

ERC
ECER Regional Conference 2008



**Thrusting Islam,
Knowledge and
Professionalism
in ECER Development**
East Coast Economic Region



ECER Regional Conference

15-17 December 2008

**Renaissance Hotel
Kota Bharu, Kelantan
MALAYSIA**

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Knowledge and
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in ECER Development
East Coast Economic Region



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PREFACE

On behalf of the conference committee, it is our pleasure to present to you the proceedings of the 1st ECER Regional Conference (ERC) 2008. The conference theme is *Thrusting Islam, Knowledge and Professionalism* in ECER development. This conference addresses research, new developments, and experiences related to the development of East Coast Economic Region (ECER). The conference is also the platform for researchers, educators and practitioners from various international institutions to disseminate new ideas relevant to ECER development.

The 58 contributions of ECER Regional Conference presented in this volume consist of the full papers accepted for the 3-day presentations at the conference after carefully being reviewed by the conference committee reviewers. The presentations were held on December 15 – 17, 2008 at Renaissance Hotel, Kota Bharu, Kelantan.

The major areas covered and presented in this volume are very wide and related with the economic clusters of ECER development which include manufacturing, environment, transportation, tourism, agriculture, human capital, education, socio-economic, infrastructure, business and financial. The main media for the proceedings of this conference is the CD-ROM which was distributed to all participants and ONLINE proceeding which can be accessed through <http://www.upena.uitm.edu.my> or <http://www.kelantan.uitm.edu.my> and the ECER Regional Conference 2008 website (<http://www.erc08.com>).

In closing, we would like to thank all authors for submitting their work and all members of the ECER Committee, for their cooperation and time spent in the preparation of this proceeding. We look forward to the continuation of ECER Regional Conference next year.

Thank you.

**Conference Chair/Proceeding Coordinator
ERC2008**

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BM(01)

INVESTMENT DECISION BEHAVIOR: ARE INVESTORS RATIONAL OR IRRATIONAL?

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ABSTRACT

Malaysian capital market offers an array of investment products in a form of shares, loan stocks, bonds, warrants, and unit trusts. The type of products chosen by an investor to commit his capital depends largely on his financial goals, time frame, and amount of capital available. Different people invest with different strategies or even no-strategies. However, previous studies found that most individual investors who play the stock market often ask for 'hot tips' that will enrich them overnight. Too often investors buy stocks on a whim or on the recommendation of a stranger when they should buy stocks that are showing fundamental strength and consistence with their investment objectives. Therefore, the main objective of this research is to study factors that influence investors' investment decision making. Do they rational or irrational in their decision making behavior. The population for the study consists of individual investor who trade share at Bursa Malaysia. 147 questionnaires were distributed and usable. The results from correlation analysis indicate positive and significant correlations among the independent and the dependent variables. However, multiple regression analysis shows significant relationships only exist for economy and frame of references indicating that Malaysian investors rely both on fundamental analysis as well as following others opinion (herding). In other words, they are partially rational in their decision making.

Keywords: *investment decision-making, risk tolerant, herding behavior*

INTRODUCTION

Most ordinary people who play the stock market often ask for 'hot tips' that will enrich them overnight. Too often investors buy a stock on a whim or on the recommendation of a stranger when they should buy stocks that are consistence with the investment objectives. According to Frieder (2004) survey, respondents said "...for me, investing is playing with stock markets...it gives me a kick." Apart from its value as a piece of anecdotic evidence on investor behavior, it also serves to illustrate that for many investors, investing constitutes more than simply weighting the risk and returns of various investment assets. Being aware of the many considerations and needs beyond risk and return that influence investors' behavior, it is surprising that finance journals are mostly confined to the utilitarian benefits of low risk and high expected returns.

According to Olsen (1998), most people consider themselves to be risk-avoiders rather than risk-takers. People will make decisions in which they are willing to accept a certain small return rather than a larger, but uncertain profit, from their financial decisions. The function of a measure of risk tolerance should be to differentiate people on the basis of the level of risk that they are willing to accept. Such a test can also be used to measure the risk tolerance of the same person over time. That is, attitudes like risk tolerance are likely to change over time as people experience the positive and negative outcomes of their previous investment decisions, changes with age to their family or work lives, and changes in the performance of national and lobar markets. However, social psychological research reveals that most

changes in attitudes take one time to emerge (Gurtler and Hartman, 2007). The investment environment in Malaysia has changed considerably overtime and opportunities for individual investors to become involved in have increased considerably, particularly as a result of encouragement from institutional changes.

The overall purpose of this research is to gain knowledge about key factors that influence investment decision style focusing on whether the investors are rational or irrational in making their decisions. In this paper, we have focused on the behavior of individual investors when buying various type of investment. In particular, we have conducted a behavioral finance analysis.

HYPOTHESES DEVELOPMENT

Theory of Behaviorism

The theoretical model employed in this research is based on the theory of behaviorism. It is an extension of Prospect theory or also known as Risk aversion theory introduced by Kahneman and Tversky (1979). This theory asserts that, when it comes to investing, people may not be as rational as they think. Behaviorists argue that investors often behave irrationally when making investment decisions thereby incorrectly pricing securities. They relate investor's decision making behavior to gambler's fallacy, anchoring, mental accounting, overconfidence, overreaction (i.e emotion/intuition) and herding behavior (e.g Banerjee (1992) and Bikhchandani, Hirshleifer and Welch (1992)). Therefore it is hypothesized that:

- *H1: Investment Decision making style of an investor is positively related to their emotion or intuition.*
- *H2: Investment Decision making style of an investor is positively related to their frame of references of and investors (herding behavior)*

However, many economists argue that investors behave rationally when buying stocks. They are presumed to use all available information to form rational expectation about the future in determining the value of companies and the general health of the economy. Consequently, stock prices should accurately reflect fundamental values and will only move up and down when the unexpected positive or negative news, respectively. Thus, economists have concluded financial markets are stable and efficient, stock prices follow a "random walk" and the overall economy tends toward "general equilibrium". Therefore, it is hypothesized that:

- *H3: Investment Decision making style of an investor is positively related to their ability to analyze environmental factors*
- *H4: : Investment Decision making style of an investor is positively related to their ability to analyze economic factors*
- *H5: : Investment Decision making style of an investor is positively related to their ability to analyze financial factors*

RESEARCH MODEL

Based on the literature reviewed conducted for this research, it was found that study on investors behavior was exhaustively done (e.g Al-Hogail (2004), Olsen (1998), Pinello (2004), Barberis and Thaler (2002)). Contradict opinion was found in terms of rational level of the investors. Many researchers categorized investors who make their decision based on information of the environment and fundamentals of the company as rational investor. Irrational investors are those who involve in herding behavior, speculation and rely their investment decision on frame of references. Below is the theoretical framework of this research:

