1} + S_i, & \text{if } \bar{X}_i \leq \mu_0 \\ 0, & \text{if } \bar{X}_i > \mu_0 \end{cases}.$$

(2)

Note that S_i is the score for the region in which $\bar{X}_i$ falls; while U_i and L_i are the cumulative sums of $\bar{X}_i$ in the regions above and below μ_0, respectively. Generally, the ordered-pair cumulative score starts at zero, i.e. (U_0, L_0) = (+0, −0). Figure 1 shows the regions, associated scores and probabilities of the 4 regions run sum $\bar{X}$ chart. According to Figure 1, ($\mu_0 < \mu_0 + K\sigma_0/\sqrt{n} < \mu_0 + 2K\sigma_0/\sqrt{n} < \mu_0 + 3K\sigma_0/\sqrt{n}$) and ($\mu_0 > \mu_0 - K\sigma_0/\sqrt{n} > \mu_0 - 2K\sigma_0/\sqrt{n} > \mu_0 - 3K\sigma_0/\sqrt{n}$) are the upper and lower control limits above and below μ_0, respectively. Here, K is the multiplier controlling the width of the control limits. The scores ($0 \leq S_1 \leq S_2 \leq S_3 \leq S_4$) and ($-S_4 \leq -S_3 \leq -S_2 \leq -S_1 \leq 0$) are assigned to the regions (R_{+0}, R_{+1}, R_{+2}, R_{+3}) and (R_{-3}, R_{-2}, R_{-1}, R_{-0}), respectively.

The procedures of the 4 regions run sum $\bar{X}$ chart are as follow:

1. Collect a sample of size, n and compute the sample mean, $\bar{X}_i = \sum_{i=1}^{n} X_i / n$.
2. Start with the cumulative score at 0, i.e. (U_0, L_0) = (+0, −0).
3. Accumulate the scores U_i and L_i corresponding to the regions $R_{(+t)}$ and $R_{(-t)}$, respectively, where the sample mean, $\bar{X}_i$ falls. Here, t = 0, 1, 2, 3.
4. If $\bar{X}_i$ is located on the other side of the center line (μ_0), i.e, $\bar{X}_i < \mu_0$ or $\bar{X}_i > \mu_0$, the process of accumulating U_i or L_i ends, respectively. Then, restart the cumulative scores of U_i or L_i based on the latest $\bar{X}_i$.
5. The process is out-of-control if a positive cumulative score U_i is more than or equal to a positive trigerring value (S_4) or a negative cumulative score L_i is less than or equal to a negative trigering value ($-S_4$).

Figure 1: Regions, Scores and Probabilities of the 4 regions run sum $\bar{X}$ chart
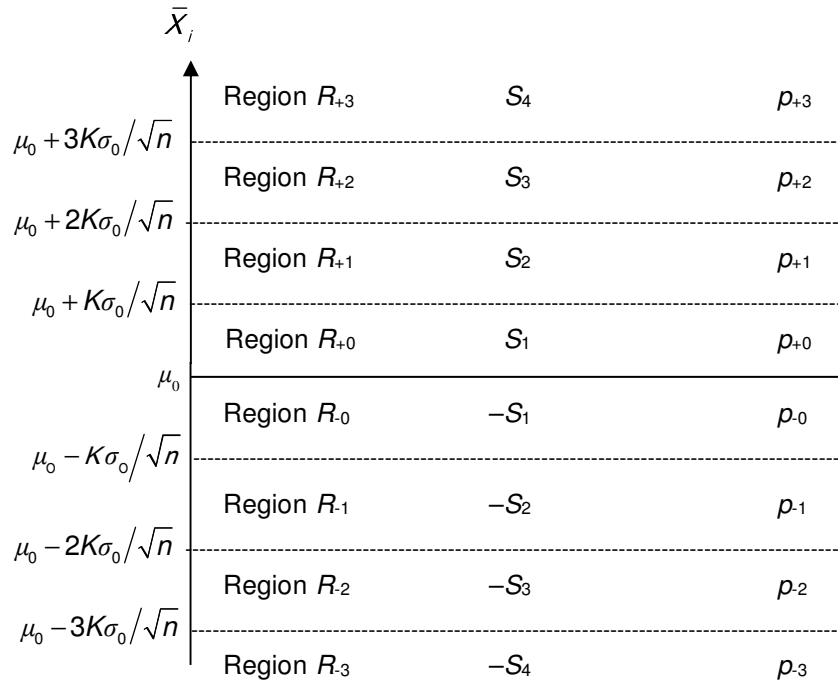
THE RUN LENGTH PROPERTIES OF THE RUN SUM $\bar{X}$ CHART

This section discusses the Markov Chain approach of the run sum $\bar{X}$ chart for evaluating the ARLs, SDRLs and the percentiles of the run length distributions. The probability p_{+2} in region R_{+2} (see Figure 1) can be obtained as follows (Champ and Ridgon, 1997):

$$p_{+2} = P\left(\mu_0 + 2K\sigma_0 \big/ \sqrt{n} \leq \bar{X}_i \leq \mu_0 + 3K\sigma_0 \big/ \sqrt{n}\right)$$
$$= \Phi\left(3K - \delta\sqrt{n}\right) - \Phi\left(2K - \delta\sqrt{n}\right).$$

(3)

Here, $\Phi(.)$ is the standard normal cumulative distribution function (cdf) and $\delta = |\mu_0 - \mu_1| \big/ \sigma_0$ is the magnitude of the mean shift in multiples of standard deviation units, where μ_1 is the out-of-control mean. The probabilities $p_{\pm t}$, where t = 0, 1, 2, 3, can be computed using the same method as displayed in Equation (3).

Suppose that we have a discrete-time Markov Chain with $p + 1$ states, where states 1, 2, …, p are transient and the state $p + 1$ is an absorbing state. Here, p is the number of possible ordered pairs (U_i, L_i) where the process is in-control. The transition probability matrix **P** of the discrete-time Markov Chain has the following structure:

$$\mathbf{P} = \begin{pmatrix} \mathbf{Q} & \mathbf{r} \\ \mathbf{0}^{\mathsf{T}} & 1 \end{pmatrix},$$

(4)

where **Q** is the $p \times p$ transient-probability matrix; while the $p \times 1$ vector **r** satisfies $\mathbf{r} = \mathbf{1} - \mathbf{Q1}$ (i.e. row probabilities must sum to 1) with $\mathbf{1} = (1, 1, …, 1)^{\mathsf{T}}$ and $\mathbf{0} = (0, 0, …, 0)^{\mathsf{T}}$. Note that the dimension of the matrix **Q** for the 4 regions run sum $\bar{X}$ chart depends on the choice of the scores S_1, S_2, S_3 and S_4. The matrix **Q** does not have a general form. Refer to Sitt et al. (2014) for the detailed procedure for obtaining the matrix **Q**.

Run length refers to the number of samples observed until the detection of the first out-of-control signal. The ARL is one of the commonly used measurements of the control chart's performance. The computation of the zero-state ARL using the Markov Chain approach is as follows:

$$ARL = s^{\mathsf{T}}(I-Q)^{-1}1,$$

(5)

where **s** = $(1, 0, ..., 0)^{\mathsf{T}}$ is the vector of initial probability having a unity in the first element and zeros elsewhere and **I** is the identity matrix. Also, the computation of the SDRL by means of the Markov Chain approach is calculated as

$$SDRL = \sqrt{2s^{\mathsf{T}}(I-Q)^{-2}Q1 - ARL^2 + ARL}\,.$$

(6)

Let N denotes the run length of the run sum $\overline{X}$ chart. Note that N is a Discrete Phase Type random variable. The cdf of N, $F_N(\ell)$ for the 4 regions run sum $\overline{X}$ chart under the zero-state mode is calculated as

$$F_N(\ell) = P(N \le \ell) = s^{\mathsf{T}}(I - Q^{\ell})1,$$

(7)

where $\ell \in \{1, 2, 3, ...\}$. The $(100\gamma)^{\text{th}}$ percentiles of the run length distribution can be determined as the value ℓ_γ such that (Gan, 1993)

$$P(N \le \ell_\gamma - 1) \le \gamma \text{ and } P(N \le \ell_\gamma) > \gamma,$$

(8)

Where γ is in the range of $0 < \gamma < 1$.

PERFORMANCES OF THE RUN SUM $\overline{X}$ CHART BASED ON THE ARL, SDRL AND PERCENTILES OF THE RUN LENGTH DISTRIBUTION

In this section, we investigate the performances of the 4 regions run sum $\overline{X}$ chart. Palm (1990) claimed that the percentiles of the run length distribution provide some useful and detailed information regarding the behavior of a control chart. Tables 1 to 4 listed the exact values of the ARL, SDRL and percentiles of the run length distribution of the 4 regions run sum $\overline{X}$ chart for different combinations of optimal chart's parameters, δ_{opt} and n. In this paper, we specify the $ARL_0 = 370.40$ and $\delta_{\text{opt}} \in \{0.4, 1.0\}$. Note that δ_{opt} represents the desired mean shift for which a quick detection is needed. In addition, we consider $n \in \{5, 10\}$ and $\delta \in \{0.00, 0.20, 0.40, 0.60, 0.80, 1.00, 1.25, 1.50, 1.75, 2.00\}$. The optimization procedure presented by Champ and Rigdon (1997) is adopted to compute the optimal chart's parameters of the 4 regions run sum $\overline{X}$ chart. The Statistical Analysis System (SAS) software is used to write the optimization program. Note that all the optimal chart's parameters (K, S_1, S_2, S_3, S_4) must satisfy the constraint $ARL_0 = 370.40$. These optimal (K, S_1, S_2, S_3, S_4) parameters are used to compute the ARL, SDRL and percentiles of the run length distribution for different shift δ. The ARL and SDRL for the 4 regions run sum $\overline{X}$ chart are computed with Equations (5) and (6), respectively; while Equation (7) together with Equation (8) are used to compute the percentiles of the run length distribution.

Table 1: Exact ARL, SDRL and percentiles of the run length distribution, together with the optimal chart's parameters (K, S_1, S_2, S_3, S_4) = (1.2010, 0, 1, 2, 4) of the run sum $\bar{X}$ chart when δ_{opt} = 0.4 , n = 5 and ARL_0 = 370.40

δ	ARL	SDRL	Percentiles of the run length distribution (th)												
			5	10	20	25	30	40	50	60	70	75	80	90	95
0.00	370.40	366.87	22	42	85	109	134	191	258	340	445	512	594	848	1103
0.20	68.56	64.72	7	11	18	22	27	37	49	63	82	94	108	153	198
0.40	15.71	12.29	4	5	6	7	8	10	12	15	18	20	23	32	40
0.60	6.97	4.12	3	3	4	4	4	5	6	7	8	9	10	12	15
0.80	4.34	2.01	2	3	3	3	3	4	4	4	5	5	6	7	8
1.00	3.16	1.29	2	2	2	3	3	3	3	3	4	4	4	5	5
1.25	2.32	0.94	1	1	2	2	2	2	2	3	3	3	3	3	4
1.50	1.79	0.75	1	1	1	1	1	1	2	2	2	2	2	3	3
1.75	1.42	0.58	1	1	1	1	1	1	1	1	2	2	2	2	2
2.00	1.20	0.42	1	1	1	1	1	1	1	1	1	1	1	2	2

Table 2: Exact ARL, SDRL and percentiles of the run length distribution, together with the optimal chart's parameters (K, S_1, S_2, S_3, S_4) = (1.2010, 0, 1, 2, 4) of the run sum $\bar{X}$ chart when δ_{opt} = 0.4 , n = 10 and ARL_0 = 370.40

δ	ARL	SDRL	Percentiles of the run length distribution (th)												
			5	10	20	25	30	40	50	60	70	75	80	90	95
0.00	370.40	366.87	22	42	85	109	134	191	258	340	445	512	594	848	1103
0.20	33.62	29.91	5	7	10	12	14	19	24	31	40	45	52	73	93
0.40	7.77	4.82	3	3	4	4	5	6	6	7	9	10	11	14	17
0.60	3.98	1.76	2	2	3	3	3	3	4	4	5	5	5	6	7
0.80	2.67	1.07	1	1	2	2	2	2	3	3	3	3	3	4	4
1.00	1.95	0.81	1	1	1	1	1	2	2	2	2	2	3	3	3
1.25	1.40	0.57	1	1	1	1	1	1	1	1	2	2	2	2	2
1.50	1.13	0.34	1	1	1	1	1	1	1	1	1	1	1	2	2
1.75	1.03	0.16	1	1	1	1	1	1	1	1	1	1	1	1	1
2.00	1.00	0.06	1	1	1	1	1	1	1	1	1	1	1	1	1

The ARLs shown in Tables 1 to 4 are larger than the MRLs (i.e. the 50th percentiles of the run length distribution) when $\delta < 2.0$. The difference between ARL and MRL values decreases when δ increases. This indicates that the shape and skewness of the run length distribution changes with the

mean shift δ and the sample size n. When the run length distributions are highly right-skewed especially for $\delta < 1.0$, the value of the mean is larger than the median. For example, from Table 1, we observe that when the process is in-control, i.e. $\delta = 0$, the value of ARL_0 is 370.40 and this value is in between the 60th and 70th percentiles of the run length distribution; while the value of MRL_0 is 258. Therefore, the MRL is better than the ARL as a representation of the central tendency. Since the ARL only measures the expected run length, it cannot be viewed as "half of the time" (Palm, 1990). Practitioners may falsely interpret the chart's performance based on the ARL value only. For instance, when $\delta_{opt} = 1.0$, n = 5 and $\delta = 0.2$ are considered (see Table 3), there could exist a risk that practitioners falsely interpret an out-of-control signal by the 81st sample (ARL_1 = 80.61) in 50% of the time. In fact, this event occurs noticebly earlier, i.e. by the 57th sample (50th percentile = 57). From Tables 1 to 4, we observe that all the

Table 3: Exact ARL, SDRL and percentiles of the run length distribution, together with the optimal chart's parameters (K, S_1, S_2, S_3, S_4) = (1.0832, 0, 1, 3, 6) of the run sum $\bar{X}$ chart when $\delta_{opt} = 1.0$, n = 5 and ARL_0 = 370.40

δ	ARL	SDRL	Percentiles of the run length distribution (th)												
			5	10	20	25	30	40	50	60	70	75	80	90	95
0.00	370.40	368.10	21	41	84	108	134	190	257	340	446	513	593	850	1105
0.20	80.61	77.19	7	12	21	26	31	43	57	74	96	110	128	181	235
0.40	17.55	14.22	4	5	7	8	9	11	13	16	21	23	26	36	46
0.60	7.36	4.65	2	3	4	4	5	5	6	7	8	9	10	13	16
0.80	4.37	2.31	1	2	2	3	3	4	4	5	5	6	6	7	9
1.00	3.01	1.50	1	1	2	2	2	2	3	3	4	4	4	5	6
1.25	2.09	1.02	1	1	1	1	1	2	2	2	2	3	3	4	4
1.50	1.57	0.71	1	1	1	1	1	1	1	2	2	2	2	2	3
1.75	1.27	0.49	1	1	1	1	1	1	1	1	1	2	2	2	2
2.00	1.11	0.32	1	1	1	1	1	1	1	1	1	1	1	2	2

Table 4: Exact ARL, SDRL and percentiles of the run length distribution, together with the optimal chart's parameters (K, S_1, S_2, S_3, S_4) = (1.0507, 0, 0, 1, 2) of the run sum $\bar{X}$ chart when δ_{opt} = 1.0, n = 10 and ARL_0 = 370.40

δ	ARL	SDRL	Percentiles of the run length distribution (th)												
			5	10	20	25	30	40	50	60	70	75	80	90	95
0.00	370.40	369.01	20	40	84	107	133	190	257	339	446	513	595	851	1107
0.20	60.41	58.27	5	8	15	19	23	32	43	56	72	83	96	136	177
0.40	10.92	8.79	2	3	4	5	5	7	8	10	13	14	16	22	28
0.60	4.27	2.78	1	1	2	2	3	3	4	4	5	6	6	8	10
0.80	2.41	1.33	1	1	1	1	2	2	2	2	3	3	3	4	5
1.00	1.65	0.78	1	1	1	1	1	1	1	2	2	2	2	3	3

1.25	1.22	0.45	1	1	1	1	1	1	1	1	1	1	2	2	2
1.50	1.06	0.23	1	1	1	1	1	1	1	1	1	1	1	1	2
1.75	1.01	0.09	1	1	1	1	1	1	1	1	1	1	1	1	1
2.00	1.00	0.03	1	1	1	1	1	1	1	1	1	1	1	1	1

percentiles of the run length distribution are almost similar to the ARL values when $\delta \geq 1.75$ and especially for $n = 10$. This suggests that the skewness of the run length distribution decreases as δ increases.

It may be helpful to evaluate the lower percentiles of the run length distribution, i.e. the 5th, 10th and 20th percentiles. These lower percentiles provide practical guidance to practitioners regarding an analysis of the early false alarms when the process is in-control. For example, in the case of $\delta_{opt} = 0.4$, $n = 10$ and $\delta = 0$, there is a 10% chance that a false alarm will occur by the 42nd sample (see Table 2). The computation of higher percentiles (i.e. 80th, 90th and 95th percentiles) of the run length distribution also provide some crucial information to practitioners. For the sake of illustration, by referring to Table 4, when $\delta_{opt} = 1.0$, $n = 10$ and $\delta = 1.25$ are considered, practitioners will have 90% confidence that a shift with magnitude $\delta = 1.25$ is signaled by the 2nd sample.

CONCLUSIONS

A good knowledge and an extensive understanding of the run length distribution for the run sum $\bar{X}$ chart are vital as they help to increase practitioners' confidence. Since the skewness of the run length distribution changes with δ and n, traditional measurement such as the ARL does not provide a full understanding about the performance of a control chart. Undoubtedly, percentiles of the run length distribution, including the MRL, provide better indication of a control chart's performance than the ARL.

In this paper, we discuss the advantages for computing the percentiles of the run length distribution for the 4 regions run sum $\bar{X}$ chart. Moreover, the measurements based on the 5th and 95th percentiles provide critical information about the spread of the run length distribution. For this study, we observe that the shape, skewness and the behavior of the run length distribution for the 4 regions run sum $\bar{X}$ chart are different as n and δ change. Thus, we recommend the computation and examination of the percentiles of the run length distribution, such as the 5th, 10th, 20th, 25th, 30th, 40th, 50th, 60th, 70th, 75th, 80th, 90th and 95th percentiles, in routine applications, particularly for the run sum $\bar{X}$ chart.

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Socioeconomic Impact of Flood 2014: Case Study of Kuala Krai

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Abstract

Kelantan is a state that consists of 11 major territories that located on the eastern coast of Peninsular Malaysia with a land area of 14,992 square kilometers. Kuala Krai is one of the territory and town of Kelantan with population of 109,461 persons. Flood 2014 had brought the significant impact on the socioeconomic of Kuala Krai. Economy activities such as agriculture-based activities, farming and business destroyed. This paper intends to investigate the socioeconomic impact of flood in Kuala Krai. This issue has been studied through the lens of Focus Group Discussion (FGD). This paper provides empirical evidence based of the victims' perspective. The study suggested the proper operating procedures (SOPs) to be taken in future to reduce the impact of flood.

***Keywords*:** Flood, socioeconomic, impact

JEL classification codes: H84

INTRODUCTION

Natural disaster is an adverse event resulting from natural processes of the mother Earth that beyond the human control and unable to be predict accurately (Muqtada et.al, 2014). The adverse event such as flood, earthquake, hurricane, landslides result in great damage of property, infrastructure and loss of human life. Floods are one of the common disasters in most part of the world. Malaysia is one of the countries that bear the nightmare from flood. Basically there are two type of floods occur in Malaysia, such as monsoon flood and flash flood. The monsoon flood that occur from Northeast Monsoon which prevails during the months of November to March with heavy rains to the east coast states of the Peninsula Malaysia, Sabah and Sarawak. The major recorded flood experiences in the country happened in Kuala Krai during 1967 while in Pekan during 1970 and 1971. Flood event in the year of 1988 also is a one of the most destructive flood in history of Malaysia where 55 lives were loss due to the impact of the disastrous flood (Muqtada et.al, 2014). Beside, flash flood occurs due to uncontrolled development activities. In 2006, Shah Alam was flooded which caused property damage with lost of millions of Ringgit.

Recently, heavy monsoons rainfall had triggered floods along Malaysia's east coast as well as in southern state. In east coast of Peninsular Malaysia, Kelantan is the one of the hardest hit area. Kelantan is located on the eastern coast of Peninsular Malaysia with a land area of 14,992 square kilometers. The state consists of 11 major territories with latitude of 06°10'N and longitude of 102°20'E. The major territories are Kota Bharu (capital city of Kelantan), Gua Musang, Pasir Mas, Tanah Merah and Kuala Krai. Floods brought huge impact and causes suffering to human life and economic loss. During flood 2014, nearly 90% of territories flooded, average damage is as high as RM2 billion. These flooding have caused damage to agricultural and livelihood as well as

infrastructure (school, railway station, highways etc). Thus, this paper intends to investigate the socioeconomic impact of flood in Kuala Krai.

Figure 1: Location Map Kelantan

Source: www. malaxi.com

STUDY AREA

The study area, Kuala Krai is one of the territory and town with population of 109,461 persons. Before 20th century, Kuala Krai was a tropical rain forest. Kuala Krai contains the confluence of two major rivers, the Lebir and Galas which form the Kelantan River. Flood 2014 had brought the significant impact on the socioeconomic of Kelantan. Nearly 90 percent of territories in Kelantan flooded, Kuala Krai was one of the worst-hit areas with huge parts of the town submerged by flood waters for days (see Plate 1). The town was cut-off from the rest of the country as floods made travel by road, air and even water extremely challenging. The floods brought direct and indirect impact on the population of Kelantan, especially Kuala Krai. Direct impacts concern damages caused by the physical contact of floodwaters with commodities, such as houses and property damaged (see Plate 2). While indirect impact is the disruptions to family's income, stress on daily activities, environmental quality and poor health services due to hospital/ clinic unable to function. Besides that, economy activities such as agriculture-based activities, farming and business destroyed.

Figure 2: Location Map Kuala Krai, Kelantan.

Source: http://thenewalfa.blogspot.com/2007/04/my-kelantan-iv-kuala-krai-my-home.html

Plate 1 The water level has exceeded

the ground floor of these triple-storeyed shop-houses

Plate 2

Houses and property damage

METHOD

Focus Group Discussion (FGD) is a form qualitative research that involved a group of people regarding the opinions, perceptions, beliefs, etc. FGD is the process to help people for explore and clarify their own views or perceptions that hardly to be access through one to one interview process. The discussion allowed interviewers to study people in a more natural pattern, where participants are free to talk in the group. The ideal time for a focus group is from 45 to 90 minutes.

Participants

In this study, Focus Group Discussion (FGD) was used to engage flood victims in discussion about experience during the flood 2014. Participants were selected to ensure a representative mix of gender and age, as well as their economic status through their job description to analyze the primary impact of the flood among the affected population. Our goal was to know the socio-economic impact of flood in Kuala Krai.

Procedure

The Flow Focus Group Discussion followed the flow as shown in Figure 3 (cited Billson 2004). The flow of discussion includes:

1) Conceptualization of the key research question. It is important to carefully define and limit the topics addressed as all participants must have an opportunity to participate in the discussion.

2) Development of the moderator's guide. The facilitator's role is critical to the success of the group discussion. It requires good group facilitation skills and qualities to put people at their ease, to project oneself in positive ways to encourage a group, and to hold the interest of participants through to the end.

3) Recruitment of participants. The composition of the group depends on the particular requirements of the evaluation. It is preferable to select participants so as to ensure there is a degree of homogeneity in the group, and to form several groups of different composition.

4) Group discussion. The discussion may be launched fairly openly by introducing the subject of the session and asking a simple question of general interest. This will enable each participant to give an initial opinion or remark on the subject.

5) Data analysis. This final phase consists of interpreting and comparing the information given by the participants, and looking for shared and divergent opinions within each group.

6) Presentation of findings in oral, written, video, or combined formats. The results from the different groups are compared so as to identify any convergence there may be. The report may quote the most noteworthy statements made by the participants, together with a summary of the discussion.