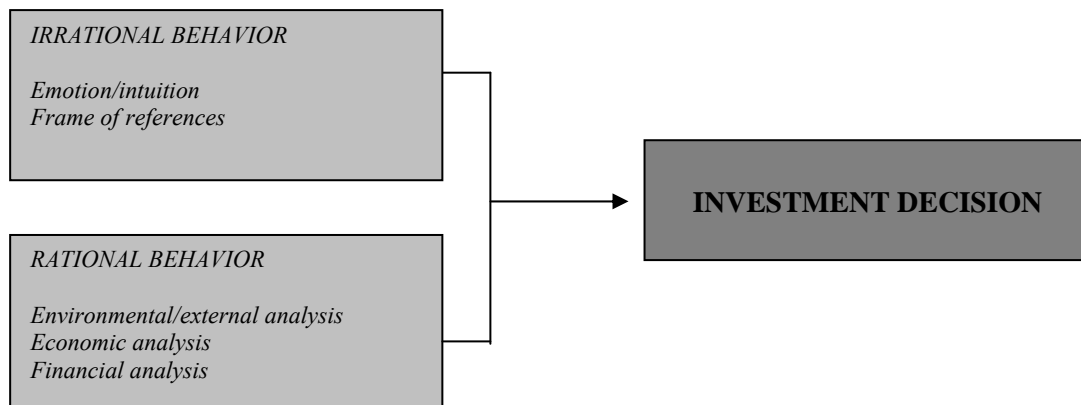


Figure 1: Theoretical framework of Investors Behavioral Decision

METHODOLOGY

Sample and procedure

Data for this study was collected through structured questionnaires. The questionnaires were distributed to the investors traded their share in stock broking companies around Klang Valey. A total of 147 responses were obtained from 200 questionnaires sent.

Variables and measurement

The instruments were adapted from various literatures and were modified for the adaptation to the investor's behavior context. The dependent variable, Investors decision making was measured using five items. Responses were measured using five-point Likert type scale anchored by "strongly disagree" (1) to "strongly agree" (5). Meanwhile for the independent variable items with five-point Likert type scale was used to measure, with scale ranging from "very unlikely" (1) to "very likely" (5).

ANALYSIS AND RESULT

The respondents comprised mainly of male, which is 71.4% and females 42%. In terms of age, the majority of the respondents are between the age of 30 to 39 years (49%) with , 21.1% having SPM, 15.6% Diploma/STPM level, 53.7% having Bachelor Degree, and 6.1% had their Master degree. 2.0% PhD and the rest (1.4%) of the respondents had other types of academic qualification. In term of the occupation, 16.3% of the respondents are working in government sector, 29.3% in private sector and

mostly respondents are self-employment (54.4%). In terms of income, most were earning RM 4,000 to 6,000 per month with 39 percent.

Descriptive analysis for investment profile shows that investors choose investment vehicles in the category of low risk tolerant with a mean of 4.47 for unit trust/investment link followed by property investment (4.34), bond (3.95) and stock market (3.55). This indicates that the investors understudied are having risk averse attitude.

Table 1: Investment profile

	bond	stock	property	Unit trust/inv. link	Money market
Mean	3.95	3.55	4.34	4.47	3.97
Std. Deviation	.594	1.118	.872	.805	1.020

Based on the descriptive analysis of investment decision making behavior, it shows that economic factors is the most influential factors in determining their investment buying behavior followed by financial and frame of references. However, in terms of relying on emotions (i.e gut-feeling, over-reaction) most respondents were rating that they are unlikely of doing so.

Table2: Decision profile

Decision N=147		
Variables	Mean	Std. Deviation
<i>Rational Behavior</i>		
Environment	3.00	.847
Financial	3.69	.942
Economy	3.80	.628
<i>Irrational Behavior</i>		
Emotion	2.95	1.057
Frame of references	3.1850	.76143

Goodness of measure

Factor analysis is a data reduction technique and also used to determine whether items are tapping into the same construct. During factor analysis, factors with eigenvalue of more than one would be retained for further analysis (Hair et al., 2006). To reduce the problem of cross loading, if the differences of loadings of any item across factors were less than 0.50 then the items will be deleted (Snell and Dean, 1992). Next, reliability testing was applied to determine the degree to which measures are free from random errors. Reliability analysis was applied to identify how well the items grouped are positively correlated to one another. Cronbach's value of 0.60 and above is considered to be reliable (Nunnally and Bernstein, 1994) as it indicates the items are homogenous and measuring the same construct. The result of the factor and reliability analysis is presented in Table 3 to 5. Factor analysis was conducted for items of investment decision, rational behavior and irrational behavior.

Rational Behavior

Table 3 presents the results of varimax factor rotation of all variables for investors' rational behavior measuring via fundamental analysis done. From the 18 items, 10 items loaded on three factors. Five items, which form external/environmental analysis, was loaded in factor 1 with a variance of 39.5 percent, two items from financial analysis loaded on factor 2 with 31.28 percent and three items from economic analysis loaded on factor 3 with a variance of 19.2 percent. The total variance achieved is 80.14 percent. Furthermore, all the Cronbach's alpha values were between 0.72 to 0.99

Table 3: Factor analysis and reliability test result

		Factor Loading				
		<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>	<i>F5</i>
Q1	Nikkei	.942				
Q2	Hang Seng	.938				
Q3	Dow Jones	.931				
Q4	M'sia For invt policy	.828				
Q5	M'sia political situation	.793				
Q6	Investment objective		.961			
Q7	Company fin. Perform.		.956			
Q8	Current market price			.830		
Q9	Historical market price			.763		
Q10	World economy			.744		
Q11	Speculation				.949	
Q12	Herding				.934	
Q13	Confidence				.666	
Q14	Television					.910
Q15	Fund advertisement					.898
Q16	Magazines					.719
Q17	Friends influence					.629
Q18	Top ten stock					.584
Reliability Cronbach Alpha		.933	.994	.719	.954	.806
Eigenvalues		3.956	2.138	1.920	2.216	2.888
<i>Percentage of Common variance</i>		<i>39.556</i>	<i>21.381</i>	<i>19.203</i>	<i>73.874</i>	<i>57.75</i>
<i>Cumulative %</i>		<i>39.556</i>	<i>60.398</i>	<i>80.141</i>	<i>73.874</i>	<i>57.75</i>

Irrational Behavior

In conceptualizing the irrational behavior, table 3 shows that three items form emotion or intuition behavior loaded in factor 4 with a variance of 73.87 percent, five items determine frame of references loaded on factor 5 with 57.75 percent. Cronbach's alfa values for emotions or intuition behavior and frame of references were 0.95 and 0.81 respectively.

Investment Decision

In identifying investment decision of the investors, table 4 shows that five items was loaded unidimensionally with a variance of 76.81 percent. Cronbach's Alfa values were 0.92. Overall it

shows that statistically, the items understudied is valid and measure what it's suppose to measure and having high consistencies with each other with acceptable Cronbach Alpha of more than 0.8.

Table 4: Factor analysis and reliability test result on Investor's decision

Investor's decision style	Factor 1
Q1: investment expected return	.921
Q2: Investment holding period	.910
Q3: Investment objectives	.866
Q4: Investor's risk tolerance	.849
Q5: Investors reaction towards loses	.833
Cronbach Alpha for nature of decision	.924
Eigenvalues	3.841
%age of Common variance	76.815
Cumulative %	76.815

Test of Relationship

Correlation analysis indicates the strength of bivariate relationships among the independent and dependent variable under studied. This therefore indicates an early indication of possible interrelationships in multiple regressions. The correlations between the independent variables also can be used to identify reasons for insignificance of one independent over another when explaining the variations in the dependent variables for multiple regressions analysis.