Figure 3: Focus Group Research Model
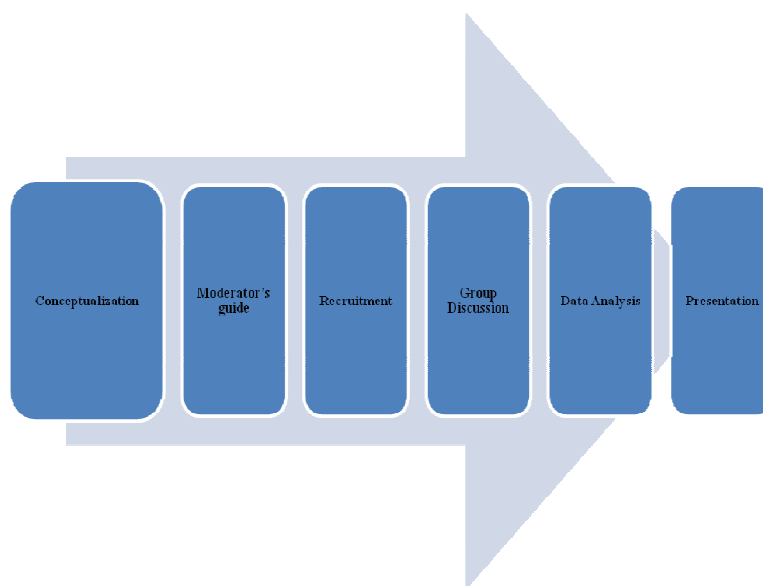
Focus group was conducted in the evening during April 2015 (almost 4 months after flood) and lasted approximately two hours (see plate 3). Participants were given token of appreciation for their attendance. A series of open-ended questions were used as the basis of the focus groups. The questions (see Table 1) allowed victims to share episodes from flood 2014 without prompting. Experienced facilitators were used to guide the discussion and provide prompting where needed to ensure all participants were able to make their opinions heard.

Plate 3 Focus Group discussion that held at village

Table 1
Focus group questions
Could you share with us your experience during flood 2014?
What is your opinion of the causes of flood 2014?
How the flood 2014 affect your income?
How long it's take for you to recover from flood 2014?
Is there any flood relief to your place?

RESULTS

Experience
Experience is the knowledge or mastery of an event or subject gained through involvement in or exposure to it. In this study, all the participants indicated that the water rose dramatically during the floods in 2014. The floods have resulting in the loss of the human life and property damage. The water level started to rise since 22th December 2014. The participant declared that;

"My house is flooded up to the waist. All the furniture was damaged except for the mattress due
to
we had brought the mattress to the second floor of the house. Other furniture just left it at the
living   *hall".*

Meanwhile, as told by participant from Kuala Krai;

On the 23th, water only rises at the low-lying areas only. After that, the water began to rise. I'm thinking no need to move out yet due to water may not rise to my house. However, my neighbor's house already flooded. I just don't care about it as I was busy with my kids that fall ill. Situation turn worse in the noon, water already step up to my kitchen. We moved to SMK Bandar Kuala Krai at1pm."

Flood Reliefs

Aid for flood victims is crucial to ensure the welfare and safety of any disaster. A rescue activity during floods is important for the flood victims. As noted by most respondents from all regions of the floods;

" The water rose too fast "

"There are no rescuers agencies come ...People who have a own boat come to save others victims.

" On the evening, water is rising but nobody came to help . Fortunately, we have villagers that came
with their boats. We moved out from the village by boat only".

Respondents from Kuala Krai also argued that the flood aid, whether from government agencies or NGOs late entry into flooded areas;

" I am unable to get any food for the first day."

"Helicopter hardly to make a safe precautionary landing. We have mee maggi only, all the aid sent to secondary school"

Activities economics

Economic activity is a key pillar of livelihood of the people of Kelantan. The majority of population in Kelantan is involved in agriculture sector. The pappy crops destroyed in flood 2014. As noted by most respondents;

" I plant vegetables nearby the river. Now, I can't make it…"

"…Paddy field had been destroyed…"

"…Farmers unable to plant anything when water level keep on rising.."

Reasons of Flood

Floods in 2014 have left significant impact on the population of Kelantan. There are many reasons that contributed to this terrible disaster. This can be seen from what is asserted by the respondent;

" ...... The reason why flood happen. Cleared hills, rivers backfilled.. "

While another respondent also agree with the opinion that first respondent;

" ... .. Because this flooding happens because the clearing of hills, land pond ... left nothing. "

" ... .They released the water in the dam From Pergau. But I'm not sure is it correct or not…

CONCLUSION

In conclusion, this paper provides empirical evidence based of the victims' perspective by using Focus Group Discussion (FGD). FGD is the process to help people for explore and clarify their own views or perceptions that hardly to be access through one to one interview process. The discussion allowed interviewers to study people in a more natural pattern. The information that has been collected is

categorized into several themes such as experience, economic activity, flood relief and reason of flood. The study suggested the proper operating procedures (SOPs) to be taken in future to reduce the impact of flood.

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AVIATION ENTREPRENEUR MODEL (AEM) IN MALAYSIA: PROPOSED CONCEPT PAPER

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Abstract

Reports in the literature have discussed on many of the success factors of small and medium enterprises. However, Aviation Entrepreneur has been given less attention by researchers. Whereas, Aviation Entrepreneur play an important role in determining the success and Aviation Entrepreneur inculcating "wholesome" Aviation Entrepreneurs.The concept is based on the Aviation Entrepreneur Model factors that contribute to the successful aviation entrepreneur such as traits, behavior, skills and self-efficacy.This study will provide a guideline to some parties involved either the government or private agencies like Small Medium Enterprises (SME), Majlis Amanah Rakyat (MARA), SMIDEC, FMM and PUNB for the purpose of developing small businesses so that Aviation Entrepreneurs can be globally competitive.

Keywords: Aviation, Aviation Entrepreneur, SMEs, Malaysia

INTRODUCTION

Small and Medium Enterprises (SMEs) in Malaysia reside in various industries. They represent a large fraction of the total number of businesses in various sectors and have offered great contribution in terms of the GDP (Salleh & Ndubisi 2006; BNM 2006; SME Corp 2010). It can be considered as a back bone of national economy (Muhammad Khalique 2011; Radam et al. 2008). There are several activities included in the classification of economic activities that involve the SMEs namely basic agriculture, manufacturing (agro-based), manufacturing-related services, services in general, mining and quarrying also construction (Malaysian National Bank, 2005).

SMEs play a vital role in the Malaysian's economic development and made Malaysia as one of the most open economies in the world (Muhammad, Char, Yasoa' & Hassan, 2010; Omar, Arokiasamy & Ismail, 2009). Furthermore, SMEs do not just serve as a backbone to the national economic development but also act as a platform to tap on the talent of entrepreneurship where one can develop himself or herself (Ab Aziz & Zakaria, 2004). In line with the Malaysian governments agenda to improve the economy of Malaysia, this sector is not only a key mechanism for ensuring socio-economic balance between the races, but this sector also indirectly improves the image of Malaysia on par with developed countries in the world. Undeniable, to help flourish the SMEs, the government has provided a few incentives through Budget 2013. A total of RM 1 billion was set aside for SME development schemes under the custodian of SME Bank. While the SME master plan (2012-2020), the government has allocated an amount of RM 30 million for 2013 and RM 200 million for working capital financing of SMEs that undertake production of halal products (Ministry of Finance Malaysia, 2013).

Aviation entrepreneur can be referred as the person who seize or create an idea and do their business activity in aviation context. While aviation industry can be defined as an industrial activities that related to the aerospace design, avionics parts, development and manufacturing, aircraft

construction and maintenance and disposal of aircraft. In Malaysia, there are about 200 related companies that involve in aviation business activities and the owner of these companies can be called

as 'aviation entrepreneur'. For instance, SME Aviation, Honeywell, Aviatron, Aero Precision Resources, Dectra, DamaiJitu, STRANDS, CTRM, Megamars, MUhibbah Airlines Support, Zetro and many more.

However, there are still many challenges and competition in economics and trade activities encountered by entrepreneurs. According to Fariza (2012) among the main challenge that encounter by entrepreneurs including lack of market knowledge, technological, skills capabilities and products quality. Beside, the work and ethics values are seen critical in order to develop overall performance of the SMEs (Ahmad, Amran & Halim, 2012). In addition to entrepreneurial values and ethics, entrepreneurs also need to focus on honing their skills on business management (Abdul Aziz Mahmud, 1977; Mohd Amir Saiffuddin, 1983; Humam Mohammed, 1988; Wan Liz Ozman, 2000: Al Habshi, 1995; Buerah, 2007).

Hence, the government has approved a set of strategic training programs to train 5,000 entrepreneur candidates (Ministry of Finance, 2013) to setting up business. Entrepreneurship training is important because it provides not only exposure to entrepreneurs but also help them learn the ropes. Entrepreneurship training programs should use experiential and action-oriented methods to meet the specific needs and requirements of entrepreneurs; hence, making them more progressive and not side-lined in the field (Zaidatol & Habibah, 2004). Even though the government had provided facilities involving substantial financial provision to help small business, but their achievements in this sector is still weak. In general, problems encountered by SMEs in Malaysia are caused by internal and external environment such as lack of poor management, competition, networking, product quality and leadership (Hung, Effendi, Talib & Rani, 2010).

Although many studies have looked into entrepreneur success, little effort has been made to Aviation Entrepreneur Model towards entrepreneur success. Thus, the purpose of this study is to develop an Aviation Entrepreneur Model which personifies the association between the Aviation values and entrepreneur success.

Research Gap and Study Objectives

This study will add on to the aviation entrepreneur literature, specifically on aviation industry. In particular, this study has five main objectives; to identify the factors that contribute to the successful aviation entrepreneur, to understand the relationship of four major successful traits of small and medium entrepreneurs in aviation industry, to identify the major roles and impact of small medium entrepreneurs for the growth of the aerospace or aviation industry, to identify areas of improvement of the aerospace or aviation industry from small medium entrepreneurs perspectives and to develop a model on successful aviation entrepreneur.

LITERATURE REVIEW

Most of the success factors of entrepreneurs studied more focused on the external factors and internal factors. External factors such as government support, training and skills, business size, location and number of employees. While, internal factors such as characteristics of the entrepreneur namely creativity, innovativeness, competitiveness, quick to act and responsible (Rosman, 2009; Nor Hasni 2005; Ku Azilah 2004). It is undeniable that the internal and external factors are very important to entrepreneurs in influencing their success. However, entrepreneurs need to continually strengthen their internal factors such as traits, behavior, skills and self-efficacy before embarking on their entrepreneurial venture. Evidently, these internal factors will eventually affect entrepreneurs' external factors (Rosman 2009; Zaidatol 2007; Norasmah and Halimah 2007).

Traits

The term traits used in this study refers to positive traits such as hard work, self-confident, innovativeness and creativity, visionary and determined to solve the problem (Zaidatol and Habibah

1997; Abd Aziz 1991). McClelland (1961) was the first to study the traits of an entrepreneur. He pointed out that many of the successful entrepreneurs who have the will towards excellent

achievement, take moderate risks and have high internal locus of control. While, Abdul Aziz (1991) felt that creativity is the competitive advantage that should have by entrepreneurs. This view was supported by Costa (1994), Kao J. in Dollinger, M.R (1995) and Noraishah (2002). While, Drucker (1994) and Barjoyai (2000) stated that creativity and innovativeness are important for entrepreneurs to produce a product that is useful to society. This opinion was supported by Yep (1985) in which he argued that creative human is often able to achieve progress more quickly than others because they enable the production of a product.

Behavior

The term behavior used in this study refers to the knowledge possessed by entrepreneurs in matters related to business (Norasmah and Halimah 2007). McGrat et al. (1992), in his study found that people who succeed in business have unique characteristics and nearly equal to each other. The same view was given by McClelland (1961) when he said that successful entrepreneurs have qualities similar to those of their achievement motivation is high. According to Noraishah (2002), a successful entrepreneur is a good risk manager. This opinion was supported by Halloran (1994) which stated that an entrepreneur that is willing to take the risk is said to have behavior as a successful entrepreneur. Findings from Wilken (1994) showed that psychological factors such as being able to bear the risk and highly motivated are associated with behaviors of successful entrepreneurs.

Skills

The term skills used in this study refers to the ability of self-entrepreneurs in their business activities effectively. Despite the characteristics and behavior of entrepreneurs, skills also one of the important roles to make an entrepreneur to be positive thinking in the business conducted and thus contribute to the success of business (Mohamed, 1996). Some of the skills needed by entrepreneurs are skills in management, finance and marketing. According to Costa (1994), marketing strategies are the key to success. This view was supported by McMohan (2001a) in his study found that the practice of providing formal financial report have a significant relationship with business performance. While Dyke, Fischer and Reuben (1992) in their study found that management experience is an important factor in achieving success or successful performance in a small business environment. Findings from Zaidatol & Habibah (2004) also showed that the important aspects of doing business are financial management, budgeting and cash flow statement preparation. In fact, most businesses fail due to lack of management, finance and knowledge of the preparation of the business plan (Humam 1992; Zaidatol 2007; Norasmah & Halimah, 2007). Zaidatol and Habibah (1997) also showed the same factors that have also caused many companies to go bankrupt because their owners do not have enough knowledge to address changing conditions of the market.

Self-efficacy

The term self-efficacy used in this study refers to the risk handling skills, financial control skills, management skills and marketing skills. In addition, self-efficacy is one of the factors affecting the success of an entrepreneur in the business. Entrepreneurs who have high self-efficacy work harder and able to work in the long term compared to individuals with low self-efficacy (Wood & Bandura in Andi 2007). Previous studies have shown that self-efficacy is related to the success of leaders and individuals (Bandura, 1997, and Hoy & Woolfolk, 1993). It is clear that self-efficacy is important to the individual in the performance of their duties and faces many similar problems in education, employment or life (Wan Haslina, 2003). It can be concluded that the characteristics of entrepreneurship not only include the characteristics of entrepreneurs but also involve behavior, skills and self-efficacy.

Success

According to Sull (2004) and Baron (2004), the differences of successful and unsuccessful entrepreneur can be defined from the level of knowledge the entrepreneur has with the specific context and the level of ambiguity in the business context. In the case of Brahim-LSG and KLAS as the inflight kitchen provider, their skills sets are of different requirements needed in the mass market.

It is acknowledged that in previous entrepreneurship studies, there are very little studies that focus on entrepreneurship in aviation context. This study focuses in aviation context to close the gaps an in fact it will give a big contributions to Malaysia country since aviation industry in Malaysia is recognised as one of the industry that boost Malaysian economy. In fact, the total revenues from the aerospace industry has grown from RM0.9 billion in 1998 to RM11.8 billion in 2014; and has provided more than 19500 job opportunity. Moreover, the investment value in the aerospace industry for the five year duration from 2010 to 2014 reached RM 4.2 billion compared to only RM 1.6 billion for twenty years duration, and it is expected to grow year by year (Malaysian Aerospace Industry 2030). In fact, there are at present more than 200 active companies established in the country that can be considered as aviation entrepreneurs. Hence, above discussion provide the rationale of undertaking this research.

The success of a business is due to many factors. In business, the concept of success generally refers to a firm's financial performance, it has been interpreted in many different ways (Foley and Green, 1989). Some authors defined success from tangible (objective) points of view such as revenue or a firm's growth, personal wealth creation, profitability, turnover (Perren, 2000; Amit et al 2000). Other studies (Watson et al 1998; Taormina and Lao, 2007) associated entrepreneurial success with continued business operations, operating for at least three years. Watson et al. (1998) and Dafna (2008) associate entrepreneurial success by relating the success with continued trading, and entrepreneurial failure is linked to unrewarding or ceased trading. Some other studies have interpreted the success from intangible points of view where intangible assets (e.g., goodwill of firm) are linked to key factors of success. In this study, aviation entrepreneur success is defined based on the understanding of definition given by several researchers (e.g., Perren, 2000; and Amit et al., 2000), who support the notion that a successful business is refer to revenue or a firm's growth, personal wealth creation, profitability and turnover. Therefore, this study will further enhance the criteria and indicators of successful aviation entrepreneur.

In general, many different terminologies are related to business failure, such as firm closure, entrepreneurial exit, dissolution, discontinuance, insolvency, organizational mortality, and bankruptcy (Cardozo & Borchert, 2004). Typically, entrepreneurial failure is defined as the cease of an operation for financial reasons, but one type of entrepreneurial failure is the discontinuance of venturing efforts by entrepreneurs (Liao et al. 2008). In particular, definitions of business "disappearance", "closure", "exit", and "failure" are confusing and often overlapping (Cardozo & Borchert, 2004; Stokes & Blackburn, 2002). Nonetheless, a failed business is the one which have to sell or liquidate in order to avoid losses or pay off the creditors, or the one which is unable to make a profitable go of the business (Gaskill et al. 1993). Pretorius (2009) reviewed the business failure definitions, and suggested a universal definition for the failure phenomenon: "a venture fails when it involuntarily becomes unable to attract new debt or equity funding to reverse decline; consequently, it cannot continue to operate under the current ownership and management" (Pretorius, 2009).In this study, unsuccessful is defined based on the understanding of definition given by several researchers (Cardozo & Borchert, 2004 and Pretorius, 2009).

The term success used in this study refers to revenues, profits obtained, growth and innovation, the value of assets, increase the number of employees and business network and customer satisfaction (for example, Hitt, Ireland, Camp, & Sexton, 2001; Lechler, 2001). These criteria are expected to relate closely to wealth generation. In line with previous literature reviews (for example, Adams & Sykes, 2003; Julien, 1998; Paige & Littrell, 2002), the growth and profitability are the two criteria most often used as performance measures in the entrepreneurship and small business literature.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Model of Aviation Entrepreneur
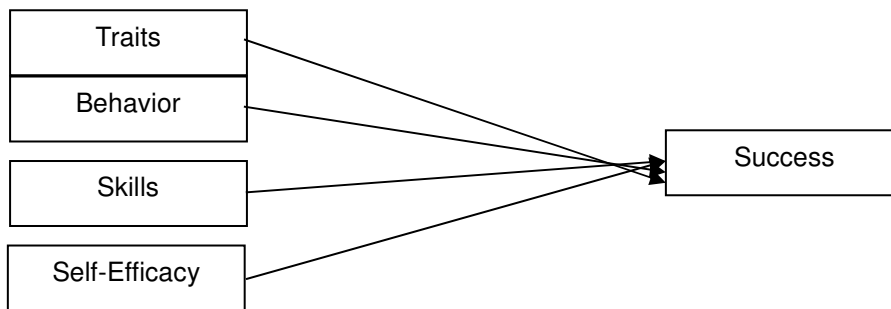
THEORETICAL FOUNDATION

Theory of Economic Development

In economic theory, the entrepreneur is seen as an important factor of production, as well as capital, labor and land. Rewards for entrepreneurs in the production process is profitability. Among the theories related to the importance of the role of entrepreneurs in economic development is the Schumpeters Theory of Economic Development (1934). Although this theory has long been produced, it is still significant enough to explain the role of entrepreneurs in economic development to date. Generally, the concept of economic development based on Schumpeter is referring to the importance of the role of entrepreneurs based on five conditions that occur. First, the introduction of new products in the market, i.e, goods that are not available in the market or goods with better quality. Second, the introduction of new production technology and has not been used. Third, opening new markets for products that have been released. Fourth, the discovery of new sources of raw materials or first created. Finally, the birth of new forms of organization in the industrial sector such as creating or destroying the monopoly or restructuring of existing industries (Schumpeter, 1934).

The theory put forward by Schumpeter puts innovation as the essence of the activities carried out by individual known as the entrepreneur. They are the key to economic development (Baretto, 1989). Entrepreneur constantly doing innovation, risk-taking, planning the use of production factors, manage and choose the combination of production factors. Through the changes made by the entrepreneur have changed the so-called power of creative destruction, that is the equilibrium shifts lead to changes in economic development. According to Brouwer (2002), entrepreneurs with special leadership qualities and the ability to act in the right way thus can make the right decision. Overall, the Theory of Economic Development presented by Schumpeter was directly linked the personality traits possessed by entrepreneurs as always worked hard, able to predict future needs and leadership (Witt, 2002). Those features will determine the business strategies that can influence business performance and contribute to economic growth in a country. The importance of the characteristics of entrepreneurs as asserted in the Theory of Economic Development is consistent with what have been analyzed by Littunen & Storhammar (2000), Gadenne (1999) and Keats & Bracker (1988), which asserted that factor of entrepreneurial characteristics of owner / manager is the most important factor that can affect the performance of small businesses.

Theory of Social Behavior

Max Weber, a German sociologist who has submitted an entrepreneurial model in 1958 to include religious elements as basic to success in economic activity (Rosli et al., 2007). Entrepreneur of the sociological perspective is based on the model presented by Max Weber, who founded the study of two groups of Protestant and Catholic religion. In his view, he stated that the success of the

Protestant is holding strong to their religious ethics (Jamaluddin, 1992). Protestant ethic described by Weber as a dedicated activity in the context of its relationship with the mundane (Mohd Amir, 1984). Max Weber included religious elements as the basis for success in economic activity. Model put forward by Weber was based on a review of the Protestants and their success in the economic

sphere. He said that the success of the Protestants in economic activity caused by the teachings found in the Protestant religion. He tried to show that the success was due to a strong grip on religion became the main impetus to the Protestants to achieve success in the economic sphere. Weber has written at length about the entrepreneurial model in the book entitled The Protestant Ethics and the Spirit of Capitalism. To Weber, the economy is in the context of capitalism. This German sociologist attempted to show that the success of the Protestants was due to a strong grip on the Protestant ethic (Kent, 1982). Protestant ethic described by Weber as activities devoted in the context of a relationship with God and be active (not only focus on purely ritual activities) in relation to the mundane. Entrepreneurial model presented by Weber can be considered as an attempt to show the relationship of religion or belief in entrepreneurship (Noraishah, 2002).

Self-Efficacy Theory

Self-efficacy theory pioneered by Albert Bandura who use the term of "self efficacy" to describe the constructs of expected success of an individual. At the beginning, Bandura has brought new changes with the introduction of "Self-efficacy: Toward a Unifying Theory of Behavioral Change". Next, Bandura published a theory related to the socio-cognitive factors of self-regulation and achievement of "Self-efficacy: The Exercise of Control" (Pajeras in Andi 2007). Self-efficacy is defined as consideration (judgements) one of the ability to organize and implement actions necessary to achieve the specified performance. Self-efficacy has no bearing on a persons skills, but it may be one consideration of any matter which may be done with expertise. It also means faith or confidence one has in the performance of behavior to achieve a purpose to be successful (in Andi Bandura, 2007). Self Efficacy is also defined as an individuals perception of their ability to perform a specific task (Bandura, 1977, 1986). It a self-assessment of ones ability to master a task. Self-efficacy can be defined as a belief that is very useful for understanding and predicting, the beliefs of an individual on his ability to implement new and difficult task or able to face difficulties in various domains of life (Schwarzer, 1992), a persons belief in the ability to move the cognitive resources, motivation and a considered appropriate way and necessary to the task requirements (Bandura, 2000), beliefs associated with the ability to self-direct behavior to get the desired results (Bandura, 1989a and 1989b; 1994, 1997), an expectation of someone that he behaves as needed to produce or achieve an outcome. Self-efficacy is also the individual assessment of his own abilities to organize and execute tasks to get the desired results or expectations. It can evaluate an individual in solving the problem and the extent of their confidence to solve the problem. In addition, self-efficacy is also associated with goal setting to achieve something dreamed up by the task carried out, environment or social interaction. This is important because it becomes the individual reference in performing each task (Pintrich, and Schunk, 1966). It is defined as confidence in the ability to organize and implement the cognitive, behavioral and social skills needed for success on a task (Bandura, 1986; Schunk, 1999). The self-efficacy also refers to an individuals self-confidence to trust to mobilize the motivation, cognitive resources and action planning that is needed to carry out a task. Bandura (1986) stated that self-efficacy influences performance by increasing effort and perseverance. Individuals with high self-efficacy, work hard and able to work in the long term compared with individuals with low self-efficacy (Wood & Bandura in Andi 2007).