Table 5 Correlation analysis

	Mean	Std. Deviation	Decision making	Environ ment	Financial	Economy	Emotion	Frame of referenc es
Decision making	3.05	.868	1.000					
Environment	3.00	.847	.061	1.000				
Financial	3.69	.942	.469**	.072	1.000			
Economy	3.80	.628	.743**	-.021	.390**	1.000		
Emotion	2.95	1.057	.017	-.080	.291**	.143	1.000	
Frame of references	3.1850	.76143	.669**	.054	.603**	.567**	-.030	1.000

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

To evaluate the behaviors that influence investor's decision-making style, Stepwise Regression Analysis was applied. Regression analysis was used to test the hypotheses. The result of the Stepwise Multiple Regression Model is reported in Table 6 below.

Table 6: Model summary and standardize Beta Coefficient of multiple regression analysis

	F value	R square	Adjusted R square	R square change	F change	Beta
Model Summary	52.866***	.652	.640	.652	52.866***	
Environment						.043
Financial						.095
Economy						.550***
Emotion						-.077
Frame of references						.295***

***significant at the 0.01 level, ** significant at the 0.05 level, * significant at the 0.1 level

The result of multiple regression analysis shows that the relationships exist between the independent variables (rational/irrational) with dependent variables (investment decision making). The model was significant ($p > 0.01$) with F-value of 52.87. The coefficient of determination (R^2) is 0.652, which indicate that 65.2 percent of the variations in investment decision-making were explained by the independent variables (environment, financial and economic analyses as well as emotion and frame or references). The multiple regression analysis in this stage also indicates that the tested variables are significant at $p, 0.01$. The b-values (standardized coefficients) for each of the variables are as follows: Environment ($b=.043$), Financial ($b=0.95$) economy ($b=.550$) Emotion ($b=-.077$) and Frame of References ($b=.295$) indicating that only economy and frame of references are positively related to investment decision making. Therefore, it is concluded that only H3 (rational behavior in terms of analyzing the economy is positively related to investment decision making style) and H5 (frame of references is positively related to investment decision making style) were supported.

DISCUSSION

As mentioned, this study intends to investigate the relationship between investment decision-making of an investors and their rationality in investing. Rational or irrational behavior was conceptualized based on whether they analyze their investment before deciding to invest or relying on their emotions and frame of references respectively. The direct positive relationship of economic analysis and frame of references was found significant to investment decision making of Malaysian decision maker. This indicates that the investors neither were relying on their emotions or intuition in making their investment nor exhaustively analyzes their investment before making their decision. Therefore, previous study conducted by researchers like; Elsayed & Martin (1980), Katz (1998), Young and O'Neill, (1992) was not in line with the current study as in their study, they found that investors are irrational in their decision making.

In the current study however, we found that investors do analyzed their investment fundamentally but just on the economic condition but not on other aspect such as company financial analysis or external information such as regulation and world event. At the same time, they are also relying on the

influence of friends, relative and remisers in their decision making. Therefore, we could conclude that Malaysian investors of partially rational in their decision making. This argument is consistent with the study done by Marota (2008). According to him, investors do not make decisions in a vacuum. They may make better decisions by trying to understand the behavioral factors that can influence their judgment for example herd mentality (i.e. following the behavior of others). Herd Mentality on investment decisions has the potential to provide investors with many psychological benefits. Herding reduces the time needed to properly analyze an investment decision. It can also help reduce feelings of regret if the investment choice was a bad one. Investors can find comfort knowing that they were not alone in their decision. Herding can also be a powerful tool in influencing market movements. It is supported by the argument of Hoffmann and Wander (2003) who identified that, the needs, social interactions and (social) networks effect are keys to understanding micro level investor behavior and macro level stock market dynamics

In addition, the findings of the current study also found that Malaysian investors only relying and analyzing economic condition in making their investment decision. Company's performance, government policy or political conditions locally and internationally was not of their interest. This finding is consistent with the assumption of Friedman (1988), that most of the investors consider economic condition and price movement as the most significant contribution to their gain and losses in investing. Others, such as company's performance, political condition and government policy is considering giving major effect only on the long run.

This empirical study has several limitations. Firstly, the scope of investigation was done only at Klang Valey. Therefore, in terms of external validity in generalizing the behavior for all Malaysian is still questionable. Secondly, the findings of this study depend largely on the respondent's honesty and integrity. However, if the respondent's answers were bias towards more socially desirable answers, the findings will also indicate biasness. It is known that individuals would agree more on socially desirable answers and disagree more towards socially undesirable answers rather than fully and truly express their feelings and the opinions.

CONCLUSION

Based on the research findings, it indicate that economic condition and frame of references influence investors decision-making behavior. Therefore, the results from this study have shed some light on the constructs of the behaviorism model. As the current study found that investors are partially rational in making their investment decision, the insights provided by this study could be used by investors, organization and the government as a foundation to formulate strategies to control and monitor the stock market behavior and at the same time having more professionals advisor in advising small investors in making their investment decision.

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THE IMPORTANCE OF CORPORATE IMAGE TO A UNIVERSITY

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ABSTRACT

Today, higher education has become a commodity in the service industry and the choice is plenty. The rate of increase in the number of higher learning institutions offering the service has surpassed the rate of increase in demand for higher education itself. Hence, the competition for potential students, especially postgraduate students among universities is very stiff. When the characteristics of service offering have become uniformed, universities should be looking for its own competitive edge to differentiate themselves from their competitors. This study attempts to investigate the influence of corporate image of a university on the willingness of their outgoing undergraduates to continue their postgraduate study at the same university and to recommend their friends, families, and employers to engage with the university. The data collected randomly from 872 the outgoing undergraduates using self-administered questionnaires. The factor analysis procedure for corporate image items produced three distinct dimensions. The study renamed these dimensions as the image of a university, image of academic programs, and the external recognitions received by the university. As for the students' loyalty, the factor analysis procedure produced two distinct dimensions. The study renamed them as market retention and positive recommendation. The study found corporate image of a university has a significant and direct effect on students' intention to engage their postgraduate study at the university. Among the significant corporate image dimensions are image of the university and image of academic programs conducted by the university. As for the loyalty dimensions, the corporate image of a university has a significant influence on the outgoing students to provide positive words of mouth and recommendations to other potential students to register with the university. At the same time these outgoing students are willing to continue their graduate study at the university. Even if they decide to take the job, they would still recommend their employers to engage with the university for industrial training and other activities such as research and consultancy. The result has significant implication to the university in its effort to ensure long-term growth and survival of postgraduate programs into the future.