Previous studies have shown that self-efficacy was related to the success of leaders and individuals (Bandura, 1977 and Hoy & Woolfolk, 1993). Since the beginning, the founder of this theory has linked the perception of self-efficacy with the achievement. Carson and Enz (1999) stated that self-efficacy is the basic of trust in an individual where they believe that they are able to perform the task until it is succeed. This construct refers to an individuals perception of their ability to perform a specific task (Bandura, 1977; 1986). In other words, it is a self-assessment of ones ability to master a task. Self-efficacy is a measurement that is used as a measure of control over the environment. The assessment of self-efficacy is more to tasks and certain situations (Pajeras, 1997).

Most individuals that do not have the self-efficacy are a bit confused with the assessment of behavior that they will produce. Self-efficacy can help in determining the outcome of ones confidence and expectation in social skills and job skills. The confidence possessedcan expect high performance

and can expect good quality in their careers in the future. A lack of confidence or doubt in their reliability often get low achievement and job performance and not accepted by society. Sometimes,one's self-efficacy and expected value is not consistent. High self-efficacy cannot expect

behavior that is consistent with the belief if the individual believes that the results of such behavior give undesirable effect (Pajeras in Andi 2007). Therefore, it can be explained that self-efficacy is important to his or her an individual in completing the task and he or she may have to face many problems either learning process, job or life (Wan Haslina, 2003).

Kohlberg's Theory

This theoretical approach is based on a study made by Lawrence Kohlberg's theory whereby he argued that individual morality evolves over several levels based on their behavior (Kohlberg in Margeret et al., 2006). There are three levels and six stages below this theoretical approach. The levels and stages of moral development are as follows. The first level is the level of pre-conventional

consists of two levels of punishment orientation and obedience. At this stage, a person is self-centered, they adhere to a more powerful authority for fear of punishment or fine. The second stage is instrumental relativist orientation where at this stage, one has to take care of others, but still have self-interest. The main motive of a person is to satisfy the needs of yourself and do not care about the needs of others. The second level is the level of Conventional consistsof agreementorientation between individual. At this level, a person cares about other people and follows their norms. Their motive is to be a good person as expected by others. Love and caring attitude play the important role. While, the stages of laworientation and regulations indicate that someone is concerned about peace in the society. A person has a responsibility to preserve regulations in society. The main focus is to keep the community and avoid split in the system. The third level is the level of Post-conventional that contains the contract-legalistic orientation of social. At this stage, one has an obligation to the law because of its social contract to comply with the law in order to protect the welfare of the people and protect their rights. Laws are made for the benefit of all. However, values such as liberty and life should be defended in any society without regarding to the opinion of the majority. The final stage is the universal ethical principle orientation. At this stage, a rational person believes the validity of universal moral principles, and they have a personal commitment to it. Universal principles are as justice, equality and respect for the dignity of people as individuals. A law or social agreement is normally valid particularly because it is based on those principles. When a law is violated, a person will act in accordance with these principles (Margeret et al., 2006).

Successful Entrepreneur

Noraishah (2002) which said that a successful entrepreneur is someone who is innovative because he often introduces new ideas or new methods of production. He is always trying to improve items or existing services or create new items and services to attract customers. Apart from these characteristics, another study done by Sexton and Bowman (1990) reported that successful entrepreneurs are the ones that have high energy and endurance. They are also capable of dominating the subordinates as a powerful weapon in controlling climate change and bring new ideas. An entrepreneur should also be able to survive long in solving business problems (Bacas & Croft, 1986). The results of a study performed by Vaught and Hoy (1981) found that these values are well appreciated by entrepreneurs compared to non-entrepreneurs. The personal values are the main catalyst for entrepreneurial success. Positive values available to entrepreneurs like freedom, positive thinking, work in small, highly motivated, ambitious, confident, tolerant with difficulty and are willing to sacrifice are the factors leading to dynamic entrepreneurs (Vaught and Hoy, 1981).

CONCLUSION

Aviation Entrepreneur model will help the policy maker and industry player to enter and sustain in the market constructively-with the identification of essential instruments and elements needed especially for the small and medium industry player. The study will definitely assist the policy maker and the industry player in identifying the strength and weaknesses of being entrepreneurs in the industry. By identifying and acknowledging the two sides of the establishment, all parties involved will benefit. The outcome of the study will help them to address the limitations therefore increasing their capabilities and sustainability. Being sustainable will help the country to grow the job market and

boost the country not only to become the excellence center of aviation but also in the success of developing the sustainable entrepreneurs.

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FACTORS AFFECTING INFANT MORTALITY RATES

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Abstract

Infant Mortality Rate (IMR) is one of the renowned indicators to evaluate a health system's performance or well-being of a nation. This paper adopts panel data method such as Pooled OLS (POLS), Random Effects (RE), Fixed Effects (FE), and Fixed Effect Robust (FER) regression model to investigate the factors affecting infant mortality rates for 171 countries from 1995 to 2013. This study finds that fertility rate, GDP per capita, health expenditure, and female labour force are statically significant. The results indicate that fertility rate have a positive relationship with infant mortality rate. GDP per capita and health expenditure show negative relationship with infant mortality rate. Female labour force indicates an inverted-U shape between labour and infant mortality rate.

Keywords: Fertility, Mortality, Fertility, Labour, Health expenditure and GDP per capita

INTRODUCTION

Infant mortality rate is defined as a ratio of infant deaths before the age of one to the total number of live birth registered in the same year. This rate is an important index for monitoring health level in a nation, evolution standard of living or evolution a policy which is related to population. However, there is a little evidence shows that the use of infant mortality rate as an indicator of health has a negative impact on older groups in the population. This is because this indicator focuses more on the health policy and its outcome only. Nevertheless a study by Reidpath & Allotey(2003) proved that infant mortality rate remains as a useful indicator of population health. Despite of technology advancement, infant mortality is still occurring in every part of the world. In year 2013, the *World Health Organization* (WHO) shows that there are 4.6 million infant deaths reported. Although the rate of infant mortality shows a substantial reduction in many developed countries but these gains have not spread to developing and underdeveloped countries. Indeed, in year 2013 itself, the infant death between the underdeveloped nations is around five times higher than the developed nation(World Health Organization, 2015). Therefore, it is critical for this further research to be conducted in hope to provide better solution to further reduce the infant death that occurring all around the world.

There is a lot of factor that may increase or decrease the rate of infant mortality. In this study, some of the key determinant of infant mortality rate; fertility rate, GDP per capita, health expenditure and female labour force participation will be used to identify the effect of infant mortality rate for 171 selected countries. This is because the main objective of this study is to identify the major factors that affecting the infant mortality rate and their relationship with infant mortality rate. This is because today's infant will be the future citizen of a nation who is a greatest asset of a country. By identified the factors, the infant rate can be improved and mortality rate can be reduced in future by reallocated the resources of a country. Moreover, there are limited studies that applying panel data for this scope of study. Indeed, most of the studies are analyzed by using cross sectional data (Zakir & Wunnava, 1999; Rezaei et al., 2015). Hence, it is crucial for a further research to be conducted to close this gap and provide more accurate information to the policy maker to deal with the infant death.

Figure 1 shows the relationship between fertility rate and infant mortality rate, female labour force participant in working sector and infant mortality rate, GDP per capita and infant mortality rate and health expenditure and infant mortality rate for 171 selected countries. The fertility rate has a

positive relationship with infant mortality rate. It means that when the fertility rate increase, the infant mortality rate also will increase. Female labour force participant in working sector shows an inverted U-shape relationship between female labour force participant and infant mortality rate. It means, increase in the labour force of female participant will increase the infant mortality rate until one stage where the increase in labour force of female participant will decrease the infant mortality rate. The GDP per capita of a nation has a negative relationship with infant mortality rate. This relationship shows that, when the GDP per capita increase the infant mortality rate will decrease. The health expenditure shows a negative relationship with infant mortality rate. It means that if more money is spending on health the infant mortality rate will decrease.

Figure 1: Scatter-plot for Fertility rate (a),Female labour force participant (b), GDP per capita (c) and Health expenditure (d) with infant mortality rate for 171 countries from 1995 to 2013.
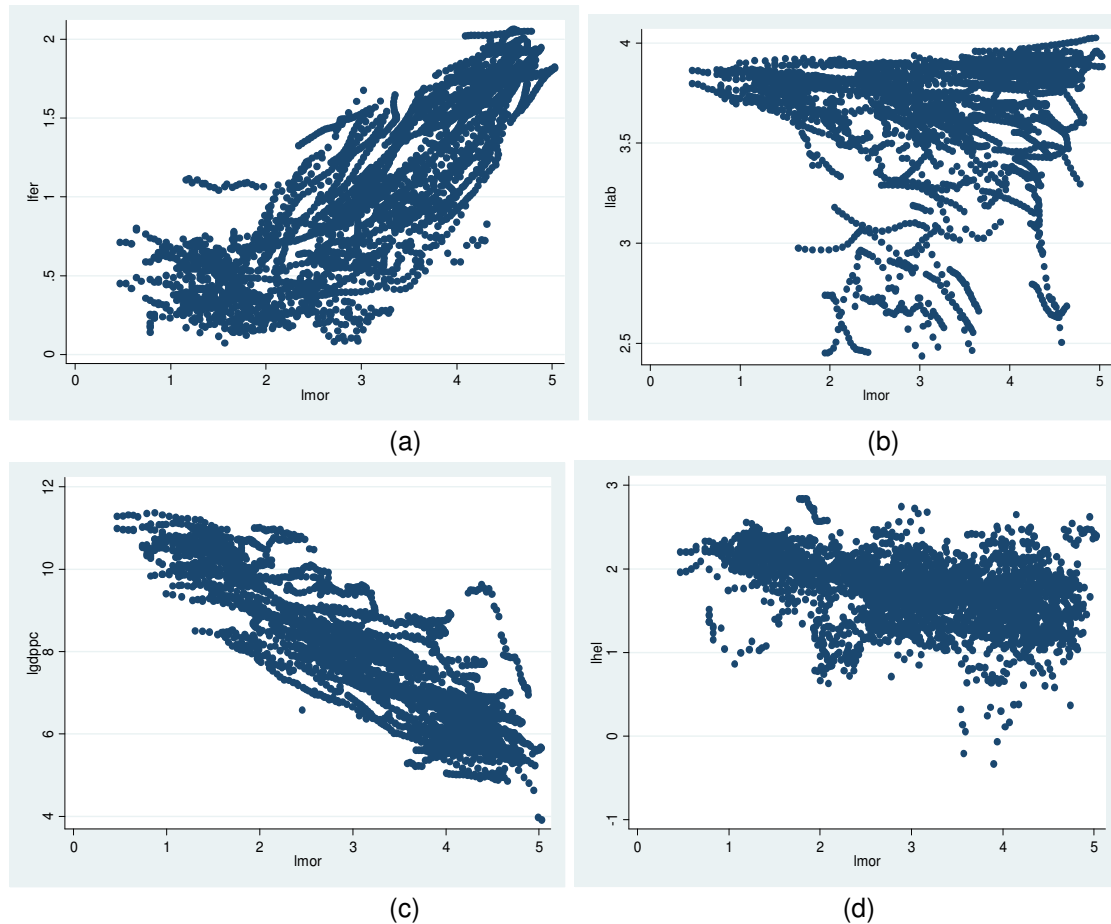
Source: The World Bank

LITERATURE REVIEW

The earlier studies on the factor affecting infant mortality rates are abundant and have a long history. Thompson (1920) in his studies provides a list of factors that influence infant mortality rate in Florida. The factors are: midwives with their superstition who is lack of education and training, diseases classified in the early infancy or tetanus and ignorance or lack of care, insanitary conditions of the home and its surroundings which affect the death rates from diarrhea and summer bowel complaints, malaria and the percentage of infant deaths increases with an increasing percentage of births. According to Birdsall (1988) a physically ill mother and later pregnancies are the main reason of reduction in the chances of survival for a baby before and after birth. On the other hand, Yamada (1983) conclude that medical and health technological development is the main reason of the decline in the infant mortality rate in Latin America.

Using cross-section data set, Zakir & Wunnava (1999) have undertaken a empirical study on factors affecting infant mortality rate in 117 countries for 1993. Their result shows that fertility rates has a positive relationship with infant mortality rate, but per capital GNP, female literacy rates and government expenditure on health have a negative relationship with infant mortality rate. Moreover, female participation in the labour force shows an inverted-U shaped relationship. Nevertheless they conclude that, fertility rates and female literacy rates have a strongest impact on infant mortality rates.

Naveed et al. (2011) apply Vector Error Correction Model (VECM) to investigate the socio- economic determinants of infant mortality in Pakistan. They find that per capital income and women empowerments have a negative relationship with infant mortality rate. Additionally, population factor has a positive relationship with the infant mortality rate. Naveed et al. (2011) conclude that female labor force participation and female education have more affect than per capital income on the infant mortality rate.

Using time series study, Rezaei et al. (2015a) examine the socioeconomic determinants of infant mortality in Iranian from 1967 to 2012. Their results show that there is a positive relationship between total fertility rate, percentage of people living in rural regions with mortality rate of infant. Further, Rezaei et al. (2015a) find that infant mortality rate have a negative relationships with physicians and mean years of schooling. However, there are insignificant between per capital GDP and female labor force on infant mortality rate.

Rezaei et al. (2015b) adopt balanced panel data to examine the impact of socioeconomic and health system factors on infant mortality rate in organization of the petroleum exporting countries (OPEC) from 2004 to 2013. They show that total fertility rate has a positive impact on infant mortality and there are negative relationship between GDP per capita and public health expenditure on infant mortality. However, they do not find that any relationship between infant mortality and female labor force participation rate. Rezaei et al. (2015b) conclude that total fertility rate, GDP per capita, public health expenditure as a percentage of total health expenditure are the main factors affecting on infant mortality in OPEC over the studies period.
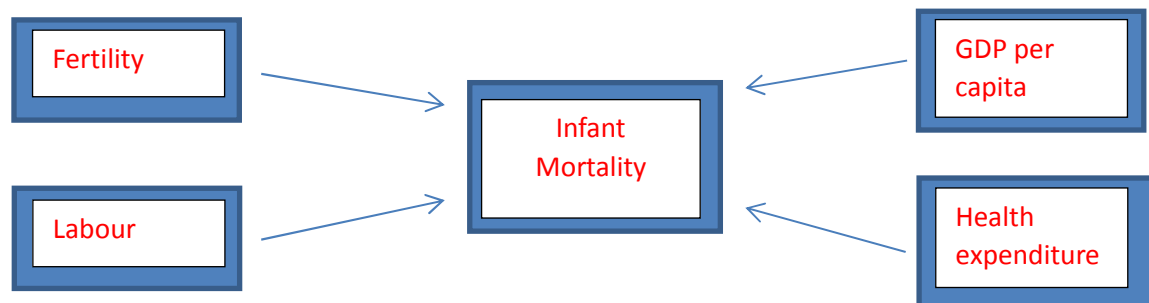
CONCEPTUAL FRAMEWORK

Figure 2: The factors affecting infant mortality rates

Figure 2 indicates that there is positive relationship between fertility and infant mortality. This suggests that increase fertility will increase the possibility of infant mortality. GDP per capita and health expenditure are negative relationship with infant mortality due to increase GDP per capita and health expenditure of health will improve the living standard for the infant. Thus, the infant mortality will decrease. Besides, there is inverted-U shape between labour and infant mortality. This study suggests that the increase female labour force participates in labour market will increase infant mortality because female labour forces have less time to take care their infant. After a time, increase female labour force participates in labour market will decrease infant mortality because female labour force concurrent with economic growth(Zakir & Wunnava, 1999).

RESEARCH METHODOLOGY

Empirical Model

To investigate the factors affecting infant mortality rates for 171 countries from 1995 until 2013, this study applies Pooled OLS (POLS), Random Effects (RE), Fixed Effects (FE), and Fixed Effect Robust (FERB) regression model. Thus, the empirical model as following:

$$IMR_{it} = \beta_0 + \beta_1 FER_{it} + \beta_2 GDPPC_{it} + \beta_3 HEL_{it} + \beta_4 LAB_{it} + \beta_5 LAB_{it}^2 + \varepsilon_{it}$$
(1)

where IMR is infant mortality rate, FER is fertility rate, GDPPC is gross domestic product per capita, HEL is health expenditure, LAB is female labour force, LAB^2 is female labour force square, index $i = 1, \dots, N$ refers to countries, index $t = 1, \dots, T$ refers to period of time, and ε_{it} is error term. In addition, this study will use Breusch-Pagan Lagrange multiplier (BPLM) test to evaluate the model of POLS or RE. If the result of BPLM is rejected, this means that POLS is not suitable for this study. Hence, this study will process to the Hausman test to determine whether RE and FE are the suitable model for this study. Further, the RE model as following:

$$IMR_{it} = \beta_0 + \beta_1 FER_{it} + \beta_2 GDPPC_{it} + \beta_3 HEL_{it} + \beta_4 LAB_{it} + \beta_5 LAB_{it}^2 + \delta_i + u_{it}$$
(2)

where IMR is infant mortality rate, FER is fertility rate, GDPPC is gross domestic product per capita, HEL is health expenditure, LAB is female labour force, LAB^2 is female labour force square, index $i = 1, \dots, N$ refers to countries, index $t = 1, \dots, T$ refers to period of time, δ_i is individual specific effect, and u_{it} is error term with normal distribution. Additionally, δ_i is to measure unobservable characteristic. Further, the FE model as following:

$$IMR_{it} - \overline{IMR}_i = \beta_1(FER_{it} - \overline{FER}_{it}) + \beta_2(GDPPC_{it} - \overline{GDPPC}_{it}) + \beta_3(HEL_{it} - \overline{IMR}_{it}) + \beta_4(LAB_{it} - \overline{LAB}_{it}) + \beta_5(LAB_{it}^2 - \overline{LAB}_{it}) + (u_{it} - \bar{u}_{it})$$
(3)

where IMR is first different infant mortality rate, FER is first different fertility rate, GDPPC is first different gross domestic product per capita, HEL is first different health expenditure, LAB is first different female labour force, LAB^2 is first different female labour force square, index $i = 1, \dots, N$ refers to countries, index $t = 1, \dots, T$ refers to period of time, and u_{it} is error term with normal distribution. After within transform the model, the constant and individual specific effects are eliminated. If the results concluded that FE model is the best model for our study, this study will include FERB for robustness checking.

Sampling Design

This study uses unbalanced data from 1995 until 2013 to investigate the factors affecting infant mortality for 171 countries. The dependent variable is mortality rate, infant (per 1,000 live births) and the independent variables are Fertility rate, total (births per woman), GDP per capita (constant 2005 US$), Labor force, female (% of total labor force), and Health expenditure, total (% of GDP). Further, this study generate labor force square in order to investigate the inverted-U shape between female labor and infant mortality. This study obtains data from the World Development Indicators (2015). Before estimation, this study will transform all the variables into natural logarithms.

Research Procedure

This study uses panel data method to investigate the factors affecting infant mortality for 171 countries. First, this study applies Pooled OLS (POLS), Random Effects (RE), Fixed Effects (FE), and Fixed Effect Robust (FERB) regression model. Additionally, this study uses Breusch-Pagan Lagrange multiplier (BPLM) test to examine whether POLS or RE are suitable for our study. If the result of BPLM is rejected, this indicates POLS is not suitable for our study. Hence, this study needs to use Hausman test to determine RE or FE is the best model. If the Hausman test is rejected, this concludes that FE is the best model. Additionally, FERB will be used in order to robustness checking for the FE, if the FE is the best model.

DATA ANALYSIS

Table 1: Summary of Pooled OLS model, Random Effects model, Fixed Effects model, and Fixed Effects Robust regression results

Notes: * denotes significant as 10% confidence level, **denotes significant as 5% confidence level, ***denotes significant as 1% confidence level.

As noted earlier, this study applies Pooled OLS, Random effects, Fixed Effects, and Fixed EffectsRobust to investigate the factors affecting infant mortality rate. First, the result of BPLM test rejected the POLS. This suggests that the POLS model is not suitable for this study. Second, this study uses Hausman test to whether Random Effects model or Fixed Effects model are the best model for our study. In addition, the result of Hausman tests rejected Random effect. Therefore, this study will apply Fixed Effects to estimate the factors affecting infant mortality. Additionally, Fixed Effects Robust will be used to robustness checking for the Fixed Effect.

Accordingly, this study employs annual data from 1995 to 2013 for 171 countries in the analysis. The empirical analysis indicates that LFER has a positive relationship on infant mortality (Rezaei et al., 2015a, 2015b; Zakir & Wunnava, 1999; Eckstein et al., 1998).Moreover, a 1% increase in LFER increases infant mortality by 0.360%. The higher rate of fertility is associated with higher rate of infant mortality and vise verse.

The result bases on FERB, the higher LGDPPC is associated with lower infant mortality rate (Rezaei

Variable	Pooled Ordinary least square (POLS)	Random Effects (RE)	Fixed Effects (FE)	Fixed Effects Robust (FERB)
LFER	0.785 (0.021)***	0.407 (0.027)***	0.360 (0.0280)***	0.360 (0.113)***
LGDPPC	-0.392 (0.007)***	-0.618 (0.011)***	-0.669 (0.013)***	-0.669 (0.086)***
LHEL	-0.266 (0.020)***	-0.221 (0.015)***	-0.209 (0.015)***	-0.209 (0.046)***
LLAB	-0.088 (0.406)	3.109 (0.390)***	3.677 (0.396)***	3.677 (1.250)***
LLAB^2	0.015 (0.060)	-0.579 (0.060)***	-0.701 (0.062)***	-0.701 0.197)***
Constant	5.966 (0.687)***	4.380 (0.649)***	4.394 (0.652)***	4.394 (2.128)**
Breusch-Pagan LM test	20754.56***		-	-
Hausman test	-	195.16***		-
Observation	3189	3189	3189	3189

et al., 2015b;Sartorius & Sartorius, 2014;Jiménez-Rubio, 2011;Olson, Diekema, Elliott, & Renier, 2010;Zakir & Wunnava, 1999). The analysis shows that the LGDPPC increases 1% lead to infant mortality decrease 0.669%. Some researchers have demonstrated there are negative relationship between LHEL and infant mortality (Rezaei et al., 2015a; Shetty & Shetty, 2014; Sharifzadeh et al., 2008)The result shows that a 1% increase in LHEL decreases infant mortality by 0.209%. These suggest that increase income and health expenditure will decrease the infant mortality rate because income and health expenditure can improve the living standard for the infant.

Besides, there is invested-U relationship between labour and infant mortality (Zakir & Wunnava, 1999). This can be explained that female labour forces have less time to take good care for their infant when female labour forces work. After a time, increase female labour force participates in labour market will decrease infant mortality. This can be explained that the salary of female increase

after a time, thus, the demand for quality of infant will increase and this will improve the living standard. Therefore, after a time, the infant mortality will decrease after the female participate in labour market. Alternatively, female may have less opportunity to have baby after participate in labour market. Hence, the infant mortality will decrease due to fertility rate decrease.

CONCLUSION AND DISCUSSION

This paper is conducted to investigate the factors that affecting the infant mortality rates. As discuss by previous studies, fertility rate, GDP per capita, health expenditure, female labour force are the factors that affected the infant mortality rates. This study result is in line with previous studies such as Zakir & Wunnava(1999). In addition, Zakir & Wunnava(1999) indicate that cross sectional data has a limitation on interpreting the result. Hence, to fill the gap, this study applies a panel data of 171 countries from years 1995 to 2013. The results indicate that the GDP per capita, health expenditure and female labour participant into labour market are negatively affecting the infant mortality rates. In contrast, fertility rates are positively affecting the infant mortality rates.

The major intention of conducting this study is to provide more accurate information to the policy maker about the factor that affecting the infant mortality with a larger sample scope. Policy-maker of nationwide especially developing nation and under-developed nations should provide more expenditure to enhance their health system. A complete health system that includes producing more medical personal, more supply for medical services, more high-tech medical equipment and also the education on infant health should be given a crucial attention by the policy maker. Besides, increasing the standard of living of the population in a nation is also an important step to reduce the possibility of the infant motility rates. Female labor force participation will able to enhance the family income. Thus, increase the quality of infant that can reduce the infant mortality rates.

However, there is still lacking in this study where the education variable's data is incomplete. Hence, for future study, education variable should be including to provide better understanding in preventing the infant mortality.