Key words: *corporate image, students' loyalty, postgraduate programs*

THE INTRODUCTION AND BACKGROUND OF PROBLEM

The task of managing corporate organizations has become increasingly difficult in an open competition especially when the globalization takes place. These organizations are competing to keep the momentum of their business and to stay ahead of their competitors. The industry of higher education has no exception. When the characteristics of services offered are almost similar, a favorable corporate image of a university is believed to play a significant role in attracting potential students, their input. In Malaysia, the competition has become stiff after the Parliament passed the Private Higher Education and Institution Act or PHEIA 1996 (Zainudin., 2007). With the passing of the Act 1996, private organizations are allowed to set up universities and colleges and participate in the industry. Zainudin (2007) noted that from 2000 to 2005, the rate of increase in institutions offering higher education is higher than the rate of increase in students seeking higher education, hence create

competition for potential students. The competition for students is evidenced when hundreds of institutions are advertising their study programs through electronic and print media, just like other commercial products or services. Not enough with that, these institutions are promoting their service by participating in hundreds of education road shows, expos, seminars and the like through out the country. In promoting their service, university and colleges are claiming that they have the best program to offer, the best facilities available, the best academic staff to serve, etc. The potential students have a chance to shop around for the best offer. The painful evidence of fierce competition exposed when the newspaper reported that 123 colleges forced to terminate their operation and another 30 colleges would eventually be closed due to inadequate number of students (Utusan Malaysia, 29 Mei 2005). Since the choice is plenty, the corporate image of a university emerged when potential students are choosing which university to apply for admission. Like other service industry, the target of students' loyalty should be the prime importance for the university. This is because students' loyalty would bring tremendous benefits to the service provider, the university. The positive loyalty of existing students would generate new students through positive words and recommendations to their families, friends and anybody who are in close contact.

THE REVIEW OF LITERATURE

Corporate Image

According to Griffin (2002), large corporations have already been using image marketing to sell their products for decades. Dowling (1993) defines the concept of image as "the total impression an entity makes on the mind of people". Corporate image in the service marketing literature early identified as an important factor in the overall evaluation of the service and the service provider (Gronroos, 1984). Furthermore, Gronroos (2001) states:

A favorable and well-known corporate image would be an asset of a firm in service industry. This is because image has an impact on customer perceptions of the communication and the operation of the firms in many aspects.

If a service provider has a positive image in the minds of customers, minor mistakes will be forgiven and will not affect their perceived quality towards the firm. As time progresses, more and more business organizations offering similar products and services emerge, thus create competition for customers among themselves.

Hence, in order to keep generating new customers as well as retaining the existing customers, these organizations need to have a clear and powerful corporate image that would project themselves in the eyes of their customers. According to Hatch & Schultz (1997), corporate image of an organization concerns the knowledge, feelings and beliefs about that particular organization in the thought of its stakeholders. Andreassen and Lindestad (1998) state that corporate image is established and developed in consumers' mind through communication and experience. They stressed that, the excellent corporate image would provide an added advantage for the organization to differentiate themselves from their competitors in the same industry. In the case of higher education, the corporate image of a university is

established and developed in students' mind from their knowledge obtained through communication and exposure from media publication regarding the achievement and reputation of the respective university. Among the achievement and reputation of a university exposed in the media are the contribution of the university to the government and society through certain research projects, the achievements of academic faculties from the university such as winning awards for research and invention at the national and international competitions, and the external recognitions received by the university such as from International Organization of Standardization or ISO, from professional bodies such as association of accountants, surveyors, engineers, doctors, and from government departments. Fielder et al. (1993) and James et al. (1999) found corporate image of the university has a strong impact on the students' decisions, affecting both the keeping of the present students and the attraction of potential students.

Customer Loyalty

Loyalty is a complex construct that involves both behavioral and attitudinal aspects. For the purpose of this study, the researcher assumes that a "loyal student" is a student who would continue the study at the same university whenever possible, and who continues to recommend or maintains positive attitudes towards the university. Dick and Basu (1994) propose two conditions in relation to loyalty, which represent the intersection of relative attitude and repeat patronage. First, customers who exhibit loyalty behavior engage in repeat purchases, where this is appropriate. Second, customers who are loyal in attitude are likely to make recommendations to someone else, and, sometimes their loyal attitude will lead to loyal behavior in the form of repeat purchases. There are various theories in service literature relating to the concept used to measure customers' loyalty in higher education institution. For example, the Relationship Marketing Theory (Reicheld and Sasser, 1990; Reicheld, 1996) revealed that a long term relationship with students may provide some sort of strategic competitive advantage in which gaining new students is generally more cost-intensive than maintaining existing relationships; and the cost-relationship effects are generated over the relationship life-cycle. Another example, the Service Marketing Theory on Customer Participation (Rust et al., 1996; Rodie and Kleine, 2000) stressed that loyal students (as the external factor in the service production process) may positively contribute to the quality of teaching and learning process at the university through their active participation and committed behavior.

Highly committed and motivated students, together with lecturer's involvement would stimulate productive learning atmosphere in the classroom; hence would produce good academic performance which benefits both the students and also the university.

Rowley (1997) mentions the importance of customer loyalty base for the success in the business of higher education. This study will focus on the issue of students' loyalty in higher education by examining their behavioral and attitudinal commitments towards their respective university in the future. The students' behavioral loyalty attributes consist of their intention to spread positive words of mouth and recommendation concerning the university to their families, friends and employers whenever they have a chance to do so. On the other hand, the attitudinal loyalty attributes consist of

their intention to remain loyal with the university to complete the existing undergraduate programs and increase transaction with the same university in the future by continuing into graduate programs with the same university.

The Schematic Model of the Study: Refer to Figure 1

The Variables in the Model:

Dependent variable

The dependent variable is **students' loyalty** towards the university, which is the variable of primary interest in the study. From the theoretical perspectives, the loyalty components consist of behavioral loyalty and attitudinal loyalty. The researcher confirms the two components through exploratory factor analysis (EPA) and confirmatory factor analysis (CFA) conducted using 300 data from pilot study. The researcher renamed the components as recommendation and retention.

Positive Recommendation consists of behavioral items such as willingness to spread positive words of mouth regarding the university to families, friends, and employers; and recommend them to engage with the university for industrial linkages, training enrolments, employee recruitments and sponsoring activities in the future.

Market Retention consists of attitudinal items such as to remain with the university either to complete the present study program or to continue the study into graduate program in the future.

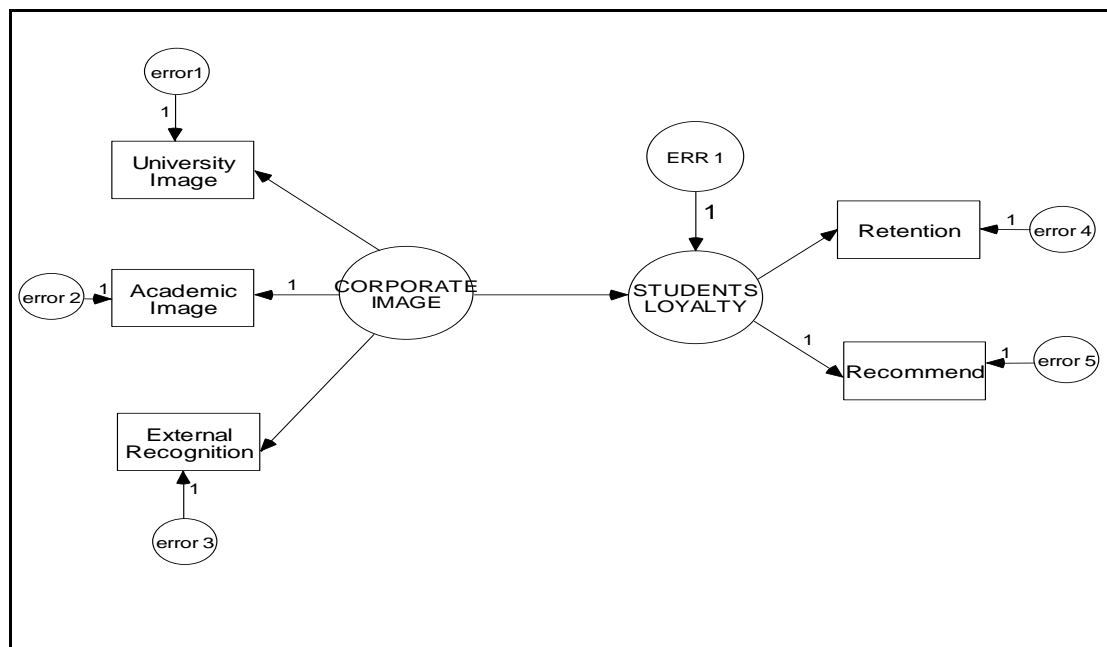


Figure 1: The Model

Independent variables

The independent variable is the **corporate image** of a university. Using the data from pilot study, the researcher conducted an exploratory factor analysis (EFA).

The EFA produces three components of manifesting variables. The researcher renamed the components as university image, academic image, and external recognitions received by the university.

University image consists of the image of a university, image of faculties and departments within the university.

Academic image consists of awards from academic achievements received for researches, inventions and publications by the academic staff at the university.

External recognition consists of recognition received from government departments or professional organizations such as ISO.

Since the researcher will be using the structural equation modeling (SEM) for the analysis, the service quality and corporate image will be treated as two latent exogenous variables.

THE RESEARCH METHODOLOGY

The Population and Sample

Population for the study consists of undergraduate students from the Faculty of Business and Management at Universiti Teknologi MARA. A total of 1000 undergraduate students selected randomly from four different regions namely eastern (Kelantan, Terengganu, Pahang), northern (Perlis, Kedah, Pulau Pinang), Southern (Johor, Melaka, Negeri Sembilan) and UiTM Headquarter in Shah Alam. The respondents were given self-instructed questionnaires with the return envelope. They can complete the questionnaires at their own convenient time and mail to the researcher. A total of 872 completed questionnaires received, which represent a satisfactory response of 87.2 percent.

The Instrumentations

The instrument for corporate image is adapted from Andreassen (1994), Caruana (2002), Kang and James (2004), and Zainudin and Zaihan (2004). While the instrument for customer loyalty is adapted from Zeithaml et al. (1996), Caruana (2002), Ndubisi (2003), Kang and James (2004), and Zainudin et al. (2005b). The researcher modifies the wordings of certain items whenever necessary in order to suit higher education scenario. The instrument for corporate image and students' loyalty consist of 16 items and 9 items respectively.

The Principal Component Factor Analysis (PCA) with Varimax Rotation was performed for these two instruments.

Factor Analysis on Corporate Image Items

The Principal Component Factor Analysis (PCA) with Varimax Rotation was performed for the 16 items of the service quality measures. The result is presented in the following table.

KMO and Bartlett's Test for corporate image instruments

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.932	
Bartlett's Test of Sphericity	Approx. Chi-Square	8498.069
	Df	120
	Significance	0.000

This KMO value of 0.932 is excellent since it exceeds the recommended value of 0.6 (Kaiser, 1974). The two results (KMO and Bartlett's) suggest that the sampled data is appropriate to proceed with a factor analysis procedure.

The Principal Component Factor Analysis extracted three distinct components with eigen values exceeding 1.0. The total variance explained for the three components is 64.304%. Meanwhile the reliability analysis for each corporate image component is given in the table.

Reliability measures for corporate image instruments in the study

Component	Number of items in a component	Cronbach's Alpha	Cronbach's Alpha based on standardized items
Academic Image	7	0.909	0.909
University Image	5	0.855	0.857
External Recognitions	3	0.685	0.688

Factor Analysis on Students' Loyalty Items

The Principal Component Factor Analysis (PCA) with Varimax Rotation was performed for the 9 items of the service quality measures. The result is presented in the following table.

KMO and Bartlett's Test for loyalty instruments

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.871	
Bartlett's Test of Sphericity	Approx. Chi-Square	6328.338
	df	36
	Significance.	0.000

This KMO value of 0.871 is excellent since it exceeds the recommended value of 0.6 (Kaiser, 1974). The two results (KMO and Bartlett's) suggest that the sampled data is appropriate to proceed with a Factor Analysis procedure.

The Principal Component Factor Analysis extracted two distinct components with eigen values exceeding 1.0. The total variance explained for the two components is 75.460 percent. The reliability statistics for each loyalty component is given in the following table.

Reliability measures for loyalty instruments in the study

Component	Number of items in a component	Cronbach's Alpha	Cronbach's Alpha based on standardized items
Market Retention	4	0.874	0.874
Recommendation	5	0.918	0.919

The Procedure for Data Analysis

The researcher analyzed data through Structural Equation Modeling using AMOS 5.0 software. AMOS is a short name for Analysis of Moment Structures.

The Assessment of Fitness for the Model

The researcher would look at a few universally recognized indexes as a measure to assess the fitness of the proposed model for the study.

Model Fit Summary produced by AMOS 5.0

Model	GFI	AGFI	PGFI
Default model	0.987	0.951	0.263
Saturated model	1.000		
Independence model	0.571	0.356	0.381

Referring to table, the Goodness of Fit Index (GFI) is 0.96. This figure exceeds 0.90 as required by Joreskog and Sorbom (1984). According to Joreskog and Sorbom (1984) the GFI value of 0.90 or higher indicates the model is a perfect fit to the data. Another index, the Adjusted Goodness of Fit Index (AGFI) is 0.923. The figure also exceeds the requirement by Tanaka & Huba (1985). Tanaka & Huba (1985) state that the AGFI value above 0.90 indicates the model is a perfect fit to the data. And finally, the researcher looked at the Parsimony Goodness of Fit Index (PGFI). The PGFI for the model is 0.506. Mulaik et al. (1989) state that the PGFI value exceeds 0.5 would indicate the model employed is a perfect fit to the data in the study.

The parameter values computed by AMOS 5.0 for the model are presented in figure 1 and figure 2. Figure 1 shows the strength and magnitude of relationship between variables in the study. In other words, figure 1 indicates how strong is the relationship between one variable to another variable when they are estimated simultaneously in one model. Figure 2 shows the coefficient of multiple regressions between variables in the study.