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Economic Impact of Flood Disaster – A Conceptual Framework using I-O Analysis

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Abstract

Serious flood disasters will recur due to global warming, deforestation, and a lack of enforcement to prevent flooding. In responding to the direct impact to the economy (damages to stock or capital), the output suppliers in affected areas may react in a few ways. (1) Decrease production of output. Earning less revenue may cause industries to lay-off employees and postpone purchases of inputs. (2) Increase products' prices if additional output cannot be produced. (3) Increase the purchase of imported inputs. The spill-over effects of the direct economic impact represent the economic indirect impact of a natural disaster. Assessing the indirect economic loss of a flood disaster is difficult. This paper proposes to estimate the direct and the indirect losses from the reduction of economic activities in the local area using Input-Output (I-O) analysis. Questionnaires need to be distributed to local residents, non-local residents or visitors, and local establishment owners for estimations of direct and indirect economic losses. The I-O's estimation of the total economic impact on the affected areas would be important to policy makers in planning for recovery.

Keywords: I-O Analysis, Direct Economic Impact, Indirect Economic Impact, Recovery Plan

INTRODUCTION

Natural disasters directly affect the economy – termed a direct impact (Merz, Kreibich, Schwarze, & Thieken, 2010; Meyer et al, 2013) - when production of output is affected. This happens when the natural disasters damage the company's capital, infrastructures' facilities, and inventories which can affect the manufacturing of goods and provision of services.

In responding to the direct impact, suppliers of goods and services in the affected region may react in one or more of the following ways: (1) Decrease their production and operation, and therefore earns lesser revenue which may then result in the lay-off of employees and postponement of input purchases. (2) Increase prices of product if the current levels or additional outputs cannot be produced, usually done during or immediately after the disaster. (3) Increase the purchases of imported inputs if production is possible and the supplies of local inputs are disrupted. In brief, the local industries (primary and secondary) will lose the opportunities to sustain or create additional output, income, and employment while imported inputs will increase in the domestic economy. As a result, local people will likely lose their jobs, getting lower pay, and may migrate to other regions. The latter events represent the indirect economic impact on the local region. In short, damages to physical stock or capital will disrupt the production, distribution, and consumption within the local economy (Rose, 2004; Rose & Liao, 2005).

Sad to say, most economic impact studies of disasters tend to focus on measuring the direct impact, and then recommend that the government restores the damaged physical public goods and facilities so that the economic activities can continue as usual. This short-term recovery measure may be useful instantly but in long-run, the net losses from production, distribution and consumption may become worse than before the disaster. For example, in 1995, the earthquake in Kobe had destroyed

the physical stock and inventories of local companies. As the cost of restoring the factory's damaged building and equipment was too high, the management of Sumitomo Rubber Industries Ltd. decided to close the factory and began the manufacturing operation in another region. The government's restoration of damaged public stock is imperative but it doesn't mean that the business players would continue to operate their businesses in the disaster-affected area like before.

Dacy and Kunreuther (1969) asserted that in planning an optimal long-term recovery strategy, the public policy makers need to construct a rebuilding process that can enable the local people and industries to exist like in the pre-disaster economic stage. In other words, the local community hopes to be in at least the same economical position as they were before.

Therefore, the research objectives that this article proposes are: (1) estimating the direct impact of disaster as reflected by the damage to physical stock; and (2) computing the indirect impact as a result of the direct impact caused by the disaster. This paper aims to provide tactical solutions that can assist government in planning the long-term recovery strategy for the betterment of the local community.

In this paper, the authors propose the use of the standard I-O (Input-Output) analysis for measuring the direct and indirect effects in a local region's economy due to disaster. In some past cases, researchers used available and published regional I-O tables for their studies. However, if suitable published I-O data is not available, the researchers need to construct their own I-O tables. Unlike other studies, this paper also proposes to include the estimation of potential expenditure by visitors in the disaster-affected regions. Visitors do generate higher demand for local products in the affected region. Therefore, the expected loss of visitors' expenditure should be treated as an indirect loss to local community.

LITERATURE REVIEW

Assessing the negative economic impact of natural disaster is a popular research area in the literature (Carrera, Standardi, Bosello, & Mysiak, 2015; Chen, Brown, Chang, & Ma, 2014; Eduardo Amaral Haddad & Eliane Teixeira, 2015; Ritchie & Dowlatabadi, 2014; Toyoda, 2008). Studies have shown that natural disasters can cause negative economic impacts not only in the affected region but also in adjacent areas – in both the short and long runs. For example, the closure of agricultural farms in a flooded area would affect the production of related factories located in local and adjacent regions because the supply of raw materials was disrupted. The factories would need to source inputs from other regions. As a result, the local community's current production, sales, income, and employment will be reduced immediately and in the future as well.

I-O table is a matrix table used by many researchers to measure the flows of output and services' monetary value within a local economy due to disaster (Chen, Brown, Chang, & Ma, 2014; Li, Crawford-Brown, Syddall, & Guan, 2013; Ritchie & Dowlatabadi, 2014; Toyoda, 2008). I-O model is useful to: (1) trace the flow of input produced by each industry to every other industry for the production of output; and (2) compute the share of output sales that have been circulated as wage and income, proprietors' income, and for tax payments. I-O multipliers can be calculated based on the re-circulation of expenditure spent by local residents, non-local residents (such as visitors and foreign labour) and industries within the disaster affected area.

A region is considered economically self-sufficient if the local economy can provide most of the demanded goods and services in the region itself. A self-sufficient economy generates high multipliers values (in terms of sales &/or output &/or income). A high proportion of the expenditure earned from local communities and visitors would circulate in the region's economy. Therefore, additional output will be produced in future, more companies in the same and other industries will be established and thus generate additional income and job opportunities to the local people. Import is considered a leakage in a local economy as it shows the outflow of money to sources located outside the study area.

Jonkhoff (2009) claimed that the affected region will experience the negative indirect impact but, the ripple effects could produce positive impact to adjacent and distant regions' economies. This statement can be explained as follows. It is expected that the regional imports' ratio of goods and

services from outside the studied boundary after natural disaster is higher than before – at least in short term – because local establishments cannot acquire the inputs from local suppliers. As a result, the self-sufficiency ratio in the affected area decreased and this will increase the economic leakages (in terms of money and labour) to other regions.

RESEARCH METHODOLOGY

In developed countries, many regional I-O tables are available but they do not show the economic activities in smaller areas within the regions. Therefore, many researchers chose to construct their own I-O tables that can measure all the inflows and outflows of money within the economies of the studied regions. Table 1 shows the basic structure of an I-O table which is composed of three main sections:

1. A productive sectors quadrant demonstrates the amount of money transactions for the purchase of input and sale of output between industries sectors operating in the studied region;
2. A primary input quadrant shows the payments of wages, salaries, profits, dividends, taxes, and imports which are earned by the industry sectors from local residents and visitors' spending; and
3. A final demand quadrant represents the estimates of output supplied by each productive sector to the end users: local residents, investor, government, and visitors. Non-local residents such as visitors' expenditure in each productive sector can be viewed as an export demand because it represents an injection of new revenue from outside regions to the local economy (Braun & Rungeling, 1992; Hjerpe & Kim, 2007).

Each column matrix of the I-O table shows the estimates of input purchases from productive sectors and value added sources located inside and outside the study's region by a particular productive sector. Each row matrix of the I-O table, on the other hand, denotes the estimates of output sales from a particular productive sector to the same and/or other productive sectors and end users such as household, government, export, and for investment purpose (Flegg, Webber, & Elliot, 1995).

Table 1: Basic structure of an Input-Output Table

Sales to sector j / Purchases from sector i	Productive sectors quadrant Sector j					Final demand quadrant sector				
	1	2	3		M	H	I	G	E	
1	X_{11}	X_{12}	X_{13}	…	X_{1m}	C_1	I_1	G_1	E_1	X_1
2	X_{21}	X_{22}	X_{23}	…	X_{2m}	C_2	I_2	G_2	E_2	X_2
3	X_{31}	X_{32}	X_{33}	…	X_{3m}	C_3	I_3	G_3	E_3	X_3
:	:	:	:	:	:	:	:	:	:	:
M	X_{m1}	X_{m2}	X_{m3}	…	X_{mm}	C_m	I_m	G_m	E_m	X_m
Primary input quadrant										
Wages & salaries	W_1	W_2	W_3	…	W_m					
Profit & dividends	P_1	P_2	P_3	…	P_m					
Taxes	T_1	T_2	T_3	…	T_m					
Imports	M_1	M_2	M_3	…	M_m					
Total Inputs (purchase)	X_1	X_2	X_3	…	X_m	C	I	G	E	X

Adapted from Fletcher (1989)
where,

X : Output produced by local industry j or the purchase of input by industry i located in the region
W : Wages & salaries paid by industry j
P : Profits & dividends earned by industry j
T : Taxes paid by industry j
M : Purchase of input from sources located outside the region by industry j

Final Demand Sectors - shows the sales of output produced by industry j located in

the region for the consumption of:
H : Local community
I : Investment or to industries located outside the studied region
G : Government
E : Visitors

The number of industry sectors in the studied area can be determined by finding out the main economic activities run by the local community. For example, in Malaysia's rural areas, the Economic Transformation Programme (ETP), Government Transformation Programme (GTP), and the Annual Report (2013) show that (1) agriculture, forestry, fishing, (2) tourism, (3) plantations, and (4) cottage were the main industries. Based on the report, researchers can disaggregate the I-O Table into the 4 main sectors. Meanwhile, the tourism sector itself can be disaggregated into 4 sub-sectors – (1) accommodation, (2) food and beverage, (3) shopping, and (4) entertainment and recreation.

I-O table needs to be transformed into an I-O model by converting the table matrix into technical coefficients matrix a_{ij} for each productive sector to measure the direct effect. The coefficient matrix a_{ij} is an index that shows the proportion of money spent by industry j on the purchase of inputs produced by industry i for output production (Dietzenbacher, 2002).

The direct dependencies of inputs manufactured by other industries that are required to produce one unit of output are called backward linkages, (Dietzenbacher, 2002). The coefficient matrix a_{ij} also shows the forward linkages that give the proportion of sector j's output that is supplied to sector i as input (Dietzenbacher, 2002).
To compute the multipliers, it is necessary to calculate the Leontief inverse matrix by using the following mathematical steps (Archer & Fletcher, 1996; Wanhill, 1988),

$$\Delta X = A\,\Delta X + \Delta T \tag{1}$$
$$\Delta P = B\,\Delta X \tag{2}$$
$$\Delta L = E\,\Delta X \tag{3}$$

Where
ΔX = $n \times 1$ vector of the change in gross output
ΔP = $k \times 1$ vector of the change in primary factor input
ΔL = $l \times 1$ vector of the change in employment resulting from the change in gross output
ΔT = $n \times 1$ vector of the change in visitor expenditure by category
A = $n \times n$ matrix of intermediate consumption coefficient
B = $k \times n$ matrix of coefficients representing usage of primary factors
E = $l \times n$ matrix of employment coefficients

Then, solve the equations above,
From (1) $\Delta X\,(I - A) = \Delta T$
Thus, $\Delta X = (I - A)^{-1}\,\Delta T$ (4)

Substitute of equation (4) into equations (2) and (3) gives
$\Delta P = B\,(I - A)^{-1}\,\Delta T$ (5)
$\Delta L = E\,(I - A)^{-1}\,\Delta T$ (6)

The multiplier matrix is denoted by the inverse of technology matrix $(I - A)^{-1}$ that is used to compute the additional (or reduce) amount of gross output in sector i that is required, directly and indirectly, to meet the increase (or decrease) of one unit of final demand in sector j (Archer & Fletcher, 1996; Dietzenbacher, 2002; Flecther, 1989).

The *sales or output multiplier* for each sector in an open model can be obtained by summing down the Leontief inverse matrix of each sector j. For example, the sales multiplier for sector 1 is equivalent to $(I - A)^{-1}_{11} + (I - A)^{-1}_{21} + (I - A)^{-1}_{31} + \ldots + (I - A)^{-1}_{m1}$. The sales or output multiplier denotes the decrease of output (in monetary term) that needs to be undertaken by local industries (sector j) due to reduction of input demanded by other local industries (sector i)..

Meanwhile, the computation of income multiplier is quite distinctive compared to sales multiplier. The vector of technical coefficient income is computed by summing the technical coefficients – of wages and salaries, with profit and dividends. The formula for the computation of

income multiplier in a closed model is "*Income multiplier = Leontief inverse matrix $(I - A)^{-1}$ * vector of the technical coefficient of income*". The income multiplier indicates the decrease of income earned by local people due to closure of industry or as a result of paycut practiced by affected industry.

Employment multiplier shows the change of number of jobs that could be lost in the affected area due to direct and indirect loss.

It is common that most I-O analysts cannot get the total estimate for sales (Xi) to equal the total estimate for purchases (Xj) for the same productive sector. If all industries and local residents in the study region record their business data that result from income earned from local and non-local residents in complete detail, then an error-free I-O table is probably attainable. Therefore, the Xi and Xj values need to be reconciled. Jensen and McGaurr, and Shaffer's reconciliation techniques can be used.

Research Design for Quantitative Data

Most secondary data is unsuitable for the research I-O table because the statistics for the breakdowns of consumers' expenditure on different business sectors in smaller or rural areas are not published. This paper suggests collecting primary data from local and non-local residents, and establishments. The accuracy of spending data also rests on a common understanding between the respondent and researcher of the nature and type of spending categories that should be reported. Interviewers should be trained to assist the respondents in recalling their expenditures within and outside the study region. This is to ensure the preciseness of the data collection without sacrificing data quality.

Data Collection

As this study focuses on measuring the economic impact due to a disaster, a detailed survey is needed to estimate the flows of goods and labour in the studied region. Researchers need to determine the boundary of the studied locations. For example, the length of Sungai Kelantan is about 450 km and is fed by more than 180 streams with a catchment area of about 11,900 km. The important towns located in the studied areas are Kuala Krai, Pasir Mas, Tumpat, and Kota Bharu.

Survey respondents

Questionnaires will be distributed to (1) local residents to estimate the direct economic loss, (2) non-local residents or, previous or current visitors to estimate expenses that had or would be spent if the existing stocks, infrastructure, and other properties in the affected area are not destroyed (term as potential loss, part of indirect economic loss), and (3) owners of local companies for the estimations of direct and indirect economic losses using Input-Output (I-O) analysis.

A resident is a person who is residing in the study area. According to WTO, a visitor is a person who is residing in an area outside the study region and makes a short-term visit, sometimes to participate in an event, and then return home. An industry is a business organization which sells products for the consumption of local and non-local (in this case, it refers to visitors) people and to fulfil the export demand (from outside the study region). Involving the secondary industries or the suppliers of the local industries is not necessary because the multiplier effect is becoming more marginal for each successive round of business trading as more and more economic leakages such as import and tax payment occurs in each round of business spending.

The respondents of domestic industry will be required to provide the following information: (1) the estimated damage amount of physical stock and loss of potential output that can be produced; (2) the estimated sale and purchase amounts made within and outside the affected region; and (3) the estimated reduction of salary and number of employees that would be laid-off.

Sampling design

Probability sampling is ideal but it is not feasible in many cases. Even if exhaustive sampling procedure can be done, problem arises when the business data have errors because companies are reluctant to reveal the revenues earned from local and non-local residents, and the geographic origins

of their suppliers are largely unknown. Therefore, researchers can use the quota sampling method. Firstly, divide the studied area into a few regions such as towns because the flow of economic transaction can be detected easily. Secondly, the respondents of local people, local industry and visitors can be chosen by using non-probability method.

IMPACT ON SOCIETY, ECONOMY, AND NATION

Natural disaster will cause damages of stock or capital (such as machinery and equipment), infrastructure facilities, and products' inventories in the affected area - termed as direct impact. Generally, Government's emergency aids can recuperate part of the direct loss. However, the ability of the public's aids in recovering the indirect loss suffered by the local community is uncertain.

Short-term recovery aids provided by the government may reduce the direct loss but in the long-run, the local economy may become worse than before the disaster. Provoked by the direct impact, the output suppliers in the affected region may react in a few ways. (1) Decrease their business production and operation, and thereby earning less revenue, laying-off employee, and postpone the purchase of intermediate inputs. (2) Increase the products' prices if additional output cannot be produced. Such practice may be observed during and immediately after the disaster. (3) Increase dependency on imported intermediate inputs if the production of additional output is possible but the supply of local intermediate inputs is disrupted. The continuous economic effect is reflecting the indirect impact on the economy of the affected area.

In summary, the authors hope that this article could provide tactical solutions that can assist the government in planning the long-term recovery strategy for the betterment of local community by understanding the estimation and impact of indirect loss. For example, if many local residents become unemployed due to the disaster, the government needs to revive or promote the growth of a sector or sectors that create higher job opportunity. If the intersectoral linkages between the local economy's industries are low, the government should encourage the local suppliers to use more local intermediate inputs so that the economic leakage (import) can be reduced.

CONCLUSION

For the short-term recovery phase, government will provide emergency aids after the disaster to revive the public physical capital stocks. For example, Ministry of Transportation will allocate the budget for the recovery of damaged public infrastructure. The short-term recovery aids may be useful temporary but in the long-run, the overall economic losses may become worse than before the disaster or crisis if the indirect loss were not taken into account. To optimize the distribution of limited resource is indeed one of the biggest challenges confronted by the government and the decision makers of private industries. Economic assessment is therefore a vital tool because the analysis can enumerate the potential costs and anticipated benefits of a proposed programme, policy or regulatory initiative, and reflect trade-offs inherent in alternatives. In brief, economic impact analysis may provide indication for the planning of a sensible policy. There is increasing recognition that assessment of disaster impacts often requires valuation in economic terms in order to justify adequate consideration in policy by the government. The proposed economic impact study can estimate the hidden costs of a natural disaster that can help the policy makers to plan adequate and relevant policies that support long-term recovery of the affected area.

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THE ROLE OF TOURISM IN THE LINKAGE BETWEEN CO$_2$ EMISSION, ECONOMIC GROWTH AND ENERGY CONSUMPTION: EVIDENCE FROM THE ASIAN COUNTRIES

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Abstract

This study aims to find out the role of tourism in affecting the relationship between CO$_2$ emission, energy consumption and economic growth. By using annual data from 1995 to 2010, a total of 21 Asian countries are included in the analysis. A panel Dynamic OLS (DOLS) and Fully Modified OLS (FMOLS) are used for estimation and analysis. The results indicate that more energy consumption leads to more CO$_2$ emission. Also, the Environmental Kuznets Curve (EKC) hypothesis is supported even with energy consumption and tourism as additional variables. The most important finding in this study is the role of tourism. The FMOLS results show that tourism has a negative effect on CO$_2$ emission. Also, a significant interaction effect is found between energy consumption and tourism on CO$_2$ emission. This implies possibility of using tourism to reduce CO$_2$ emission and included in CO$_2$ emission reduction policy like the Kyoto Protocol. In other word, energy efficiency in tourism sector and energy relevant policy in tourism is able to keep CO$_2$ emission down and at the same time, maintain sustainable economic growth. In terms of causality, the panel VECM based Granger causality test identifies 2 unidirectional causalities running from energy consumption to CO$_2$ emission and tourism.   The VECM also identifies bidirectional causality between economic growth and CO$_2$ emission, tourism and CO$_2$ emission, economic growth and energy consumption, and lastly tourism and economic growth.

Keywords: EKC, Tourism, DOLS, FMOLS, VECM, Interaction term

INTRODUCTION

The concern on the issue of global warming has been growing rapidly especially in the recent decade. Global warming often relates to climate change which means an increase in overall temperature. According to a recent summary on the current climate change by the World Meteorological Organization (WMO), the global average temperature is estimated to have risen by 0.6^o C over the course of 20th century. It is added that 2001-2010 was the warmest decade and 2010 was the warmest year on record since the beginning of modern monitoring of global temperature (WMO, 2013).

It has been identified that greenhouse gases (GHG) are the main cause of global warming and climate change. Among the GHG, carbon dioxide (CO$_2$) is the major contributor. To reduce the emission of GHG, Kyoto Protocol was adopted in 1997 to commit the members by setting international target of emission reduction. However, some countries still recorded a positive change in CO$_2$ emission compared with previous years.

Developed and high income countries are often being pressured to lower their CO$_2$ emission level. In fact the phenomenon of global warming is a global issue, thus the responsibility of reducing CO$_2$ emission should not limit to developed and high income countries. Some recent studies relating CO$_2$ emission and economic growth started to focus in less developed or developing countries. Those include Ang (2008) on Malaysia, Jalil and Mahmud (2009) and Zhang and Cheng (2009) on China, Pao and Tsai (2010) for Brazil, Russia, India and China.

An ideal situation would be achieving sustainable economic growth while minimizing the emission of CO_2. This is the goal that academicians and policy makers wish to achieve. Therefore, this study tends to examine the relationship between CO_2 emission, energy consumption and economic growth with an additional variable, tourism. In this study, the panel version of Dynamic Ordinary Least Square (DOLS) is used together with another alternative, known as the Fully Modified Ordinary Least Square (FMOLS) to examine the relationship between CO_2 emission, energy consumption, economic growth and tourism for a panel of Asian countries, by using annual data from 1995 to 2010. Other than that, the Panel Vector Error Correction Model (VECM) based Granger causality test is employed to examine the direction of short run and/or long run causality between the variables.

Overview of selected Asian countries

According to the Asian Development Bank, the CO_2 emission of the Asia and the Pacific is likely to be more than triple by 2050 if the current trend continues. This increase in CO_2 emission will put an unbearable strain on the ecosystem. For energy, the global energy demand is set to increase by one-third from 2010 to 2035 with China, India and other developing Asian countries accounting for over 60% of the world's total. This increase in the demand for energy is said to have a strong impact on CO_2 emission due to the direct combustion of fossil fuel.

Table 1 CO_2 Emission and Tourism Receipts for 21 Asian Countries in the 1990 and 2000

Countries	CO_2 Emission (metric tons per capita)			Tourism Receipts per capita (current U.S.$)		
	2000	2010	Difference (%)	2000	2010	Difference (%)
Armenia	1.13	1.42	+26	16.90	154.89	+816
Australia	17.20	16.71	-3	1420.70	2508.55	+77
Azerbaijan	3.67	3.39	-8	8.45	87.47	+935
Bangladesh	0.21	0.37	+76	0.38	0.69	+82
Cambodia	0.16	0.29	+81	28.23	116.32	+312
China	2.70	6.17	+129	13.72	37.50	+173
India	1.14	1.62	+42	3.45	12.02	+248
Indonesia	1.26	1.82	+44	23.81	31.65	+33
Japan	9.61	9.13	-5	47.10	119.90	+155
Kazakhstan	8.58	15.15	+77	27.10	75.73	+179
Korea, Rep.	9.52	11.47	+20	181.40	290.77	+60
Kyrgyz, Rep.	0.92	1.13	+23	4.10	38.91	+849
Malaysia	5.40	7.94	+47	250.76	641.96	+156
Mongolia	3.13	4.24	+36	17.94	106.17	+491
Nepal	0.14	0.16	+14	9.45	14.08	+49
New Zealand	8.53	7.30	-14	588.95	1499.30	+155
Pakistan	0.74	0.94	+27	3.83	5.76	+50
Philippines	0.94	0.87	-7	30.06	36.82	+22
Singapore	12.17	2.70	-78	1276.60	2792.76	+119
Sri Lanka	0.54	0.65	+20	20.31	50.55	+149
Thailand	3.02	4.49	+49	159.36	358.56	+125

Source: World Development Indicator (WDI), World Bank.

From table 1, it can be observed that most of the countries recorded a positive change in CO_2 emission in 2010 compared to 2000. From the data, the country with the highest positive change is China, followed by Cambodia, Kazakhstan, and Bangladesh. It can be concluded that most of the countries in Asian emit more CO_2 emission than before 2000s.

Higher CO_2 emission and energy consumption are often related to rapid economic growth. Several studies in the past attempted to examine the relationship between CO_2 emission, economic growth, and energy consumption. Those include Ang (2007), Halicioglu (2009), Zhang and Cheng

(2009), and Soytas and Sari (2009). However, their results are not conclusive. Particularly, if energy reduction policy used to reduce CO_2 emission has a negative impact on economic growth, policy makers and country leaders would be likely to be reluctant to commit to CO_2 emission policy. As most of the Asian countries are developing countries, their "emission for development" trend is definitely a potential challenge for future CO_2 emission reduction policy.