Result and Discussion

Figure 1 shows the strength of relationship between each dimension and their main variable as well as the relationship between main variables in the study. The main interest of the study is the strength of relationship between corporate image and students' loyalty. The result shows the measure of relationship between corporate image and students' loyalty is 0.58.

From the output, the relationship between the 'image of a university', 'image of academic activities' and 'external recognitions received by the university' to the corporate image of a university

are 0.85, 0.88, and 0.44 respectively. In other words the ‘image of academic activities’ conducted by the university contribute the most to the corporate image of a university.

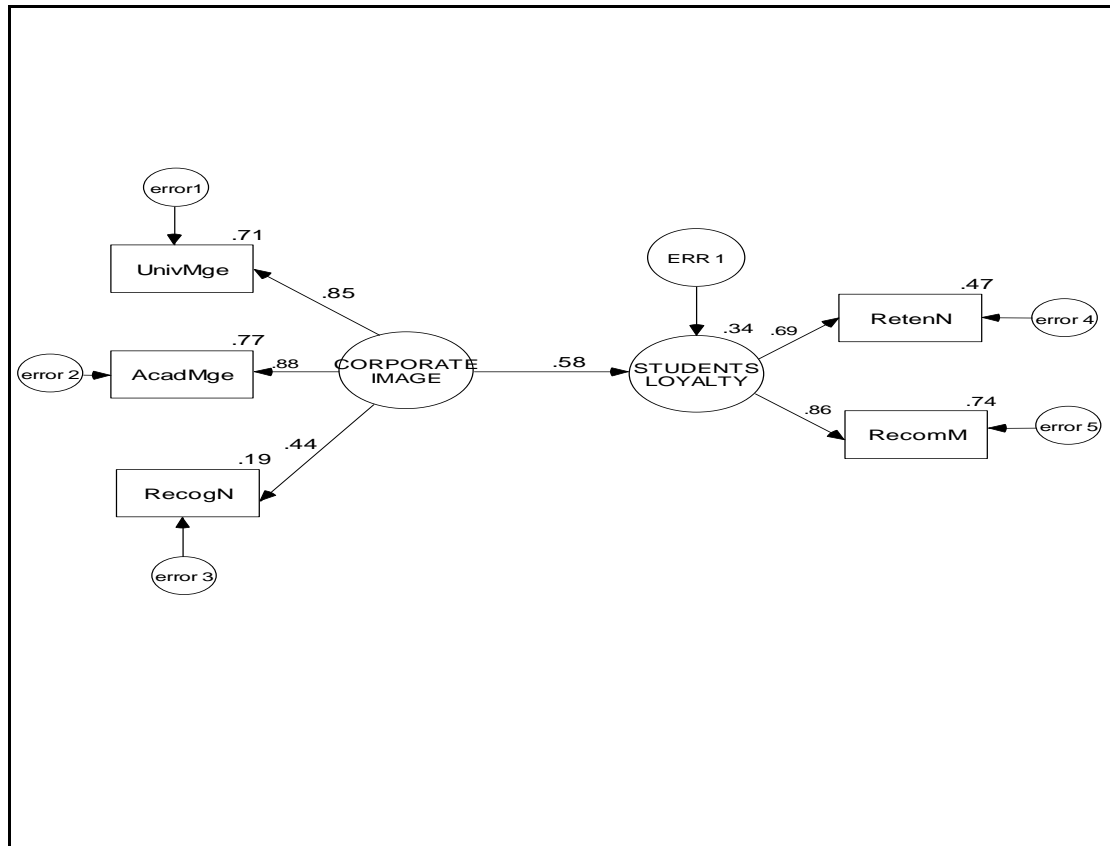


Figure 2: The Strength and Magnitude of Relationship between Variables

The output in figure 1 also shows the relationship between ‘retention’ and ‘recommendation’ to the students’ loyalty towards the university is 0.69 and 0.86 respectively. In other words, the tendency of loyal students is higher in recommending the university to their friends, families and employer compared to tendency of they themselves continue their postgraduate study at the university. The reasons might be these outgoing undergraduates prefer to find the job and settle for good, or they might want to proceed doing postgraduate study in the future, or the might want to venture to a new university for their postgraduate studies.

Table 1: Path Analysis for Output in Figure 2

PATH ANALYSIS		Estimate	S.E.	P
STUDENTS_LOYALTY	← CORPORATE_IMAGE	.652	.046	***
RETENN	← STUDENTS_LOYALTY	.857	.066	***
RECOMM	← STUDENTS_LOYALTY	1.000		
ACADMGE	← CORPORATE_IMAGE	1.000		
UNIVMGE	← CORPORATE_IMAGE	1.182	.055	***
RECOGN	← CORPORATE_IMAGE	.422	.034	***

*** Indicate the level of significance is 0.001 or lower

Path analysis 1: Corporate Image » Students' Loyalty

The β estimate is 0.652 with standard error 0.046.

The significance value (p) is less than 0.001.

This shows that the impact of Corporate Image on Students' Loyalty is highly significant.

Path analysis 2: Corporate Image » Academic Image

Corporate Image » University Image

Corporate Image » External Recognitions

The β estimates are 1.00, 1.182, and 0.422 respectively.

The significance values are less than 0.001.

This shows the impact of Academic Image, University Image, and External Recognitions to the Corporate Image of A university are highly significant.

Path analysis 3: Students' Loyalty » Retention

Students' Loyalty » Recommendation

The β estimates are 0.857 and 1.00 respectively.

The significance values are less than 0.001.

This shows the impact of Retention and Recommendation to the students' loyalty is highly significant.