For the tourism indicator, the data from table 1 shows that the tourism receipts for all 21 Asian countries are increasing. Not many literatures in the past focus in explaining the relationship between tourism and CO_2 emission. The emission from tourism related activities mainly come from transports (see table 2). A recent study by Lee and Brahmasrene (2013) on the European Union (EU) found that tourism could help to keep CO_2 emission down while boosting economic growth at the same time. They proposed a direction of promoting a low carbon economy in both tourist's pattern and policy, lower emission technology implementation (biofuel), replacing old and inefficient aircraft and transport, and better flight and load management to support their finding.

Motivated by Lee and Brahmasrene (2013), this study introduces the role of tourism into the Environmental Kuznets Curve (EKC) framework, together with another variable, namely energy consumption. If the result of this study matches with Lee and Brahmasrene (2013), then it is possible to include tourism sector into future CO_2 emission reduction policy, such as the Kyoto Protocol. If this is found to be true, then it is possible to lower CO_2 emission and achieve sustainable economic growth at the same time.

Table 2 Distribution of CO_2 emission from tourism by sector, 2005

Sector	CO_2 (Mt)	% of total
Air transport	515	40%
Car transport	420	32%
Other transport	45	3%
Accommodation	274	21%
Activities	48	4%
Total	1307	100%

Source: Modified from UNWTO-UNEP-WMO (2008).

LITERATURE REVIEW

Relationship between CO_2 emission, economic growth and energy consumption

The early strand of literatures which relates CO_2 emission and economic growth relies on the EKC hypothesis. The EKC hypothesis was originated from the work by Kuznets (1955) in which an inverted-U shape relationship was found between income and income inequality. This inverted-U shape relationship was then applied in the field of environmental economics and known as the EKC. Starting from the pioneering work by Grossman and Krueger (1991), many literatures followed their effort in estimating the functional form and validity of this EKC hypothesis. As a result, different functional forms were identified (see Shafik, 1994; Robert & Grimes, 1997; Friedl & Getzner, 2003).

However, this line of research was being criticized for the direction of causality. It is conceivable that causation could flow from emission to economic growth, or even bidirectional causation. Also, most of the studies consist of only two variables which may suffer from omitted variable bias (Lean & Smyth, 2010).

Recent studies started to address the above issues by including additional variables into the studies and adopting the time series Granger causality approach. The most common variable added into the analysis is energy consumption (see Ang, 2007, 2008; Zhang & Cheng, 2009).

The results from the studies involve energy consumption as additional variable have contradictory policy implications. For example, Soytas and Sari (2009) found unidirectional Granger causality running from energy consumption to CO_2 emission, while Halicioglu (2009) found bidirectional Granger causality between economic growth and CO_2 emission. These findings indicate that an energy conservation policy to reduce CO_2 emission may eventually handicap the growth of an economy.

The role of tourism

On the other hand, the role of tourism in affecting economic growth and CO_2 emission is considered a new area of research. Lee and Brahmasrene (2013) found that tourism has a positive impact on economic growth, but a negative effect on CO_2 emission. This implies that tourism can be used to integrate the CO_2 emission, economic growth, and energy relevant policy to reduce the emission of CO_2 and maintain sustainable economic growth at the same time.

Previous studies have found that tourism has positive effects[2] on the country's economic growth. Those studies include Albalate and Bel (2010) and Holzner (2011) for the EU countries, Hall (1998) for the Eastern Europe, Falk (2010) for Austria, and Bernini (2009) for Italy. They propose a tourism-led economic growth hypothesis which assumes tourism to be a major determinant in overall economic growth.

Specifically, the tourists' visit and spending on the goods and services can create income, taxes, foreign currency, as well as job opportunities (Choi & Sirakaya, 2006; Dwyer & Forsyth, 2008). This is consistent with Archer (1995) and West (1993) where they found that tourism is a prime source of foreign exchange earnings and generates export revenues.

The study by Mihalic (2002) pointed out several advantages of using tourism as a growth strategy compared to the export of goods and services. Following this, it is reported that many countries have started to focus in tourism development for the purpose of economic growth (Sahli & Nowak, 2007).

Similarly, Lee and Chang (2008) also reported that the development of tourism not only stimulates the growth of a particular sector, but triggers overall economic growth at the same time. In brief, the literature discussed above substantiate that tourism positively affects the output growth of an economy.

As many studies above found that tourism can boost economic growth, there is a possibility to include tourism in energy-growth policy to reduce CO_2 emission and at the same time, achieve sustainable economic growth. Thus, this study aims to find out the role of tourism in this relationship.

From the proposal of Lee and Brahmasrene (2013), energy relevant policy especially in tourism sector can play a significant role in keeping CO_2 emission low. Hence, this study would like to extend this concept into the EKC framework and further incorporating an interaction term between energy consumption and tourism to better investigate the role of tourism in this relationship. Details are explained in the following chapter.

RESEARCH METHODOLOGY

Data and Model Specification

Based on the EKC hypothesis and previous findings, it is plausible to formulate the following relationship:

$$CO_2 = f (GDP, GDP^2, EC, T)$$
$$+ \quad - \quad + \quad -/+$$

The expected sign of GDP and GDP square is positive and negative according to the EKC hypothesis. Energy consumption is expected to be positive as more energy used results in higher CO_2 emission. Tourism is expected to be negative based on the findings by Lee and Brahmasrene (2013). However, there is still emission from the vehicles used to transport tourists from one destination to another. Hence, this study aims to find out the role of tourism in this relationship.

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[2] Some exceptional studies found that tourism will impose social cost and negative impact on an economy. Those include Sinclair (1998), Gursoy and Rutherford (2004), and Dunn and Dunn (2002).

The relationship can be expressed into following model:

$$C_{it} = \beta_{0i} + \beta_{1i}GDP_{it} + \beta_{2i}GDP^2_{it} + \beta_{3i}EC_{it} + \varepsilon_{it} \tag{1}$$

$$C_{it} = \beta_{4i} + \beta_{5i}GDP_{it} + \beta_{6i}GDP^2_{it} + \beta_{7i}EC_{it} + \beta_{8i}T_{it} + \varepsilon_{it} \tag{2}$$

Eq. (1) is the common EKC framework with energy consumption as additional variable. Eq. (2) is the extension of Eq. (1) with the inclusion of the role of tourism. To better investigate the role of tourism in CO_2 emission, specifically on how energy is used in tourism sector, an interaction term (ECXT) of energy consumption and tourism is added into the analysis. The model can be represented by the following model:

$$C_{it} = \beta_{9i} + \beta_{10i}GDP_{it} + \beta_{11i}GDP^2_{it} + \beta_{12i}EC_{it} + \beta_{13i}T_{it} + \beta_{14i}ECXT_{it} + \varepsilon_{it} \tag{3}$$

Where i=1,…,N denotes the country and t=1,…,t denotes the time period. C is CO_2 emission (measured in metric tons per capita), EC is energy consumption (measured in kg of oil equivalent per capita), GDP and GDP squared are measured in constant 2005 U.S.\$ per capita, T is the indicator for tourism (measured in international tourism receipts per capita in current U.S.\$) and ε is the regression error term. β_0, β_1, β_2, β_3, β_4 … β_{14} are intercepts and parameters to be estimated. All variables are in natural logarithm form for econometric analysis. The data is retrieved from the World Development Indicators (WDI), World Bank.

From Eq. (3), if the interaction term is positive and significant, then tourism and energy consumption are complements in CO_2 emission. If it is negative and significant, then tourism and energy consumption are substitutes in CO_2 emission. If it is insignificant, then the 2 variables are said to have an independent effect on CO_2 emission.[3]

Panel Unit Root Test

Spurious regression is a potential and common problem especially in time series analysis. The solution is to test for the stationarity of the data and make the data stationary by differencing if they are not. Therefore, in most of the time series and panel analysis, the empirical analysis always starts with the testing of unit root of the variables.

In this study, three panel unit root tests are used to enhance the robustness of result. The three tests are Levin, Lin, and Chu (LLC) developed by Levin, Lin, and Chu (2002), Im, Pesaran and Shin (IPS) proposed by Im, Pesaran, and Shin (2003), and Fisher-ADF by Maddala and Wu (1999). The null hypothesis for all three tests is the existence of unit root (the variables are non-stationary), while the alternative hypothesis for the three tests is that there is no unit root in the series (the variables are stationary).

The LLC test has the following basic ADF specification:

$$\Delta y_{it} = \alpha y_{it-1} + \sum_{j=1}^{p_i} \beta_{ij}\Delta y_{it-j} + X'_{it}\delta + \varepsilon_{it} \tag{4}$$

where $\alpha = p - 1$, but allow the lag order for the difference terms, p_i to vary across cross-section. The test derives estimates of α from proxies for Δy_{it} and y_{it} which are standardized and free of autocorrelations and deterministic components.

The estimation begins with two additional equations, regressing both Δy_{it} and y_{it-1} on the lag term Δy_{it-j} (for j=1,…,p_i) and the exogenous variable X_{it}. The coefficient from these two estimations are denoted as $(\hat{\beta}, \overline{\delta})$ and $(\tilde{\beta}, \tilde{\delta})$. $\Delta \overline{y}_{it}$ is defined by taking Δy_{it} and removing the autocorrelations and deterministic components using the first set of estimations:

$$\Delta \overline{y}_{it} = \Delta y_{it} - \sum_{j=1}^{p_i} \hat{\beta}_{ij}\Delta y_{it-j} - X'_{it}\hat{\delta} \tag{5}$$

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[3] See Compton and Giedeman (2011) for more on the interaction effects.

Likewise, $\bar{y}_{it-1}$ is defined using second set of coefficients:

$$\bar{y}_{it-1} = y_{it} - \sum_{j=1}^{p_i} \beta_{ij} \Delta y_{it-j} - X'_{it}\delta \qquad (6)$$

Next, the proxies are obtained by standardizing both $\Delta \bar{y}_{it}$ and $\bar{y}_{it-1}$, dividing by the standard error from equation (4). Lastly, an estimate of α can be obtained from the pooled proxy equation:

$$\Delta \tilde{y}_{it} = \alpha \tilde{y}_{it-1} + \varphi_{it} \qquad (7)$$

Levin, Lin, and Chu (2002) showed that under the null, a modified t-statistic for the resulting $\hat{\alpha}$ is asymptotically normally distributed:

$$t_{\alpha}^* = \frac{t_{\alpha} - (N\tilde{T})S_N \hat{\sigma}^{-4} se(\hat{\alpha})\mu_{m\tilde{T}}^*}{\sigma_{m\tilde{T}}^*} \to N(0,1) \qquad (8)$$

Where t_{α} is the standard t-statistic for $\hat{\alpha} = 0$, $\hat{\sigma}^2$ is the estimated variance of the error term φ, $se(\hat{\alpha})$ is the standard error for $\hat{\alpha}$, and:

$$\tilde{T} = T - (\sum_i p_i/N) - 1 \qquad (9)$$

The average standard deviation ratio, S_N is the mean of the ratios of the long run standard deviation to the innovation standard deviation for each individual. The estimation is based on kernel technique. $\mu_{m\tilde{T}}^*$ and $\sigma_{m\tilde{T}}^*$ are the adjustment for the mean and standard deviation.

Unlike LLC test, the IPS test combines individual unit root test to derive a panel based result. This characteristic is the same for Fisher-ADF test. The IPS test begins with the ADF regression for each cross section which is similar with equation (4). After estimating the separate ADF regressions, the average t-statistic for α_i, from the individual ADF regression, $t_{iT_i}(p_i)$:

$$\bar{t}_{NT} = (\sum_{i=1}^N t_{iT_i}(p_i))/N \qquad (10)$$

is then modified to desired test statistics. Under the circumstance where the lag order is equal to zero($p_i = 0$ for all i), Im, Pesaran, and Shin (2003) provided simulated critical values for $\bar{t}_{NT}$ for different number of cross sections N, series length T, and for models with intercept, or intercept and linear trend.

For common case where the lag order in equation (4) could be non-zero for some cross sections, Im, Pesaran, and Shin (2003) showed that a properly standardized $\bar{t}_{NT}$ has an asymptotic standard normal distribution as follow:

$$W_{\bar{t}_{NT}} = \frac{\sqrt{N}[\bar{t}_{NT} - N^{-1}\sum_{i=1}^N E(\bar{t}_{iT}(p_i))]}{\sqrt{N^{-1}\sum_{i=1}^N Var(\bar{t}_{iT}(p_i))}} \to N(0,1) \qquad (11)$$

Maddala and Wu (1999) proposed a panel unit root test based on Fisher (1932). The Fisher ADF test combines the p-values of the test statistics for a unit root in each residual cross sectional unit. This non-parametric test has a chi-square distribution with 2N degree of freedom, where N is the number of cross sectional units. This test has the advantage over the test proposed by Im, Pesaran, and Shin (2003) that it does not depend on different lag length in the individual ADF tests. With Monte Carlo simulations, Maddala and Wu (1999) showed that their test is more superior to Im, Pesaran, and Shin (2003). The test statistic can be derived as follow:

$$\lambda = -2\sum_{i=1}^N \log_e \pi_i \qquad (12)$$

where π_i is the p-value of the test statistic for unit i.

Panel Cointegration

From the panel unit root tests above, if the variables are integrated at the same order, then the existence of cointegration or long run relationship can be examined by using Pedroni (1999; 2004) and Kao (1999) tests. Both tests are based on the Engle-Granger (1987) cointegration test which examines the residuals of a spurious regression performed using I (1) variables. From the test, the variables are said to be cointegrated if the residuals are I (0). Otherwise, the residuals will be I (1).

Based on the test proposed by Engle-Granger (1987), Pedroni (1999, 2004) and Kao (1999) extended the framework to test for cointegration involving panel data. In total, the Pedroni test provides seven statistics to test the null hypothesis of no cointegration in the heterogeneous panel. The tests are divided to either falling within the dimensions (panel tests) or between dimensions (group tests).

The within dimensions tests pool the autoregressive coefficient across different countries in the panel. The between dimensions tests are less restrictive that allow for heterogeneity of the parameter across countries. Specifically, Pedroni test considers the following regression:

$$y_{it} = \alpha_i + \delta_i t + \beta_{1i} x_{2i,t} + \cdots + \beta_{Mi} x_{Mi,t} + \varepsilon_{i,t} \qquad (13)$$

for t=1, …, T; i=1,…, N; m=1,…, M; where y and x are assumed to be I (1). The parameter α_i and δ_i are individual and trend effects which may be set as zero if needed.

Under the null hypothesis of no cointegration, the residuals, $\varepsilon_{i,t}$ will be I (1). The residuals are obtained from equation (11) and tested whether the residuals are I (1) by running the following regression:

$$\varepsilon_{it} = p_i \varepsilon_{it-1} + \mu_{it} \qquad (14)$$

or

$$\varepsilon_{it} = p_i \varepsilon_{it-1} + \sum_{j=1}^{p_i} \varphi_{ij} \Delta \varepsilon_{it-j} + v_{it} \qquad (15)$$

for each cross section. The Kao test follows the basic approach as the Pedroni tests, but it specifies cross section specific intercepts and homogeneous coefficients on the first-stage regressors.

Given the existence of cointegration among the variables, the panel version of Dynamic Ordinary Least Square (DOLS) is used to estimate Eq. (1) to Eq. (3). This method was introduced by Saikkonen (1992) and Stock and Watson (1993). Then Kao and Chiang (2000) extended this estimator to panel data analysis known as the pooled DOLS. The unique characteristic of this DOLS is it involves augmenting the panel cointegration regression with cross section specific lags and leads to eliminate the endogenity and serial correlation. The role of the specific lags and leads can help to reduce bias in DOLS. In the work of Kao and Chiang (2000), they found that DOLS is superior over other alternatives through the Monte Carlo simulations.

To enhance the robustness of result, especially the analysis of the role of tourism in the EKC framework is considered as a relatively new attempt, another alternative to the DOLS, known as the Fully Modified Ordinary Least Square (FMOLS) is used to estimate Eq. (1) to Eq. (3). The FMOLS developed by Pedroni (2000) has the advantage of that it corrects for both endogeneity bias and serial correlation, and thereby allows for consistent and efficient estimator for the cointegrated panel. Thus, the FMOLS is the most appropriate method to be applied in the presence of heterogeneous cointegrated panels (Hamit-Hagger, 2012).

Panel Granger Causality

The existence of a cointegration relationship among the variables from the Pedroni and Kao tests indicates the variables have an error correction representation, with an Error Correction Term (ECT) incorporated into the model (Engle & Granger, 1987). Hence, a Vector Error Correction Model (VECM) is formed to reintroduce the information lost in the differencing process. The unrestricted VECM can be derived as follow:

$$\Delta C_t = \beta_1 + \sum_{i=1}^{p} \delta_{1i} \Delta C_{t-i} + \sum_{i=1}^{p} \emptyset_{1i} \Delta EC_{t-i} + \sum_{i=1}^{p} \omega_{1i} \Delta GDP_{t-i} + \sum_{i=1}^{p} \gamma_{1i} \Delta GDP^2_{t-i} + \sum_{i=1}^{p} \varpi_{1i} \Delta T_{t-i} + \tau_{11} ECT_{t-1}$$
$$+ \varepsilon_{1t} \qquad (16a)$$

$$\Delta EC_t = \beta_2 + \sum_{i=1}^{p} \delta_{2i} \Delta C_{t-i} + \sum_{i=1}^{p} \emptyset_{2i} \Delta EC_{t-i} + \sum_{i=1}^{p} \omega_{2i} \Delta GDP_{t-i} + \sum_{i=1}^{p} \gamma_{2i} \Delta GDP^2_{t-i} + \sum_{i=1}^{p} \varpi_{2i} \Delta T_{t-i}$$
$$+ \tau_{21} ECT_{t-1} + \varepsilon_{2t} \qquad (16b)$$

$$\Delta GDP_t = \beta_3 + \sum_{i=1}^{p} \delta_{3i} \Delta C_{t-i} + \sum_{i=1}^{p} \emptyset_{3i} \Delta EC_{t-i} + \sum_{i=1}^{p} \omega_{3i} \Delta GDP_{t-i} + \sum_{i=1}^{p} \gamma_{3i} \Delta GDP^2_{t-i} + \sum_{i=1}^{p} \varphi_{3i} \Delta T_{t-i}$$
$$+ \tau_{31} ECT_{t-1} + \varepsilon_{3t} \qquad (16c)$$

$$\Delta GDP^2_t = \beta_4 + \sum_{i=1}^{p} \delta_{4i} \Delta C_{t-i} + \sum_{i=1}^{p} \emptyset_{4i} \Delta EC_{t-i} + \sum_{i=1}^{p} \omega_{4i} \Delta GDP_{t-i} + \sum_{i=1}^{p} \gamma_{4i} \Delta GDP^2_{t-i} + \sum_{i=1}^{p} \varphi_{4i} \Delta T_{t-i}$$
$$+ \tau_{41} ECT_{t-1} + \varepsilon_{4t} \qquad (16d)$$

$$\Delta T_t = \beta_5 + \sum_{i=1}^{p} \delta_{5i} \Delta C_{t-i} + \sum_{i=1}^{p} \emptyset_{5i} \Delta EC_{t-i} + \sum_{i=1}^{p} \omega_{5i} \Delta GDP_{t-i} + \sum_{i=1}^{p} \gamma_{5i} \Delta GDP^2_{t-i} + \sum_{i=1}^{p} \varphi_{5i} \Delta T_{t-i} + \tau_{51} ECT_{t-1}$$
$$+ \varepsilon_{5t} \qquad (16e)$$

There are two types of causality from Eq. (16a) to Eq. (16e). The first causality is via the error correction term (ECT), which captures the long run relationship, given that τ ≠ 0. Another type of causality is via the lagged dynamic terms, which represents the short run dynamics. Also, the significance of the ECT provides evidence of an error correction mechanism that restores the variables back to their long run equilibrium (Engle & Granger, 1987).

RESULTS AND INTERPRETATIONS

Table 3 Panel Unit Root Tests Results

	LLC		IPS		Fisher ADF	
	Level (trend and intercept)	First difference (intercept)	Level (trend and intercept)	First difference (intercept)	Level (trend and intercept)	First difference (intercept)
C	1.67	-11.85***	-1.22	-11.89***	49.68	200.12***
	(0.95) (4)	(0.00) (3)	(0.11) (0)	(0.00) (2)	(0.19) (1)	(0.00) (2)
EC	-1.25	-12.47***	-0.33	-10.73***	44.61	182.91***
	(0.10) (1)	(0.00) (2)	(0.37) (1)	(0.00) (2)	(0.36) (1)	(0.00) (2)
GDP	-0.97	-15.10***	0.49	-8.60***	41.89	138.50***
	(0.17) (0)	(0.000) (2)	(0.69) (1)	(0.00) (2)	(0.48) (1)	(0.00) (2)
GDP²	-1.03	-14.10***	0.75	-8.20***	40.26	135.40***
	(0.15) (0)	(0.00) (2)	(0.77) (1)	(0.00) (2)	(0.55) (1)	(0.00) (2)
T	0.18	-13.28***	-1.12	-9.90***	51.21	167.23***
	(0.57) (5)	(0.00) (2)	(0.13) (2)	(0.00) (2)	(0.16) (2)	(0.00) (2)

Note: LLC, IPS, and Fisher ADF indicate the Levin et al. (2002), Im et al. (2003), Maddala and Wu (1999) panel unit root and stationary tests. All three tests examine the null hypothesis of non-stationary. ** and *** represent the rejection of null hypothesis at 5% and 1%. The figures without bracket is the test statistic value, the first bracket shows the probability value, while the subsequent bracket shows the lag length selected based on SIC. The probability values for the Fisher ADF are computed using asymptotic χ² distribution, while the rest follow the asymptotic normal distribution.

Table 3 summarizes the results from the three panel unit root tests. From the results, all the variables are non-stationary in their level forms. However, when the variables are tested by using their first difference, the results show the rejection of null hypothesis of non-stationary. In conclusion, the three tests reveal that all the variables are stationary in their first differences.

Table 4 Panel Cointegration Results

A) Pedroni
Panel cointegration statistics (within-dimension)
Panel v-statistic   -0.41 (0.66)

Panel rho-statistic	1.16 (0.88)
Panel PP-statistic	-8.46*** (0.000)
Panel ADF-statistic	-8.30*** (0.000)

Group mean panel cointegration statistics
(between-dimension)

Group rho-statistic	2.85 (1.000)
Group PP-statistic	-11.97*** (0.000)
Group ADF-statistic	-9.38*** (0.000)

B) Kao

ADF	1.77** (0.04)

Note: Both tests examine the null hypothesis of no cointegration for the variables. *** indicates the rejection of null hypothesis at 1%. The figures without bracket represent test statistic values. Probability values are shown in the bracket. The lag length is selected automatically based on SIC.

Table 4 shows the results from the two cointegration tests. From the Pedroni test, four out of seven test statistics reject the null hypothesis of no cointegration among the variables. This is further supported by the result from the Kao test in which the long run cointegration relationship is detected. This result indicates that the variables do not drift apart in the long run steady state relationship. In other words, all the variables are cointegrated in the long run.

Table 5 Panel DOLS and FMOLS estimates

Independent variable	DOLS			FMOLS		
	Eq. (1)	Eq. (2)	Eq. (3)	Eq.(1)	Eq.(2)	Eq.(3)
EC	1.11***	1.00***	0.86***	0.93***	0.92***	0.73***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP	3.83***	2.66***	3.47***	3.26***	3.19***	3.87***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP^2	-0.26***	-0.18***	-0.24***	-0.21***	-0.21***	-0.26***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
T		0.03	-0.25		-0.006	-0.38*
		(0.20)	(0.14)		(0.83)	(0.07)
ECXT			0.04*			0.06*
			(0.09)			(0.07)
Adjusted R^2	0.99	0.99	0.99	0.99	0.99	0.99
S.E. of regression	0.10	0.08	0.08	0.14	0.14	0.14

Notes: Dependent variable is CO_2 emission. Pooled estimation is used for DOLS. Automatic leads and lags selection are based on AIC criterion. For GMM, White period instrument weighing method is used. Effect specification is based on cross section fixed (orthogonal deviation for eq. (1), first difference for eq. (2) and (3)). The figures without bracket indicate the coefficient estimates while the figures in brackets show the probability value. *, **, *** represent the coefficient is significant at 10%, 5%, and 1% respectively.

Table 5 shows the results from DOLS and FMOLS. From the results, Eq. (1) shows that the EKC hypothesis is supported with energy consumption as additional variable. The signs of all the variables follow the EKC hypothesis. This indicates the inverted-U shape relationship is validated from both DOLS and FMOLS. From the result of DOLS, 1% increase in energy consumption increases CO_2 emission by 1.11% (0.93% for FMOLS). Also, 1% increase in GDP increases CO_2 emission by 3.83% (3.26% for FMOLS).

Turn to Eq. (2), the EKC hypothesis is still supported in both DOLS and FMOLS. However, the tourism indicator is insignificant in both estimates. Furthermore, the sign of tourism is contradictory in both estimates. To further investigate the role of tourism in this study, an interaction term is included in Eq. (3). This is because the multiplicative[4] or joint effect between energy consumption and tourism

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[4] See Gujarati and Porter (2009, p.289) for the multiplicative effect arise from the interaction between 2 variables.

may have a significant impact on the emission of CO_2. In addition, the sign of the interaction term is able to tell whether tourism and energy consumption are complement or substitute to CO_2 emission.

According to the DOLS, Eq. (3) reveals that the EKC hypothesis is supported as in Eq. (1) and (2). Besides, there is a significant interaction effect between energy consumption and tourism and it is positive. The positive sign indicates there is a complement or joint effect between tourism and energy consumption on CO_2 emission. In other words, the impact of tourism and energy consumption on CO_2 emission is not independent to each other. However, tourism is found to be insignificant although it is of a negative sign.

To ensure a more accurate analysis, the FMOLS is conducted. The estimate of FMOLS on Eq. (3) is similar to DOLS except the significance of the tourism indicator. The FMOLS shows that the EKC hypothesis is supported. Other than this, tourism is negative and significant at 10%. This matches the finding of Lee and Brahmasrene (2013). Ahead of Lee and Brahmasrene (2013), this study also finds a significant interaction effect between energy consumption and tourism on the emission of CO_2.

Table 6 Panel Granger Causality Test Result

Dependent variable	ΔC	ΔEC	ΔGDP	ΔGDP^2	ΔT	ECT
ΔC	-	7.02** (0.01)	30.91*** (0.00)	9.64*** (0.00)	4.30** (0.04)	-0.01** (0.03)
ΔEC	1.31 (0.25)	-	12.24*** (0.00)	2.54 (0.11)	1.48 (0.26)	-0.002 (0.51)
ΔGDP	5.76*** (0.00)	4.93*** (0.00)	-	1.79 (0.14)	16.77*** (0.00)	-0.0004 (0.89)
ΔGDP^2	1.47 (0.23)	0.001 (0.98)	0.61 (0.72)	-	1.20 (0.28)	-0.05 (0.50)
ΔT	3.16** (0.02)	4.78** (0.03)	2.28* (0.08)	0.83 (0.55)	-	-0.01 (0.64)

Note: The figures without bracket denote the F-statistic value for the dependent variables with first difference operator and coefficient for the ECT, while the figures in brackets indicate the probability value. This panel VECM Granger causality examines the null hypothesis of no Granger causality from independent variable to dependent variable. *, **, and *** represent the rejection of null hypothesis at 10%, 5%, and 1%.

The result of the panel VECM Granger causality test is shown in Table 6. The test indicates a bidirectional causality or feedback effect between economic growth and CO_2 emission, tourism and CO_2 emission, economic growth and energy consumption, and tourism and economic growth. Besides, energy consumption is found be Granger cause CO_2 emission and tourism in a unidirectional way.

Turn to the ECT, the coefficient on the lagged ECT in negative and significant only when CO_2 emission is the dependent variable. This supports the finding from the cointegration test for long run relationship. The ECT is not significant when other variables as dependent variable. This implies that in the long run, causality runs interactively through the ECT from economic growth, energy consumption, and tourism to CO_2 emission.

Comparing the results from this study with previous literatures, the bi-directional causal relationship between economic growth and energy consumption is consistent with the work by Apergis and Payne (2010). This suggests there is a feedback effect between the two variables. This means that more economic growth requires more energy consumption and more energy consumption contributes to more economic growth.

Next, bidirectional causality is also identified between economic growth and tourism. This is consistent with Durbarry (2004) and Tang (2011). Previous findings such as Holzner (2011), Falk (2010), Bernini (2009) and so on had found that tourism boost the growth of an economy. As economy grows, it is possible to attract more tourists. Therefore, there is a feedback effect between tourism and economic growth.

The finding of unidirectional causality running from energy consumption to CO_2 emission supports the work by Zhang and Cheng (2009). This indicates more CO_2 emission will be released if more energy is being used due to the direct combustion of fossil fuel.

Lastly, the bidirectional causality between economic growth and CO_2 emission matches the finding of Ghosh (2010). This feedback effect is mostly a challenge for leaders to reduce CO_2 emission as the reduction may eventually have a negative impact on the growth of the economy.

The new contribution of this study up to the knowledge of the author is the bidirectional causality between tourism and CO_2 emission and unidirectional causality running from energy consumption to tourism. Detail explanation on the policy implication is on the next chapter.

CONCLUSION AND DISCUSSION

To determine the role of tourism in the linkage between CO_2 emission, economic growth, and energy consumption, this study includes annual data of 21 Asian countries from 1995 to 2010. Also to enhance the accuracy of this analysis, the panel DOLS is used together with its alternative, FMOLS. Moreover, a panel VECM is employed to find out the directions of causality among the variables.

Based on the results, it can be concluded that the variables are cointegrated in the long run. The results also support the EKC hypothesis even with energy consumption and tourism as additional variables. From the FMOLS estimates, the negative effect of tourism on CO_2 emission is confirmed and this is consistent with Lee and Brahmesrene (2013).

One of the contributions of this study is the inclusion of an interaction term to the existing EKC framework to examine the joint or multiplicative effect between energy consumption and tourism on CO_2 emission. The FMOLS indicates that there is a significant interaction effect between energy consumption and tourism on CO_2 emission. In other words, the impact of energy consumption and tourism on the emission of CO_2 is not independent. This gives rise to the concept of energy relevant policy especially in tourism sector to reduce the emission of CO_2.

The above finding on the interaction effect suggests an alternative rather than energy conservative policy to reduce CO_2 emission which may harm the economy of a country. This outlines a new direction of policy which can help to reduce CO_2 emission and at the same time, maintain sustainable economic growth.

There are several suggestions in detail. First, is the use of biofuel. A report by International Energy Agency pointed out the potential of biofuels in reducing emission (IEA, 2012). The report also added that more than 50 countries and the EU have mandated or promoted biofuel blending to displace oil in domestic transport supply. Relating this to the finding in this study, it can be noted from table 1 that the Asian's tourism industry is increasing. Therefore, this practice could be expanded to Asian countries to reduce the emission of CO_2.

Second, is the change in tourist patterns and policies which include transport modal shift, the choice of closer destinations, spending on goods and services with favorable eco-efficiency, and increase in the length of stay. Transport modal shift is the switch of mode of transport from vehicles that emit more emission to those that emit less. This also includes promoting public transports such as train and bus, as well as an integrated public transport system and infrastructure. However, other measurements such as the choice of closer destinations and increase in the length of stay require the initiative from the tourists' side (Scott, Peeters, & Gossling, 2010). Hence, the Asian countries should pay attention to the above suggestions when promoting their tourism industry.

Lastly, is the effort of better flight management. The measurements include replacing old and inefficient aircrafts, better flight and load management. Replacing old and inefficient aircrafts with those with better and new engine may help to reduce fuel consumption. Similar with the above, these measurements are highly dependent on the airline companies and practitioners.

From the above discussions and suggestions, it is advisable that the CO_2 reduction policy such as the Kyoto Protocol should take the role of tourism into consideration when formulating relevant policy and regulation. As mentioned above, the role of tourism especially with enhanced

energy efficiency could help to reduce CO_2 emission, and at the same time, maintain sustainable economic growth. Apparently, this is a better alternative compared to energy conservative policy. As developing countries in the world, the Asian countries should be aware of their "emission for development" pattern and take this responsibility to reduce CO_2 emission in order to reduce the rate of global warming as well as climate change.

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CAN GOVERNMENT DEBT INSTIGATE ECONOMIC CRISIS IN MALAYSIA?

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Abstract

Is it possible for government debt to trigger economic crisis in Malaysia? The objective of this study is to analyze the possibility of that happening and to examine whether it is private debt instead that can cause economic crisis. Using time series data from 2000 to 2014, this study employs cointegration and causality tests to assess the link from government and private debt to economic growth, unemployment, and house price. The empirical evidence shows that government debt does not Granger-cause economic growth, unemployment, or house price. Instead, the causal relationship is positive with private debt. This suggests that it is improbable for government debt but a possibility for private debt to instigate economic crisis and instability in Malaysia.

Keywords: Government debt, private debt, household debt, economic crisis, Malaysia

INTRODUCTION

Debt is a highly important subject due to the central role of credit in fuelling the engine of modern economy. However, credit/debt is a double-edged sword. An economy cannot grow without credit which is crucial to finance production and development. But too much of it can cause unsustainable growth and will eventually destroy the economy. Since the onset of European sovereign debt crisis, concerns have been raised over the increasing government debt around the world. In Malaysia, government debt had increased from RM378 billion in March 2010 to RM596 billion in March 2015. An increase of nearly 60 percent in 5 years (Bank Negara Malaysia 2015). However, according to the Malaysian Deputy Finance Minister, Chua Tee Yong, the government debt position is still manageable and considered as moderate. From RM596 billion oustanding government debt, 97 percent constitutes of domestic debt while only 3 percent or RM17.6 billion consists of external debt. The government debt is also still below the 55 percent of GDP limit and the external debt is much lower than the constraint imposed under the External Loans Act 1963 ("National debt level still manageable," 2015). In addition to that, the government budget deficit is actually decreasing despite the fact that government debt rose in gross value. From RM43 billion or 5.6 percent of GDP in 2010, the Malaysian government budget deficit has been reduced to RM37 billion or 3.2 percent of GDP in March 2015 (Ministry of Finance 2010, 2015).

The positive development can be attributed to the active measures taken by the government since 2010 to reform its financial position. Through the Economic Transformation Program (ETP) embarked by the governmnet in 2010, it has taken necessary but unpopular moves such as reducing subsidies for fuel, sugar, and electricity to reduce spending. In April 2015, the government also has implemented the goods and services tax (GST) in order to grow its revenue. In a statement in June 2014, the Minister in the Prime Minister's Department, Idris Jala stated that the government transformation program had successfully brought Malaysian public debt position into the "Safe Zone" (Jala 2014). The "Safe Zone" refers to an area within a matrix developed by Boston Consulting Group to assess a country's fiscal position (see Appendix). If a government debt is below 75 percent of GDP and budget deficit is at 4 percent or lower, then a country's fiscal condition is considered safe. However, it moves to the danger zone if a government debt equals or higher than GDP and budget deficit is at 8 percent and above. As illustrated in the Appendix, it can be clearly seen that the Malaysian government debt had been moving consistently to the "Safe Zone" since 2010 and entered the area in 2013.

Based on these facts, the government believes that its financial position is sustainable and a crisis induced by public debt is an unlikely event. But how true is this belief? To answer that, the main objective of this study is to examine whether government debt can trigger economic instability in Malaysia. The study also incorporates private debt into the analysis to determine whether it is private debt that presents a greater influence than government debt. This paper is organized as follows. The next section discusses several economic crisis and their common causes. Then, the empirical model, data, and econometric methodology are described. In the next section after that, empirical findings of the study are discussed, and finally, the last section gives conclusion to the study.

ECONOMIC CRISIS: PAST AND PRESENT

The history of modern capitalism has been filled with countless financial crisis and economic depression. Among the biggest of them are The Great Depression in the 1930's, the bursting of the Dot-com bubble in 2000, The Asian Financial Crisis in 1997, The Global Financial Crisis in 2008, and currently the European Sovereign Debt Crisis. Malaysia too had personally experienced financial crisis during the 1997 Asian Financial Crisis and had tasted the pain of economic depression. There were many factors that contributed to the crises and those factors were always involved with debt. But which debt is significant to those crises? Public or private debt? Many literature point to private debt - namely financial and household sector debt - as an important factor causing various financial and economic crises. Although government debt also played a role, it usually help in deepening the crises rather than being the instigator of it.

The Asian Financial Crisis

The Asian Financil Crisis in 1997 is always associated with a currency crisis. However according to Krugman (1999), "the currency crisis were only part of a broader financial crisis, which had very little to do with currencies or even monetary issues per se. Nor did the crisis have much to do with traditional fiscal issues". Before the crisis began, Asian governments finance are more or less in balance and they did not enganged in irresponsible credit creation or expanding the money supply. It was actually the financial intermediaries who played the main role in causing the crisis in the first place. In Thailand, the non-bank financial intermediaries borrowed short-term money from abroad largely in dollars and lent them to speculative investors mainly in the real estate sector. The same thing also happened in South Korea where conventional banks borrowed a lot in short-term and lent them to already highly leveraged corporations to invest in speculation. Thus, according to Krugman (1999) the Asian crisis neither caused by fiscal problem nor government macroeconomic policy, but financial excess which ended in financial collapse. However, this does not mean that the government were totally blameless. The government contribution to the crisis was through the guarantee of liabilities and protection of financial intermediaries which then created a moral hazard problem. Due to protection, the financial intermediaries had an incentive to undertake highly risky investments even up to the point of taking investments with low expected return as long as there is a little chance that they could reap high profits (ibid).

Corsetti et al. (1998) also argue that prior to the Asian crisis the government in Asian countries were not dissaving. This is evident from the fiscal balance of Asian countries which was either in surplus or a small deficit. For instance, between 1990 to 1997, Korea recorded a fiscal deficit from 1990 to 1992 (the highest was 1.63 percent of GDP), Indonesia only once in 1992 (0.44 percent of GDP), Malaysia in 1990 to 1992 (the highest was 3.1 percent of GDP), Phillippines in 1990 to 1993 (the highest was 3.47 percent of GDP), and Thailand recorded fiscal deficit only once which is in 1997 (0.32 percent of GDP). In the banking system however, credit was growing excessively before the crisis. This led to a large build up of non-performing loans and finally the collapse of financial institutions. For example in 1997, bank lending to private sector in Malaysia was at 107 percent of GDP, Singapore at 100 percent of GDP, and Thailand at 116 percent of GDP. The government finance only became a problem in the aftermath of the crisis. This is due to the restructuring of the financial crisis which put a large burden on the government where in several Asian countries was expected to amount to 15 percent of GDP.

Global Financial Crisis 2007-09

It is already known that the bursting of the housing bubble in the United States have sparked a full-blown economic crisis in 2008 and brought disaster to millions of people throughout the world.

But what caused the bubble in the first place? Crotty (2008) argued that the ultimate cause of the crisis is the deeply flawed institutions and practices of the New Financial Architecture (NFA). The NFA refers to a globally integrated system of giant bank conglomerates and the 'shadow banking system' of investment banks, hedge funds, and Special Investment Vehicles (SIVs) in which mostly are unregulated or badly regulated. The NFA is riddled with perverse incentives that encourage financial institutions to take excessive risk, creating ever higher leverage which in turn increases vulnerabilities in the financial system. The prime example is the growth in securitization which awashes the financial market with fee income. Since these fees are not lost even if the securities suffer large losses in the future, this generates a strong incentives to maximize the creation of loans in the financial system regardless whether these loans are sound or not. This is why securities packaged with subprime mortgage loans (loans taken by high risk borrowers) were highly lucrative because it awarded the originators and investors with very high return hence in high demand from investment banks, hedge funds, pension funds, insurance companies, and SIVs created by banks (ibid). What happened next is already well known. The rise in subprime mortgage loans by households increased financial fragility and eventually collapsing the housing market in US in 2008.

This is also argued by Mian and Sufi (2010). According to them the increase in household debt in the U.S from 2002-2006 is closely related to the 2007-09 economic recession. Although other factors in the financial markets such as the bankcruptcy of Lehman Brothers and policy uncertainty contributed to the size of the crisis, the evidence found by them shows that the initial economic slowdown happened due to the inability of the already highly leveraged household sector to continue to service its debt. As homeowners started to realize that the increase in house price were no longer sufficient to roll over their existing debt, they aggressively borrowed from the existing unsecured credit limits until they defaulted and finally unable to continue to spend. Mian and Sufi (2010) found that this trends began around the middle of 2006, well before the crisis in August 2007 or the deeper meltdown in the fall of 2008. A similar conclusion also was found by the Financial Crisis Inquiry Commision (2011). As reported by the commission, a lot of financial institutions and households were fully in debt in the years up to the crisis. This situation left them vulnerable to financial distress or default even if the value of their investments declined modestly. When the housing and mortgage markets collapsed, the whole financial system and the economy were brought down together.

The European Sovereign Debt Crisis

The sovereign debt crisis in Europe is mainly seen as coming from fiscal problem. Although this is true today, the crisis however had its origins not in government debt but a private sector one. According to Lane (2012), government debt for the aggregate euro area did not appear to be an imminent problem in the mid 2000s. When looking at individual country government debt, only Italy and Greece had significantly high debt level around 2007 while France, Germany, Ireland, and Spain had a relatively healthy fiscal positions prior to the onset of the crisis. However, when looking at private credit dynamics, the euro area saw a remarkable growth in private credit in 2003 to 2007. The credit boom during that period was not due to government borrowing but rather, it was primarily by households and corporations.

Storm and Naastepad (2015) also provides a similar argument. They argue that one of the misinterpretation of the Eurozone crisis is that it is a crisis of fiscal profligacy or reckless spending by the government. They point out that in the period 2000-2007 prior to the crisis, government debt in the Eurozone declined on average, which according to them already contradicts the claim of fiscal irresponsibility. Sovereign debts rose sharply only after the crisis, due to the intervention from government to bail out insolvent banks and once GDP started to contract. As a consequence, government debt in the Eurozone increased by 33 percent of GDP from 2008 to 2012. However, they pointed that the Eurozone's aggregate debt is almost completely driven by private sector indebtedness. They also found no association between government debt and economic growth in the period 2000-2007 which means that the variation in government indebtedness does not statistically explain the variation in economic growth. Instead, there was a positive association between real GDP growth and household debt in the run-up to the crisis.

Economic Crisis Since the Past Century

Taylor (2012) conducted a more comprehensive study on financial crisis by using a sample of 14 advanced economies between 1870 and 2008. He argued that over 140 years, there has been no

systematic association of financial crisis with either prior current account deficits or prior growth in government debt levels. It is private debt that has always been the only useful and reliable predictive factor to crisis. However, Taylor (2012) also notes that the combination of credit boom with adverse fiscal position at the onset of a crisis will make economies more vulnerable to painful recession. Meanwhile, countries with lower government debt are better able to withstand a financial crisis by having more room to provide stabilizing support for their economy

From various literature so far, we have seen that economic and financial crisis were almost entirely driven initially by private debt rather than government debt. Malaysia's past experience in the Asian Financial Crisis also had its root in private sector debt. Has government debt become a new threat now or does private debt still pose risk to Malaysia's economy? The next section will discuss the methodology used in this study to examine that question.

METHODOLOGY AND DATA

Empirical Hypothesis and Data Sources

The empirical investigation begins with establishing some hypotheses. In order to examine whether government debt can instigate economic instability, the first hypothesis is that there should be causality running from government debt to economic growth. As government borrows and spends into the economy, this signifies a demand created by the government which in turn cause economic growth. Second, there should also be causality running from government debt to unemployment rate. If government debt-spending affects economic growth, then it should also influences the level of unemploymnet as economic growth creates job. The same hypothesis also applied to private debt where private debt should cause economic growth and unemployment. The role of government debt and private debt to economic crisis can also be analyzed by including housing market as a measure of instability. As we have seen from the US Subprime crisis in 2007-08, the housing market can be a source of economic crisis too. Therefore, if there's any effect on either government or private debt on the housing market, there should be causality running from government debt and private debt to the price of houses. The hypotheses are summarized in three models as illustrated in Figure 1.The arrow indicates the direction of causality.
.

Figure 1: Empirical hypotheses

1) GDP ← government debt, private debt

2) Unemployment rate ← government debt, private debt

3) House price index ← government debt, private debt

The data employed are quarterly data covering first quarter 2000 to fourth quarter 2014. The data series were directly obtained from several sources. Data for GDP, government debt, and house price index were gathered and compiled from Bank Negara Malaysia Monthly Statistical Bulletin. Meanwhile, data for unemployment rate were taken from CEIC and data for private debt were collected from the Bank of International Settlements. Private debt here refers to private non-financial sector which includes non-financial corporations, households, and non-profit institutions-serving-households.

Econometric Methodology

The econometric procedure in this study is divided into several stages. First, the analysis began with determination of the order of cointegration. If the variables do not follow the same order of integration, then there can be no meaningful relationship among them. However, if the variables are cointegrated, then cointegration and causality test can be employed. The study utilized two procedures for detecting unit roots and the order of integration of the variables: the Augmented Dickey-Fuller (ADF) and the Phillip and Perron (PP) tests. (see Said and Dickey 1984; Phillips and Perron 1988). After checking for unit root, and if the underlying variables to be tested are both I(1), then the analysis proceed with cointegration test. Cointegration tests in this study are conducted using the method developed by Johansen (1998) and Johansen and Juselius (1990) since this particular method is claimed to be superior than the regression-based Engle and Granger procedure. The

Johansen-Juselius method also sets out a maximum likelihood procedure for estimating and determining the presence of cointegration. If cointegration tests show that there exists long-run relationship among the variables, then the following Error-Correction Model (ECM) is estimated:

$$\Delta y_t = \alpha_0 + \sum_{i=1}^{n} \beta_1 \Delta y_{t-i} + \sum_{i=1}^{n} \beta_2 \Delta x_{t-i} + \sum_{i=1}^{n} \beta_3 \Delta z_{t-i} + ECT_{t-1} \tag{1}$$

where Δ is a first difference operator and α_0 is the intercept. y_t is the dependent variable, in this case either GDP, unemployment rate, or house price index. Meanwhile, variable x_{t-i} and z_{t-i} are the independent variables, where the former is government debt and the latter is private debt. If the variables are cointegrated, there always exists a corresponding error-correction representation, which implies that changes in the dependent variable are a function of the level of disequilibrium in the cointegrating relationship (captured by the error-correction term or ECT) and changes in other explanatory variables. As a consequence, either Δy_t or Δx_t or Δz_t or all of them must be caused by the equilibrium error (ECT) which is itself a function of Δy_{t-i}, Δx_{t-i}, and Δz_{t-i}. If both variables have a common trend, then the current change in the dependent variable must be partly the result of the independent variables moving into alignment or merging with the trend value of the dependent variable. The Granger causality can be determined either through the statistical significance of the t-test of the lagged ECTs and/or the F-test to the joint significance of the sum of the lags of each explanatory variable. The non-significance of both tests in the ECM model indicates that the dependent variable is exogenous.

In addition, the ECM approach also enables to differentiate between short-run and long-run Granger causality relationship. When the variables are cointegrated, then in the short-run, deviations from this long-run equilibrium will be corrected back by the changes in the dependent variable in order to force the movement towards the long-run equilibrium. If the dependent variable is driven by this long-term equilibrium error, this indicates that it is responding to this feedback. Otherwise, it is responding only to short-term shocks to the system. The F-test of the differenced independent variables gives an indication of the short-run causal relationship, while the long-run causal effects is shown through the significance (or non-significance) of the t-test of the lagged value of ECT. The coefficient of the lagged ECT is a short-run adjustment coefficient and represents the proportion by which the long-run disequilibrium in the dependent variable is being adjusted in each short period.