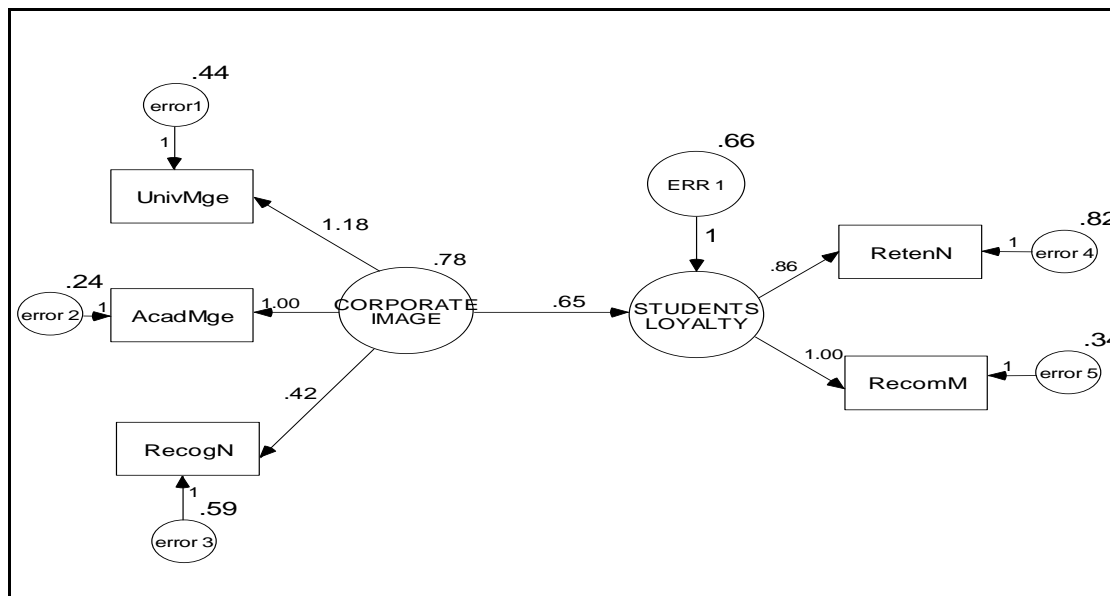


Figure 3: The Coefficients of Multiple Regression between Variables in the Study

Implication to the Management of a University

This study found corporate image of a university has a significant and direct effect on students' loyalty towards the postgraduate programs of a university. The result of this study is consistent with Zeithaml and Bitner (1996) who found that corporate image of an organization has the ability to influence customers' purchasing behavior. The result is also consistent with Zainudin and Zaihan (2004) who found that the image of a hospital has a significant and positive influence of patients' willingness to recommend the hospital to their friends and families. More importantly, this finding is in line with Gronroos (1984, 2000), the Service Marketing Guru. In his research, Gronroos (1984)

revealed that corporate image is an important factor in the customers' overall evaluation of service consumption and also their overall impression towards the service provider itself.

Of the three corporate image dimensions emerged, the dimension of academic image is found to be the most important factor as far as the corporate image is concerned, beside the image of a university and the external recognitions received by the university. This research found that the awards and achievements by academic staffs of the university from their researches, inventions, and publications are important elements influencing students' positive perception towards the university. Thus, the management of a university should give utmost priority on the academic excellence achieved by the academic faculties. Any achievement or awards obtained by these academic faculties should be well communicated to all stakeholders. The publicity of any achievement by a lecturer, for example, would directly help those respective lecturers to earn valuable appreciation and positive perception from their students. More importantly, the publicity would indirectly elevate the image of a university, as a whole, in the eyes of other stakeholders.

Since the achievements obtained by academic staffs of a university contribute significantly to the corporate image of that particular university; and more importantly it helps to elevate the perceived quality of the university, the university should provide appropriate atmosphere for its academic staff to excel in their respective field. And for the academicians who achieve excellence, they should be rewarded accordingly so that it would others to excel as well.

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BM(03)

THE FACTORS EFFECTIVE TO SUCCEED IN IMPLEMENTING ACTIVITY BASED COSTING AND MANAGEMENT

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ABSTRACT

Activity based costing / management system is one approach in which its launching and implementing in practice will bring advantages for the users. However, lack of knowledge to the ones leading ineffectiveness of launching and implementing activity based costing, budgeting and management systems will lead to wasting of financial and human sources in an organization. Organizations have no choice but rebuilding and recovering the failed systems due to being of many advantages. Such a process needs much more investing and using more resources. So, we should be aware of the ones bringing failure and we should try to put the approaches suggested in such an article from theory to practice consciously. This article has a close look at pros and cons of using ABC/ABM, and the author has mentioned the different reasons of failures, when implementing, and the deterrent ways. The reasons can be classified in the five groups including deterrent reasons, technical weakness, the user denial, organizational obstacles and others. The deterrent reasons are the most common and significant ones. Technical weakness is due to factors stemmed from nature activity based systems. Also it should be noted that for some reasons, the users may deny its usage and there are some obstacles in organization and the existing specific characteristics in entities will cause the system implementation failure. To know the issues and the ones causing the issues and to avoid them is the origin of implementation and the success of such systems.

Keywords: *activity based costing, activity based management, implementing, budgeting, management systems.*

INTRODUCTION

In globally developed and competitive markets, to be adapted with competitive environment, dynamic and complicated environment is essential for organization to continue their activity. For this purpose, many information systems have been presented for services and product costing and budgeting, cost – reducing, continuous improvement, performance measurement, and eventually value–adding. Traditional cost system using some cost drivers supported financial and budget reporting in a wrong way and presented many false information. In such a condition, many organizations have been trying to improve their costing systems. Improved costing system is a system for evaluating the source usage through services, production or consumers in an effective way. Technology developing and competition increasing were an effective factor for designing such a system.

One new method was ABC/ABM which is of many advantages compared to traditional costing system based on volume. So in order to enjoy its advantage, companies are willing to implement ABM/ABC system. We should implement ABC/ABC systems consciously, intelligently and conservatively. Since being successful in doing such a project is not as much as we imagine.

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Exhibit 1 portrays three paths for ABM/ABC implementing programs. As it shows, only one way is higher than the optimum level and can be kept easily. First, three paths will go up from starting point very fast and will reach to the climax point, then suddenly these three paths will be separated and two paths will face failure and just one way will end the path successfully. Now it is our turn to follow the paths to get their experience.

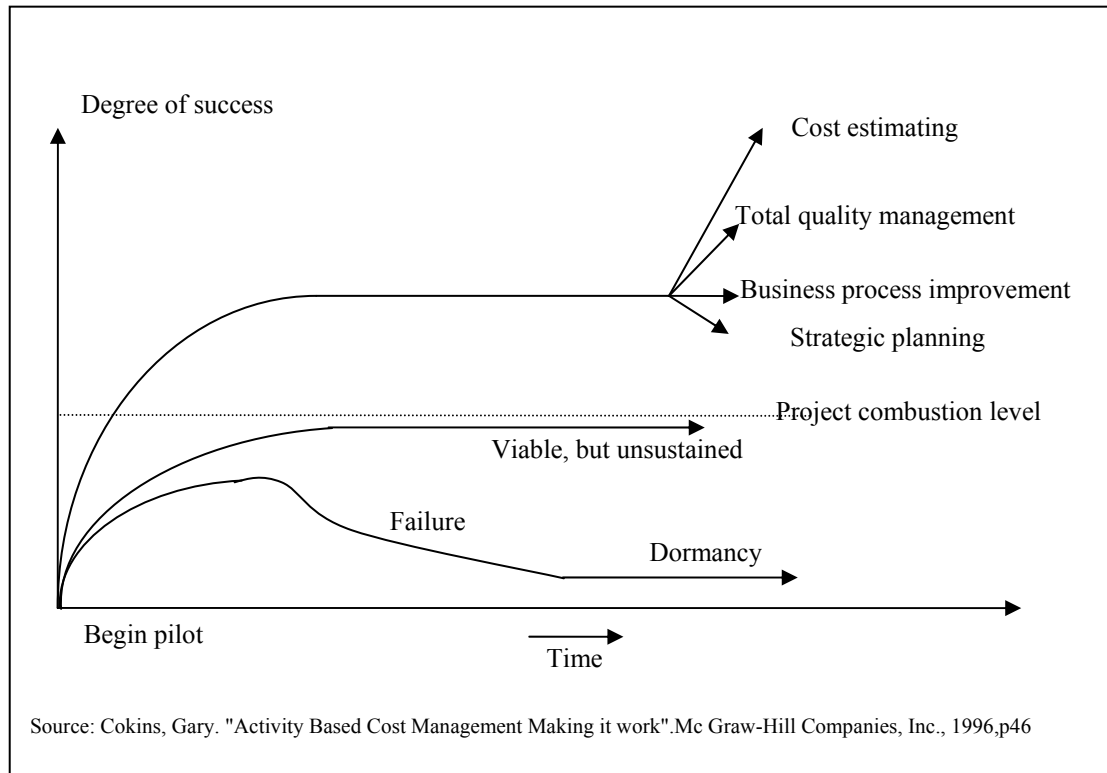


Figure 1: Exhibit 1, Possible paths of ABC/ABM

The lower path going in a wrong way will be followed by people who will understand mistake in a traditional system. However, they will not touch the successful point. Since movement to use management techniques based on activity and process has been known as an essential factor, ABM/ABC projects will not be static any longer. Rebuilding and recovering the failed system need much more investing and using more financial and human resources can be the result of try and error and other unforecast situations. So, it would be better to start such a process, i.e. its designing and implementing in system consciously and intelligently.