Finally, this study employed the variance decompositions (VDCs) to analyze out-of-sample causality i.e. forecasting. Because ECM model could be interpreted as within-sample causality, it only indicates the Granger causality relationship within the sample period of the study. It also unable to determine the dynamic properties of the system, nor does it allows to investigate the relative strength of the causal relations beyond the sample period. The drawbacks of ECM model can be overcome with variance decompositions (VDCs). VDCs can be used as out-of-sample causality test where it partitions the variance of the forecast error of a certain variable into proportions attributable to shocks or innovations in each variable including its own. This process enables the study to determine the relative strength of each variables. A variable that is optimally forecast from its own lagged values will have all its forecast error variance accounted for by its own disturbances (Sims 1982).

EMPIRICAL FINDINGS

Unit Root Test

Table 1: Unit Root tests

Variables	ADF Statistic		PP Statistic	
	level	first difference	level	first difference
Government debt	-1.3870	-7.1558***	-1.3649	-7.1558***
Private debt	3.4552	-6.5082***	4.4649	-6.5272***

GDP	-0.3728	-5.4329***	-0.3378	-10.3440***
Unemployment rate	-1.3505	-7.8860***	-4.3385	-16.3318***
House price index	3.8438	-6.3520***	4.1104	-6.6817***

Note: *** indicates significance at 1 percent level.

As reported in Table 1, the ADF and PP test results show that all variables are non-stationary at levels but become stationary after taking the first difference. This indicates that all variables are integrated at order 1, or I(1), at 1 percent level of significance.

Cointegration Test

Prior to performing cointegration tests, the optimal lag length is selected based on information theoretic model selection criteria namely the Akaike and Schawrz information criteria. This is important due to the sensitivity of Johansen approach to the lag length used in which under-parameterization would tend to bias the results and over-parameterization would diminish the power of tests. The results of cointegration tests are presented in Table 2. Both the results of trace test and maximum eigenvalue test unanimously conclude that there is one cointegrated equation in every model.

Table 2: Johansen cointegration test

GDP, government debt, private debt		
Null hypothesis	**Trace statistic**	**Max. Eigenvalue**
r = 0	33.3546*	24.4681*
r ≤ 1	8.8864	8.6957
r ≤ 2	0.1907	0.1907
unemployment rate, government debt, private debt		
Null hypothesis	**Trace statistic**	**Max. Eigenvalue**
r = 0	52.0376**	39.0484**
r ≤ 1	12.9892	12.8218
r ≤ 2	0.1673	0.1673
house price index, government debt, private debt		
Null hypothesis	**Trace statistic**	**Max. Eigenvalue**
r = 0	35.8331**	26.7620**
r ≤ 1	9.0710	8.8296
r ≤ 2	0.2413	0.2413

Note: * and ** indicates significance at 5 and 1 percent level respectively

Granger Causality

In order to examine the nature of causation, the next procedure employed is the Granger causality test. The hypothesis that the dependent variable is influenced by the independent variables is equivalent to the test that all of the coefficient on the lagged values of the independent variables are jointly equal to zero. The test statistic used is an F-statistic and rejection of the null hypothesis suggests that there exists causal relationship running from the independent variables to the dependent variable. The results of Granger causality tests based on ECM are reported in Table 3.

The hypothesis that government debt does not Granger-cause economic growth cannot be rejected either at 1, 5, or 10 percent level of significance, suggesting that growth was not influenced by government debt. However, the Granger causality from private debt to growth is established through the significance of both the F-statistic on the lagged independent variables terms for private debt and the significance of the error-correction term (ECT). Thus, the inclusion of past information on

private debt improves the forecast of growth of GDP in the short run as well as the long run, at least for the sample period examined in this study. This is also true for the causality of private debt to unemployment rate and house price index. Meanwhile, the hypothesis that government debt does not Granger-cause unemployment rate and house price index also cannot be rejected at any significant levels of confidence.This suggests that government debt also neither influence unemployment nor house price.

Table 3: Granger causality based on Error Correction Model

Dependent Variables	Independent Variables		
	Δlog Government debt (F-statistic)	Δlog Private debt (F-statistic)	ECT(-1) (t-statistic)
Δlog GDP	0.7647	8.5536***	-4.3680***
Δ Unemployment rate	0.0019	2.6870*	-5.4504***
Δlog house price index	0.0393	2.8503*	-4.9137***

Note: *** and * indicates significance at 1 and 10 percent level respectively. Diagnostic tests on the residuals show no evidence of serial correlation or heteroscedasticity.

Variance Decomposition

In order to provide further insight into the relationships of government and private debt with growth, unemployment, and house price beyond the sample period, the forecast error-variance decomposition is calculated. A variable that is optimally forecast from its own lagged values will have all its forecast variance account by its own disturbances. In other words, if government debt or private debt is important to economic growth for example, the impact of the shock on either government or private debt is significant on economic growth. A 20 quarter or 5 years horizon is chosen for the analysis.

Table 4: Variance decompositions

Effect upon ΔGDP			
Period	Source of variation/shock		
	ΔGDP	ΔGovernment debt	ΔPrivate debt
4	54.76	0.68	44.55
8	38.03	5.99	55.96
12	34.21	7.45	58.32
16	31.63	7.87	60.48
20	29.89	8.23	61.87
Effect upon ΔUnemployment rate			
Period	Source of variation/shock		
	ΔUnemployment rate	ΔGovernment debt	ΔPrivate debt
4	91.08	0.47	8.43
8	88.93	1.16	9.90
12	86.81	1.80	11.37
16	84.86	2.39	12.73
20	83.06	2.93	13.99

Table 4: Variance decompositions (continued)

Period	Effect upon ∆House price index		
	Source of variation/shock		
	∆House price index	∆Government debt	∆Private debt
4	97.77	0.12	2.10
8	97.97	0.65	1.37
12	96.65	1.69	1.65
16	93.17	3.28	3.53
20	87.40	5.39	7.19

Several conclusions are derived from the various decomposition results presented in Table 4. First, innovations or shocks toward government debt is consistent with ECM results. Table 4 indicates that changes in government debt in every period gives very small contribution to the variation in forecast error of growth. However, the difference with private debt is significantly huge. For example, in the 5th year (period 20) of forecast, government debt accounts for only 8.23 percent of the variation in forecast error of growth. This is quite small compared with changes in private debt which accounts for 61.87 percent of the variation in forecast error of growth during the same period. Thus, the role of private debt on economic growth is clearly bigger than government debt. This is also signify that private debt poses greater influence and hence, risk to the stability of Malaysian economy compared with government debt.

This conclusion is also true when looking at the impact of government and private debt towards unemployment and house price. In 5 years, government only accounts for 3 percent of forecast error variance of unemployment rate while private debt accounts for 14 percent. Meanwhile, the difference between government debt and private debt is not too big when looking at the impact on house price. In 5 years, government debt only accounts for 5.39 percent while private debt at 7.19 percent. However, the point is still clear that the impact of government debt towards house price is smaller than the impact coming from the variations in private debt.

CONCLUSION AND REMARKS

The main purpose of this study is to analyze whether government debt can instigate economic crisis in Malaysia. The analysis also incorporates private debt to determine whether it is private debt instead that can cause economic crisis. The methodology employed uses several procedures which include Augmented Dickey Fuller and Phillips Perron unit root tests, Johansen's cointegration test, and followed by Error-Correction Model and variance decompositions to capture both within-sample and out-of-sample Granger causality. The non-existence of causal link from government debt to economic growth, unemployment rate, and house price suggests that it is improbable for government debt to trigger economic crisis in Malaysia. Instead, this study found that the causal relationship is positive with private debt where it significantly influenced growth, unemployment, and house price. This indicates that it is more likely for private debt to instigate economic crisis in Malaysia.

However, this study never suggests that there *will certainly* be an economic crisis in Malaysia in the future because of private debt. That depends on various factors that will prevent or allow it from happening. For example, the rise in household income can improve the ability of household to service its debt and reduces financial fragility. What the study intended to prove is: *if* an economic crisis due to excessive debt is going to happen in Malaysia, it is more likely to be triggered by private debt rather than government debt. Furthermore, the result found by this study also should not be interpreted as to indicate that government debt is not important at all. High and excessive government debt will surely become a burden and poses risk to a nation. But it will not likely to be an *initial trigger* for a crisis in Malaysia. Rather, it will become a burden in the *aftermath* of a crisis (if it happens) especially if the level of debt is high. Therefore, the continuous effort of the Malaysian government to control its

borrowing and spending should be given credit and supported. However, the concern now is on the rising household debt which could pose a systemic risk to Malaysia. As of 2014, the level of household-debt-to-GDP in Malaysia had increased although marginally to 87.9 percent (Bank Negara Malaysia 2014).This figure is much higher when looking at household-debt-to-income ratio in Malaysia which already reached 146 percent. This ratio is the highest among many developing economies and also similar to those in the United States and the United Kingdom (McKinsey Global Institute 2015).

But according to Bank Negara Malaysia (2014), household indebtedness and rising property prices are actually moderating as a result of the package of measures taken since 2010. New households borrowing also were of higher quality and households' financial buffers too are much stronger. Furthermore, risks to household finances from a house price correction are also continued to be mitigated through several measures which include: subduing speculative activities in the property market, prudent valuation and credit risk management practices by banks, and the sound quality of the housing loan portfolio. But how far these measures are really effective to ensure that household debt will not put the stability of Malaysian economy at risk? This is a question that should be examined in a further research. So far, this study has only showed that it is not government debt but instead it is private debt that can instigate economic crisis in Malaysia.

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APPENDIX

A matrix developed by Boston Consulting Group to analyze government fiscal position. Malaysian government debt had been moving to the "Safe Zone" since 2010 (Source: Jala 2015)
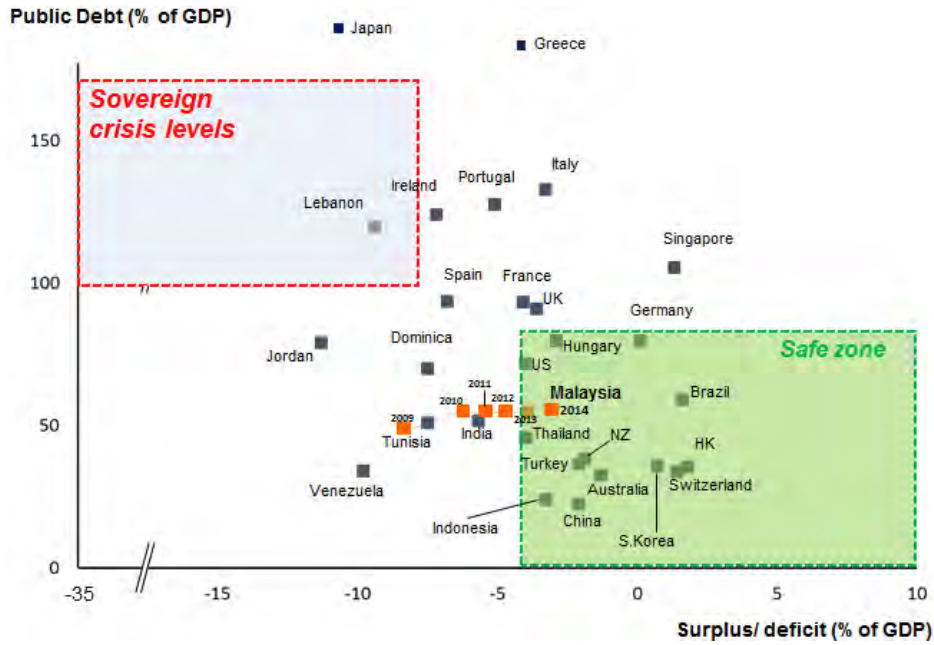
Does Stock Market Overreact?
Evidence from KLCI Malaysia 2007-2014

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Abstract

According to market efficiency, all investors are rational and market price reflects new information quickly. Reality, however, tends to be contradict with efficient market, as investors tend to have emotional behaviour on trading in stock market such as overreaction toward new information. Hence, this study serves the objective of showing the irrational behaviour among investors, leading to overreaction in property, and trading and services industry in Bursa Malaysia. The finding found that the investors tend to overreact to economic crisis and underreact to some new information released from 2007 to 2014.

Keywords: Overreaction, Return Predictability, EMH, Stock market

INTRODUCTION

For the past few decades, Efficient Market Hypothesis (EMH) had been dominating main research themes in finance-related sector, in which researchers believe the rational assumption mentioning that the investors will rely on relevant information to do judgmental decisions under Bayes rule. Jensen (1978) states that "*I believe there is no other proposition in economics which has more solid empirical supporting it than the Efficient Market Hypothesis*". Even some market situations are out of EMH explanation such as value stocks (loser portfolio) generate higher returns than growth stocks (winner portfolio), Fama and French (1992) explain that, the value stock may be riskier, hence, investors require higher return, and Lakonishok, Shleifer and Vishny (1994) explain that investor's expectations are based on past performance of the stocks. These explanations are formed in relation to the EMH assumption stating that "investors are rational".

However, Behaviour Finance explains that, "investors are irrational", investors react like gamblers in casino as investors tend to focus on short term to make money, subsequently leads to overreact to certain market conditions, such as overtrading in growth stocks (winner portfolio). Investors suffer from psychological biases that affect the trading activities such as misinterpretation of news, as a result stock price over shoot. The root of explanation of De Bondt and Thaler (1985) explain value stocks (loser portfolio) provide higher return than growth stocks (winner portfolio) based on investor psychological biases in interpreting the news which lead to overreaction on growth stock. Therefore, this study aims to show that stock markets is inefficient as investors exhibit psychological biases which will lead to overreaction or underreaction on trading strategy from 2007 to 2014, which involves Malaysian economy from recession (bad news) to recovery (good news). Besides, this study also will try to suggest the investment strategy under over and under reaction condition.

LITERATURE REVIEW

Emergence of Behavioural Finance

Behavioural finance is a relatively new developed field in finance that combines the behavioural and cognitive psychological theory with conventional economics and finance. It helps to provide explanations to stock market inefficiencies by focusing on the psychological and behavioural factors (Shiller, 2003).

In addition, Lo (2005) stated that the behavioural finance models take into account the irrationalities in investors' behaviour, including all the cognitive factors and emotional issues so as to explain the stock market behaviours. Thus, it allows the situations in which the investors fail to update their beliefs correctly in the presence of new information or the investors update the new information rationally but make improper or questionable choices (Barberis & Thaler, 2003). Furthermore, behavioural models also allow the possibility that market participants may overreact or underreact to the unexpected news, which may lead to the stock return regularities or some extreme events like stock market bubbles and crashes (Sharma, 2014). Therefore, it is believed that taking the behavioural biases, including overconfidence, representativeness, anchoring and conservatism into consideration could provide a better understanding of the stock market inefficiencies (Kaestner, 2006).

Overreaction

Market overreaction shows that stock prices tend to exhibit reversal behaviour over the long run, that is, the past losing stocks outperform the past winning stocks, suggesting that predictability exists in stock market returns (Maheshwari & Dhankar, 2014). According to Ali, Nassir, Hassan and Abidin (2010), these return reversals are generally resulting from the overreaction effect, in which the irrational behaviours of market participants would eventually lead to abnormal price movements in the stock market. Generally, investors are subject to cognitive biases and it could cause them to overweight the new information and make irrational tradings (Ali, Ahmad & Anusakumar, 2011). In the presence of unexpected good or bad news, investors tend to be overly optimistic or pessimistic about a particular stock, driving the stock price up or down to an unreasonable level. Over a period of time, specifically three to five years, the market corrects its initial price reaction and the stock price slowly reverts back to its fair value, resulting in a return reversal pattern.

Maheshwari & Dhankar (2014) stated that investors adopting the contrarian strategy, which involves buying the prior losers and selling the prior winners, are able to profit from this market overreaction. By knowing that the market tends to overreact to the extremely good (bad) news, the contrarian investors assume the winner (loser) stock prices will be pulled much higher (lower) than its true value (Fung & Lam, 2004). Therefore, they would apply the contrarian strategy by simultaneously buying the losing stocks and selling the winning stocks. Over the long run, the market realized its initial overreaction to the previous information and took corrective action, causing the stock prices move to the opposite direction. Consequently, the former loser stocks would generate higher average returns than the former winner stocks. Tripathi & Aggarwal (2009) claimed that the consistent positive returns earned by the contrarian strategy have clearly indicated the existence of predictability in stock market, in which the investors can make future abnormal returns by using the past information of the securities, seem to be incompatible with the EMH.

The study carried out by Daniel, Hirshleifer and Subrahmanyam (1998) has clearly demonstrated the existence of overreaction in stock market, as a result of the investors' overestimation of the precision of their private information. Similarly, Chuang & Lee (2006) observed that the stock prices strongly overreact to private information and underreact to public information in the presence of overconfident investors. Moreover, Odean (1998) revealed that if investors are overconfident, there is a tendency that the market will overreact to salient, but less relevant information and at the same time, underreact to the statistical and highly relevant information. Conversely, Zaiane & Abaoub (2009) analyzed the existence of overconfidence in Tunisian stock market and found that only one third of the sample supporting the overconfidence theory. Therefore, it is concluded that there is only little evidence to confirm that Tunisian investors overact to their private information signals as a consequence of overconfidence bias.

Besides, somehow the investors may also overestimate or underestimate the level of information in the market (Hott, 2009). Therefore, investors tend to derive the asset information from the actions of majority, which contributed largely to asset price discrepancy due to overreaction (Hott, 2009).

Underreaction

Market underreaction refers to the tendency of stock prices to underreact to the unexpected news or events, which in turn lead to a momentum in profits over the short horizons (Barberis, Shleifer

and Vishny., 1998). According to Archana, Safeer and Kevin (2014), the momentum effect suggests that the former winning (losing) stocks have a higher than expected probability of continuing be the winning (losing) stocks in the short run, as a consequence of the market underreaction. Basically, investors who suffering from the psychological biases do not perfectly and fully process the new information immediately, but rather to integrate the new information gradually over the time. The slow adjustment to the new information would cause the securities prices continue to move in the same direction in the subsequent period, specifically three to twelve months (Jegadeesh & Titman, 1993). In other words, the stock prices continue to rise after the positive earnings announcements, or continue to fall after the negative earnings announcements, resulting in market returns continuation. Eventually, the recent past winners tend to outperform the recent past losers.

Basically, investors can gain advantage of market underreaction by using the strategy of momentum, holding that investors buy the past winning stocks and sell the past losing stocks (Lam, Liu and Wong, 2010). Jegadeesh & Titman (1993) stated that the return continuation was a consequence of stock market underreact to new information and gradually incorporate the information into the securities prices. Investors who recognized the momentum in securities prices can achieve abnormal returns by utilizing the current positive information to predict positive returns in the future (Barberis et al., 1998). This is because the market tends to underreact to the unexpected news or announcements, causing a mispricing of securities in the initial period, and a price correction in the following period. As a result, the investors who use the momentum strategy would eventually obtain abnormal profits as the recent past winners (losers) tend to be the future winners (winners). Latif, Arshad, Fatima and Farooq (2011) argued that the trends in returns over the short horizons present the evidence of predictability in stock market, contradict to the assumptions made in EMH.

Numerous studies have provided convincing support for the underreaction hypothesis in stock market. Cutler, Poterba & Summers (1991) found reliable evidence that stock prices gradually incorporate information, causing the market underreaction and continuation of stock returns in the short run. Similarly, Chan, Jegadeesh & Lakonishok (1996) reported that stock prices respond slowly to the new information, particularly earnings announcements, suggesting the existence of underreaction in US stock market. Moreover, Rouwenhorst (1998) examined the stock markets in twelve European countries. The author claimed that the stock markets tend to underreact to the new information and the investors are allowed to beat the market and make abnormal returns by applying momentum strategy. Besides, the findings of Lo & MacKinlay (2011), Schnusenberg & Madura (2001), Alrabadi (2012) and Lasfer, Melnik and Thomas (2003) showed significant evidence of the underreaction effect in international stock markets. Their studies revealed that the stock markets exhibit trends in returns, in which the stock prices continue to drift in a single direction over the short horizons. Likewise, Chan, Hameed & Tong (2000) analyzed the global stock markets and the proven the existence of momentum profits and market underreaction. Furthermore, Ali et al. (2010) detected the underreaction effect to the national election announcement in Malaysian stock market.

RESEARCH METHODOLOGY

Sampling Design

The data employed in this study includes prices of 30 most active stocks from Trading and Services sector, and Properties sector. Also, stock prices are denominated in Ringgit Malaysia currency. Apart from that, indexes of market specifically Bursa Malaysia Kuala Lumpur Composite Index (KLCI) were also collected. All monthly historical data from year 2007 to year 2015M03 were obtained from DataStream.

Research Procedure

This study applies for the analysis of overreaction and underreaction within industries. The steps are listed as follows:

Step 1: Select companies from each industry.

The study chooses 30 most active stocks, in terms of most active by dollar volume, from each sector respectively as it considers both trading volume and stock prices. There are basically two steps applied by the study in stock selection. Bear in mind that these steps were applied independently in each industry. Firstly, the study filtered the all available stocks and only considered the stocks with complete monthly data from 2007 to 2015M03. This step is to ensure that no missing data in between the time scope of study which may cause result discrepancies (De Bondt and Thaler, 1985). Secondly, in order to choose the most active stocks over period considered, the study computed the dollar volume of each remaining stocks from first step. It is done by multiplying monthly trading volume and stock prices. Hence, the study computed the average dollar volume of each stock. The top 30 stocks with the highest average dollar volume are selected to form winner and loser portfolios in the study.

Step 2: Process the stock prices and market indexes into returns.

The model deals with monthly stock returns and stock market returns. In this step, monthly stock adjusted prices and the monthly KLCI generated from DataStream are transformed into monthly returns by using the following equations:

Monthly stock return is calculated as:

$$r_j = \frac{(P^i_{j+1} - P^i_j)}{P^i_j}$$

Where r_j is the financial return of stock i at the end of month j
       P^i_j is the price of stock i at the end of month j, and
       P^i_{j+1} is the price of stock i at the end of month $j+1$,

Monthly KLCI return is calculated as:

$$r^{KLCI}_j = \frac{(INDEX_{j+1} - INDEX_j)}{INDEX_j}$$

Where r^{KLCI}_j is the financial return of the KLCI in the month j,
       $INDEX_j$ is the index of KLCI in the month j, and
       $INDEX_{j+1}$ is the index of KLCI in the month j+1.

The use of KLCI return is to calculate the residual return of portfolios formed by comparing portfolio return with KLCI return, which will be discussed in following steps.

Step 3: Build winner and loser portfolios based on industrial average return of *t+1* quarter.

In this step, the study classified the stocks into winner and loser portfolios based on their financial performance at the end of *t+1* quarter. For each quarter, winner portfolio will be formed with a combination of promising group of stocks, and the loser portfolio will be formed with a combination of non-promising group of stocks. The classification of stocks into promising and non-promising stocks portfolio was made in the period from 2007 to 2014.

Since the collected data frequency is in monthly, average financial returns of *t+1* quarter for each stock have been calculated at first. The study then ranked all the 30 stocks from high to low based on their average financial returns. Subsequently, for every *t+1* quarter, an average value of average financial returns of each stock has been computed with the purpose of grouping promising stocks and non-promising stocks into winner and loser portfolios respectively at *t* quarter. The stocks with higher average financial returns is to be grouped as winner portfolio for *t* quarter, and the group with lower average financial returns is to be grouped as loser portfolio for *t* quarter. The steps of forming winner and loser portfolio are summarized as follows:

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┌─────────────────────────────────────────────────────────────────────┐
│          Calculate the t+1 average financial returns of each stock    │
└─────────────────────────────────────────────────────────────────────┘
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⬇

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┌─────────────────────────────────────────────────────────────────────┐
│          Calculate the t+1 average of stocks' average financial returns│
└─────────────────────────────────────────────────────────────────────┘
```

T   ⬇

```
┌─────────────────────────────────────────────────────────────────────┐
│  Stocks with higher-than-average t+1 financial returns - Winner Portfolio for t quarter │
│  Stocks with lower-than-average t+1 financial returns - Loser Portfolio for t quarter   │
└─────────────────────────────────────────────────────────────────────┘
```
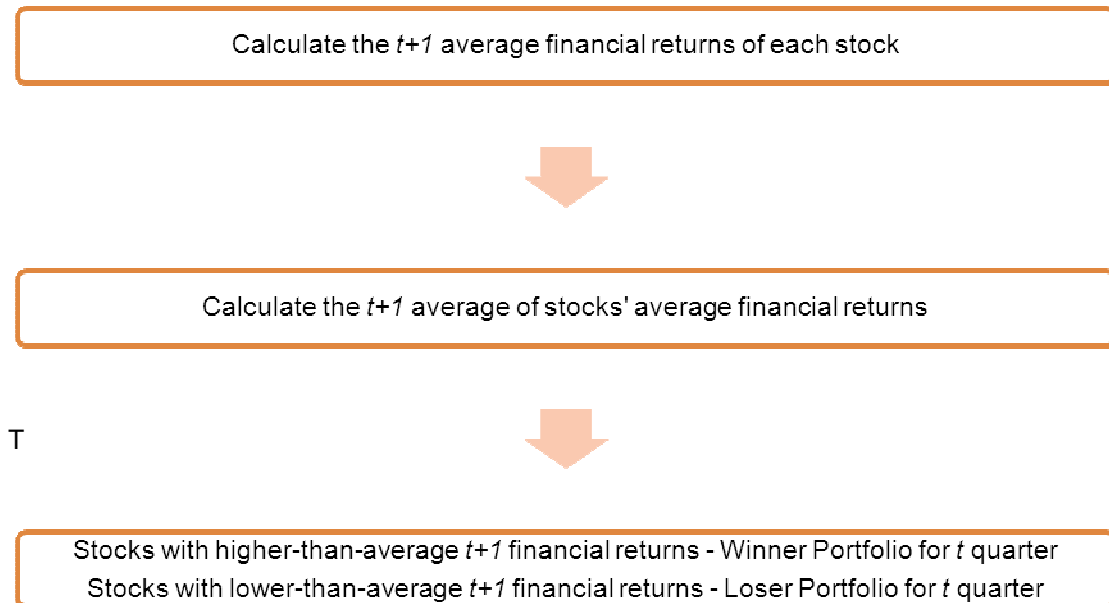
The idea implies for using *t+1* quarter in building winner and loser portfolios is to identify the future winner stocks and future loser stocks. By identifying them, the study then investigates how the winner and loser stocks in *t+1* quarter were performed during *t* quarter. It provides an insight regarding the previous stock performance. Did the stocks perform well (poor) before they transformed into loser (winner) stocks in the future? The overreaction and underreaction hypotheses can be answered in this sense.

Step 4: Calculate residual returns of winner and loser portfolios of each month during *t* quarter, by comparing with KLCI return.

Using the classification of winner and loser portfolios in step 3, in order to visualize the overreaction (underreaction) effect, the study has to show the magnitude of how loser (winner) portfolios outperform winner (loser) portfolios. To perform that, residual returns of both winner and loser portfolios for each month of *t* quarter were calculated. Residual return describes the financial return generated by a portfolio over a period of time that differs from the market return. The monthly residual returns of both winner and loser portfolios were calculated, according to the equations listed as follows:

$$RR^{W}_{t,j} = r^{W}_{t,j} - r^{KLCI}_{t,j}$$

Where $RR^{W}_{t,j}$ is the residual return of the winner portfolio in the month *j* of the quarter *t*,

$r^{W}_{t,j}$ is the financial return of the winner portfolio in the month *j* of the quarter *t*, and

$r^{KLCI}_{t,j}$ is the financial return of the KLCI (as market index) in the month *j* of the quarter *t*.

$$RR^{L}_{t,j} = r^{L}_{t,j} - r^{KLCI}_{t,j}$$

Where $RR^{L}_{t,j}$ is the residual return of the loser portfolio in the month *j* of the quarter *t*,
$r^{L}_{t,j}$ is the financial return of the loser portfolio in the month *j* of the quarter *t*, and

$r^{KLCI}_{t,j}$ is the financial return of the KLCI (as market index) in the month *j* of the quarter *t*.

From the residuals returns corresponding to the 3 months of each quarter, the average residual returns of the winner portfolio ARR^{W}_{t} and of the loser portfolios ARR^{L}_{t} are calculated from

year 2007 to 2014. The idea is mainly to study the effect of overreaction (underreaction) on quarterly basis. The average residual returns were calculated using equations listed as follows:

$$ARR_t^W = \frac{1}{n} \sum_{j=1}^{n} RR_{t,j}^W$$

Where $ARR^W{}_t$ is the average residual return of winner portfolio in the quarter t,
$RR^W{}_{t,j}$ is the residual return of winner portfolio in month j of the quarter t, and
n is the number of month in the quarter t.

$$ARR_t^L = \frac{1}{n} \sum_{j=1}^{n} RR_{t,j}^L$$

Where $ARR^L{}_t$ is the average residual return of loser portfolio in the quarter t,
$RR^L{}_{t,j}$ is the residual return of loser portfolio in month j of the quarter t, and
n is the number of month in the quarter t.

The study then investigates for evidence of overreaction by comparing the performance of the winner and loser portfolios during the study period.

$$ARR_t^W - ARR_t^L$$

Referring to the overreaction phenomenon, overreaction happens when the former loser stocks tend to outperform the former winner stocks. Hence, if $ARR_t^W - ARR_t^L$ shows a negative value, it basically indicates that loser portfolio has higher average residual return than winner portfolio. It can be interpreted as loser portfolio has outperformed winner portfolio during the t quarter. On the other hand, if $ARR_t^W - ARR_t^L$ provides a positive value, it means the former winner portfolio maintained its outstanding performance in the stock markets than former loser portfolio. The market is then appeared to be underreacted during the t quarter.

Step 5: Perform hypothesis testing to indicate the validity of overreaction or underreaction effect.

The study uses parametric t-test for two independent samples, in order to test if the difference between average residual returns is statistically meaningful. The null and alternative hypotheses are as follows:

$$H_0: ARR_t^W - ARR_t^L = 0$$

$$H_{1(A)}: ARR_t^W - ARR_t^L < 0$$

$$H_{1(B)}: ARR_t^W - ARR_t^L > 0$$

Null hypothesis proposes that the sector does not exhibit neither overreaction nor underreaction characteristics throughout the quarter. On the other hand, alternative hypothesis A proposes that the sector does exhibit overreaction effects meaningfully throughout the quarter, as winner portfolio underperforms loser portfolio with lower residual returns. While alternative hypothesis B proposes that the sector does exhibit underreaction effects meaningfully, as winner portfolio outperforms loser portfolio with higher residual returns. The null hypothesis will be rejected if the t-statistics figure is lower than the significance level.

The test statistics is listed as follows:

$$\text{T-statistics} = \frac{ARR_t^W - ARR_t^T}{\sqrt{\frac{s^2_{ARR_t^W}}{n_{ARR_t^W}} - \frac{s^2_{ARR_t^T}}{n_{ARR_t^T}}}}$$

Where ARR_t^W is the average residual returns of winner portfolio,
ARR_t^L is the average residual returns of loser portfolio,

$S^2_{ARRt}{}^W$ is the standard deviation of average residual return of winner portfolio,
$S^2_{ARRt}{}^L$ is the standard deviation of average residual return of loser portfolio,
$n_{ARRt}{}^W$ is the number of months taken into account in calculating winner quarterly average residual returns, and
$n_{ARRt}{}^L$ the number of months taken into account in calculating loser quarterly average residual returns.

DATA ANALYSIS

Share prices from two sectors were obtained to calculate the returns for period ranging from 2007 to 2015M03. The data are used to form winner and loser portfolio for quarter *t* based on the average return in the quarter of *t+1*. By compared with the market index which is KLCI index, the residual return for each year is acquired to determine the effect of underreaction or overreaction. The average residual returns, ARR^W and ARR^L as well as their differences for both sectors are tabulated as below together with their t-statistics at the 5% and 10% significance level.

Table 1: Average Residual Returns and T-Statistics - Trading and Services Sector

Year	ARR^W (%)	ARR^L (%)	$ARR^W - ARR^L$ (%)	T-statistics
2007 Q1	3.6421	2.3238	1.3283	0.6558
2007 Q2	5.2156	0.6713	4.5443	2.3707**
2007 Q3	3.0463	2.4250	0.6213	0.4268
2007 Q4	2.9005	-1.1347	4.0352	2.4852**
2008 Q1	-1.4741	-3.8554	2.3813	1.8538
2008 Q2	-1.1487	0.6589	-1.8076	-1.3520
2008 Q3	-1.2212	3.1597	-4.3809	-2.9158*
2008 Q4	-1.0306	-3.7743	2.7437	1.6152
2009 Q1	-3.1643	2.0980	-5.2623	-3.1161*
2009 Q2	4.8314	8.5669	-3.7355	-2.0652**
2009 Q3	0.5564	-4.6443	5.2007	4.5223*
2009 Q4	-1.9862	-2.4225	0.4363	0.3644
2010 Q1	-0.8068	0.0933	-0.9001	-0.4557
2010 Q2	0.7714	1.0091	-0.2377	-0.1296
2010 Q3	-1.4195	-1.9507	0.5332	0.5067
2010 Q4	6.2678	0.5502	5.7176	5.9110*
2011 Q1	0.3012	1.3000	-0.9986	-0.4575
2011 Q2	0.3524	-1.5991	1.9515	0.9893
2011 Q3	-3.9917	-1.3633	-2.6284	-2.2281**
2011 Q4	11.4352	2.8857	8.5495	2.5515**
2012 Q1	-0.0346	20.9792	-21.0138	-5.7365*
2012 Q2	-0.8235	-3.2758	2.4523	2.0853**
2012 Q3	-0.3932	-2.1793	1.7861	1.5034
2012 Q4	0.0716	-1.5511	1.6227	1.2652
2013 Q1	1.6503	1.0000	0.6836	0.4926
2013 Q2	5.2881	1.7414	3.5367	2.6504**

2013 Q3	1.0391	3.5975	-2.5584	-1.4398
2013 Q4	-0.1979	-0.9141	0.7162	0.4418
2014 Q1	-0.0132	1.9051	-1.9183	-1.5365
2014 Q2	0.6573	-0.3414	0.9986	0.8387
2014 Q3	0.1474	1.7973	-1.6499	-1.1798**
2014 Q4	-6.1458	1.3161	-4.8296	-3.1529*

Note. * and ** indicate significance at 5% and 10% respectively.

Table 2: Average Residual Returns and T-Statistics - Properties Sector

Year	ARR^W (%)	ARR^L (%)	$ARR^W - ARR^L$ (%)	T-statistics
2007 Q1	8.8174	8.4903	0.3272	0.1410
2007 Q2	12.7887	10.4987	2.2900	0.7818
2007 Q3	3.0338	2.4621	0.5717	0.2448
2007 Q4	-4.7789	-6.2011	1.4222	1.0790
2008 Q1	-4.7030	-2.8883	-1.8147	-1.2365
2008 Q2	-4.4165	-3.7644	-0.6521	-0.4062
2008 Q3	-0.0634	-1.4082	1.3448	0.9083
2008 Q4	-0.9237	-0.1296	-0.7941	-0.7054
2009 Q1	-2.2312	0.7295	-2.9607	-1.7644
2009 Q2	9.9110	10.1170	-0.2061	-0.1060
2009 Q3	-3.0394	2.4070	-5.4464	-1.9911**
2009 Q4	-0.9686	-2.9458	1.9772	1.1182
2010 Q1	0.5081	3.3139	-2.8058	-1.0161
2010 Q2	-2.1220	-1.3004	-0.8216	-0.5453
2010 Q3	-2.8549	-1.8941	-0.9607	-0.5827
2010 Q4	14.1189	3.4136	10.7053	3.4736*
2011 Q1	-0.4749	2.9442	-3.4191	-1.3640
2011 Q2	0.8907	-0.3572	1.2479	0.6793
2011 Q3	-2.4900	-1.1368	-1.3532	-1.5617
2011 Q3	0.8514	2.1709	-1.3195	-0.6413
2012 Q1	0.1067	1.0965	-0.9899	-0.5945
2012 Q2	-2.1195	-2.8787	0.7592	0.6055
2012 Q3	-0.8408	-0.5281	-0.3127	-0.2330
2012 Q4	-1.1116	-0.4908	-0.6207	-0.5002
2013 Q1	3.3319	3.5930	-0.2611	-0.1936
2013 Q2	6.4441	6.9731	-0.5290	-0.2527
2013 Q3	1.0115	-1.2661	2.2775	2.1803**
2013 Q4	0.5406	-0.1603	0.7009	0.4539
2014 Q1	5.6626	3.0873	2.5753	2.1701**

2014 Q2	2.8660	4.1111	-1.2451	-0.5387
2014 Q3	3.2018	3.2663	-0.0645	-0.0301
2014 Q4	-5.0141	-4.6716	-0.3425	-0.2001

Note. * and ** indicate significance at 5% and 10% respectively.

Referring to Table 1, prior to the explosion of 2008 Global Financial Crisis, underreaction effect has been observed in trading and services sector in 2007. While during the crisis, Malaysia investors generally exert overreact response to the crisis. This can be explained by the contraction in export of Malaysia during late 2008, caused the loss of investor confidence to the particular sector. The falling exports show a continuous decline in aggregate demand from external effects, which is the main channel through which the global financial crisis has penetrated the Malaysian economy. As a result, when investors' lost their confidence with the companies' performance in the sectors, they tended to overreact irrationally by selling off their holding stocks, causing the stock prices to be disproportionate. Furthermore, both overreaction and underreaction effects are observed between 2010 and 2014 in trading and services sector.

Referring to Table 2, in properties sector, investors still overreacted to the subprime lending crisis in the third quarter of 2009, even though the Malaysian economy was in the progress of recovery. Aside, underreaction effects are observed in properties sector in 2010, 2013 and 2014.

CONCLUSION AND DISCUSSION

As a summary of the study's result, trading and services sector and property sector exhibit overreaction effect due to the global financial crisis in the year of 2008 and 2009. During the pre-crisis period, investors tend to underreact to the trading and services sector. Therefore, it is proven that Malaysian investors tend to react disproportionately upon any surprises in events or news, rather than reacting rationally in efficient market.

Standing from both institutional and individual investors' point of view, this study can act as their guidelines in managing securities or portfolios. The importance of capturing overreaction and underreaction is that it justifies which option of investment strategy to be used, namely Contrarian Strategies is for overreaction phenomenon, while Momentum Strategies is for underreaction phenomenon. In case of overreaction phenomenon, the investors can employ Contrarian Strategies by selling past winner stocks and buying past loser stocks, upon any surprises in any domestics, economics or international events and news. The strategies tend to be even applicable during economy crisis, as the study shows significant overreaction effect in Malaysian stock markets during 2008 Global Financial Crisis. In case of underreaction phenomenon, the investors can apply Momentum Strategies by selling past loser stocks and buying past winner stocks upon event shocks.

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Contents

Based on management of staged process, Grover (2007) suggests the need for effective management of the doctoral process to alleviate the occurrence of potential mistakes during the process. He recommends four stages of doctoral process, which are *exploration*, *engagement*, *consolidation*, and *entry*. The exploration stage comprises the orientation stage for new entry students that involves students socialising into the program through getting to know their peers and faculty members as well as recognising the kinds of resources that they can accessed. Failing to socialise at this stage or making mistakes at this point may lead to ineffective management of the early doctoral process which could lead to many problems later. The engagement stage involves students to have more engagements with the faculty members and to establish their research goal and direction. At this point, abilities to have integrative thinking and prioritise on their high value activities are required before moving to the next stage of consolidation. At this stage, students establish their research topic and achieve candidacy. They must also be able to manage relationship with their supervisors, while avoiding complacency and procrastination, which could lead to delayed completion of their doctoral studies. The entry stage refers to the final stage of doctoral education, in which students are now getting prepared for the job market. The most common mistake at this point is when students do not give priority to completion and focus more on getting a job...329

There are several studies on doctoral research process that utilise personal narrative approach. The use of personal narratives allows the description of one's doctoral experiences and process that one has to go through to completion. Our review on several narratives enabled us to derive emergent constructs that influence doctoral experiences. Based on our understanding of the discussion in Ryan (2012)'s edited book, we generate these constructs: a) family-study balance, b) emotion, c) life experience, d)work experience, e) motherhood and Ph.D., f) academic career, which all have bearings on the doctoral research process. Brown (2014) edited book indicates a number of emergent constructs, which include a) cultural adaptation in foreign setting, b) family culture, c) societal expectation, d) early-life experiences, e) transition to family life in foreign setting, f) matching of actual societal issue with theoretical debate, g) transformation into a scholar, h) openness, i) self-confidence development, j) dreams and inspirations, k) family history, and l) discovering oneself. 329

Joseph (2014)'s personal narration provides insights into two important constructs in conducting qualitative research: a) cultural adaptation in data collection and b)competencies in using different types of data collection techniques and analysing them. Based on Watt (2007)'s personal narration article, we interpret the emergent constructs as a) family-study balance, b) emotion, c) data access, d) value of reflexivity during as well as after the study, e) research process, f) research reporting trade-offs, g) communication with respondents, h) subjectivity in interpretation, and i) data trustworthiness. The use of surveys, as in the case

of Anderson and Swazey (1998) also generates emerging inquiries that require more discourses in the future. This include the need to explore why students perceive that certain things in graduate school cause personal changes that they do not like and to identify what are these specific personal changes.

Based on our review of literature on reflective studies (Brown, 2014; Joseph, 2014; Ryan, 2012; and Watt, 2007), we deduce that underneath the above constructs there are prevalent within the doctoral process the existence of elements of certain values. On the whole, these studies give positive impacts on both the authors and the readers; some give more focus in telling about their life as doctoral students, others describe in details specific research activities that they had to go through. However, there is less attention given to discussing the methods that they had employed in learning about qualitative methodology.

Doctoral Program in Management

THE Z FACTOR: MANAGING THE NEXT GENERATION OF WORKPLACE

INTRODUCTION

The next generation of Malaysians entering the workforce will be ambitious, entrepreneurial and hyper-connected. They will be more interested in forging their own career path rather than following traditional job structures, leveraging technology to meet their demand. Generation Z (Gen Z) will be entering the workforce and a noteworthy transformation in the age demographic of office workers is near (Carlson, 2009). Just as organizations are coming to grips with the needs of the emerging Generation Y (Gen Y), a new group, Gen Z, is looming on the horizon. Little is known about Gen Z, the children of Gen Y. The first of this group have graduated university and entering the workforce, right about the time when Gen Y will hit its peak as a share of office workers. Thus, the workplace will need to address both groups. In the sense, the challenge will be to serve not only Gen Y workers, but to also anticipate the workplace needs of the emerging Gen Z so that both groups can work effectively.

Who is Gen Z?

Traits of Gen Z

Readiness of Gen Z in Workforce

According to a survey conducted by Ipsos research (2015) with a focus group discussion and in-house interviews with 511 respondents that fit into the Gen Z age bracket, youth entrepreneurship is gaining popularity in Malaysia and is being seen a major game-changing element to ensure sustainable economic growth. Giving Gen Z the resources they need to become successful entrepreneurs could be the key fuels innovation, creates new jobs and increases productivity and competitiveness. The need to forge their own path in life can be seen in the result of the survey where the Gen Z need to be bold and adventurous, being entrepreneurial and wanting to seek career linked to hobbies or interests. In evidence, 42% of the respondents entertained the idea of doing something completely new in career while 37% said that they would like to transform their hobby into their profession. Therefore, holding a traditional day job is not really a priority for Gen Z

On the other hand, the self-driven motivation sets Gen Z apart from Gen Y peers. Gen Z is generally considered to be more driven and less narcissistic than Gen Y (Nambiyar, 2014). Their ambitious nature of Gen Z brings with it high demands where 75% of respondents said they consider getting higher salary to be the key factor where earning

Medical tourism is one of the important subsectors under the Healthcare National Key Economic Areas (NKEA). Medical tourism refers to any activity related to medical services like cosmetic surgery or other medical procedures are covered under the Healthcare NKEA (ETP, 2009). Wellness and spa are included in the scope of the Tourism NKEA (ETP, 2009). The health sub-sector is distributed from tourism sector to be the most burgeoning market in Malaysia (Ormond, 2011). Today, Malaysia is one of the most preferred medical tourism destinations in the world (Ormond, 2011; Dahlui & Aziz, 2011). Malaysia has the good prospects in developing the medical tourism industry such as affordable medical price, short waiting time for treatment, well-trained medical specialists, state-of-the-art medical facilities, worldwide recognized safety and quality services, reasonable exchange rate compared to nearby competitor countries (Dahlui & Aziz, 2011). However, this phenomenon brings harm to local populations (NaRanong and NaRanong, 2011). What is the darkness of medical tourism industry to local patients in Malaysia?

Perceived service quality refers a perceived verdict where customers compare their received service with their expectations (Grönroos, 1984). Perceived service quality can be divided into technical quality and functional quality (Grönroos, 1984). According to Bolton and Drew (1991); Parasuraman et al., (1988), perceived service quality is a form of attitude, where it is not equal to satisfaction that is the results from the comparison of performance and expectations. Perceived service quality can be explained in professionalism and skills, service recovery, attitudes and behavior, , reliability and trustworthiness, servicescape, accessibility and flexibility, reputation and creditability (Grönroos, 2000).

Perceived service quality include employees providing prompt service and respond to customer's needs promptly. According to Watson et al., (1988), responsiveness dimension in perceived service quality symbolizes the service provider's ability to give immediate response to request and suggestion, and to assist customers when they face problems (Zeithmal et al, 1990). Responsiveness able to create time benefit such as it saved time when service employees responded promptly to customers.

It is already known that the bursting of the housing bubble in the United States have sparked a full-blown economic crisis in 2008 and brought disaster to millions of people throughout the world. But what caused the bubble in the first place? Crotty (2008) argued that the ultimate cause of the crisis is the deeply flawed institutions and practices of the New Financial Architecture (NFA). The NFA refers to a globally integrated system of giant bank conglomerates and the 'shadow banking system' of investment banks, hedge funds, and Special Investment Vehicles (SIVs) in which mostly are unregulated or badly regulated. The NFA is riddled with perverse incentives that encourage financial institutions to take excessive risk, creating ever higher leverage which in turn increases vulnerabilities in the financial system. The prime example is the growth in securitization which awashes the financial market with fee income. Since these fees are not lost even if the securities suffer large losses in the future, this generates a strong incentives to maximize the creation of loans in the financial system regardless whether these loans are sound or not. This is why securities packaged with subprime mortgage loans (loans taken by high risk borrowers) were highly lucrative because it awarded the originators and investors with very high return hence in high demand from investment banks, hedge funds, pension funds, insurance companies, and SIVs created by banks (ibid). What happened next is already well known. The rise in subprime mortgage loans by households increased financial fragility and eventually collapsing the housing market in US in 2008..736

This is also argued by Mian and Sufi (2010). According to them the increase in household debt in the U.S from 2002-2006 is closely related to the 2007-09 economic recession. Although other factors in the financial markets such as the bankcruptcy of Lehman Brothers and policy uncertainty contributed to the size of the crisis, the evidence found by them shows that the initial economic slowdown happened due to the inability of the already highly leveraged household sector to continue to service its debt. As homeowners started to realize that the increase in house price were no longer sufficient to roll over their existing debt, they aggressively borrowed from the existing unsecured credit limits until they defaulted and finally unable to continue to spend. Mian and Sufi (2010) found that this trends began around the middle of 2006, well before the crisis in August 2007 or the deeper meltdown in the fall of 2008. A similar conclusion also was found by the Financial Crisis Inquiry Commision (2011). As reported by the commission, a lot of financial institutions and households were fully in debt in the years up to the crisis. This situation left them vulnerable to financial distress or default even if the value of their investments declined modestly. When the housing and mortgage markets collapsed, the whole financial system and the economy were brought down together..737

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Taylor (2012) conducted a more comprehensive study on financial crisis by using a sample of 14 advanced economies between 1870 and 2008. He argued that over 140 years, there has been no systematic association of financial crisis with either prior current account deficits or prior growth in government debt levels. It is private debt that has always been the only useful and reliable predictive factor to crisis. However, Taylor (2012) also notes that the combination of credit boom with adverse fiscal position at the onset of a crisis will make economies more vulnerable to painful recession. Meanwhile, countries with lower government debt are better able to withstand a financial crisis by having more room to provide stabilizing support for their economy 737