The middle path is the result of high-ranking managers supporting ABM/ABC system continuously and their power in an organization is so much that it will result in implementing ABN/ABC system continuously. In spite of failure in implementing in ABC system, managers of high authority in organizations are aware of its advantages and keep on their supporting such a system. Unfortunately, costing information presented by such systems to the employees is not so useful that it can pass the acceptable level and can portray its legibility. If so, such systems are not very economical. The higher path shows the successful project of ABM/ABC system which is of many advantages for the users and will lead to make better decision.

WHAT IS ABM/ABC SYSTEM?

ABC system can be taken into account as a development and extension of two-stage assignment for costing and is underlying for modern cost system, measuring products and program cost, more efficient operational budgeting and appropriate product pricing. In traditional costing, costs usually are allocated based on volume to the cost objects. Based on ABM/ABC, although, programs, products and services are not the direct resource users, they are activity users. ABM/ABC system will put an emphasis on activity as a cost object since activity is the main reason for costing. In such a system first, costing will be assigned to the activities and then through the activities, it will be given to other objects such as programs, plans, products, services.

Having determined the cost, the managers will give much more credence to the new cost object i.e. activities. From this respect, ABM/ABC system is assigning costing system based on research in which activities and main programs will be cost drivers determined, analyzing the economic entity and its operation. Measuring the products and program cost appropriately, product price, product processing improvement, eliminating the additional activities, identifying the cost drivers, value added activities identification, eliminating non value added activities, operation programming, determining trade strategy of entity and finally measuring its operation appropriately need some information provided by ABM/ABC system much better compared to the management accounting conventional systems.

ABM/ABC can be an axis around which complex particles of advanced cost management system keep and if implemented carelessly and unthoughtfully, it can neutralize total cost management. However, the effective usage of ABM/ABC system will lead to increase the company value since by using ABM/ABC technology, we can identify the cost of the inefficient methods of program and process and can identify and measure the saving amount of improving such methods. Also redesigning the programs by an ABC analyzer with efficient processes will lead to cost decreasing and quality improvement and plan-performing and effectiveness of budget planning. They are the best results we can expect one system in the present global competition.

Now, it is turn to look for and find the obstacles in implementing ABM/ABC plans. To be aware of different reasons of failures in implementing ABM/ABC plans can increase the success possibility in the future plans.

THE FAILURE REASONS FOR SOME ABM/ABC SYSTEMS

One significant way for achieving the success is not to repeat the mistakes done by others and to give credence to the ones leading to failure in other ABM/ABC plans. To know the failure reasons will aid to implement the system consciously and to avoid them can be effective higher successes. An increase in success chance can avoid wasting the financial and intellectual capital investments noticeably and can boost the organizational cooperation.

Generally speaking, there are many reasons for the issues existed in implementing ABM/ABC plans which can be classified into the following ones:

1. The deterrent reasons
2. Technical weakness
3. The user denial
4. Organization obstacles
5. The others

THE DETERRENT REASONS

The deterrent reasons, the most significant and common ones, are the same as follows.

- How to act to implement and launch the new project is of significance. In appropriate launching will result in missing the next stages for implementing the system. There will be many forms for launching activity based costing and operational budgeting and sometimes combination of which is the best choice. Using many stimulated projects has a high effect on the right selection and individual understanding of the modern systems. Using planners and users, visual sense is effective in fast identifying the possible weakness before implementing the system.
- When ABM/ABC systems are launched, only by using the financial and accounting parts (or accountants over use it) and cooperation of other effective concerned parts are not used in implementing the system and it is not enjoyed intelligently and it is changing to the ordinary one the same as many financial and management activities. So before implementing ABM/ABC systems, we should be aware of some information needed and facilities for transferring the information for operational parts to launch and go on implementing ABM/ABC systems based on them. Holding some conferences and free discussions, transferring and using the results obtained in organizations and using other ways to attract the employees, cooperation will increase the success degree of the new systems.
- If the new innovations of ABM/ABC system are an ordinary, predetermined and aimless method, new models or systems will be made illusively. Such systems are to remove the inefficiency of the innovated traditional systems and their objectives are to meet the information needed for the users. So helping to solve issues pertaining to information in an organization and to promote the organization will aim to increase in applying the new system. So in implementing stages, we should have a continual contact with the users and also try to identify their issues and to receive the on-time feedback by the users to make ourselves satisfied with the condition provided by the system.
- When there is a belief that measuring data related to ABM/ABC system for the users is very enjoyable. In fact without any planning, it is not possible for the users to take advantages even though the new information maybe of some useful hints. The users should try to know how ABC has improved the existing financial and budget reporting and also try to make

themselves aware through different stages of tracing the cost of activities and costing subjects and programs.

- When information available in ABM/ABC system become like a reviewed book and compared with previous accounting and official systems. There is a connection between evaluations of employees, working and official systems and using ABM/ABC systems in a wrong way in such organizations will result in encouraging the wrong behaviors continuously.
- Persisting against changes have been underestimate, the managers and employees who are not aware of financial issues think that a successful financial system is one which provides financial report monthly and balances books of accounts. Their questions is that "what is the problem existed in a system obtaining the optimum results monthly?" We should show carefully and patiently the disadvantages of the traditional system based on volume and the potential improvements of new system and its effects on correcting the past wrong decisions and improving the resource allocation. Introducing the new system effectively is of significance. ABC may be simply considered as a costing system with more details.
- When many users don't trust to the new accounted figures of ABM/ABC system and such a view has been underestimated by designers. Tracing the cost by ABM/ABC system in a right way, we can find that there is a significant difference between the results obtained from the product cost, services or outputs of a process. Such a difference will make one doubt and even one strong organizational shock. So, the result obtained and its documentation should be transferred to different centers in an organization gradually.
- When ABC/ABM systems have a great effect on some parts of an organization. For example when the managers in charge of producing goods with certain profit observe that the accounted profit in the traditional systems has been decreased or changed to loss by ABM/ABC calculation, they will object to ABM/ABC systems in an organization.
- When ABM/ABC system will not contribute to officials in accountability process. One significant feature in such systems is to facilitate and to improve the responding process and to be clear in responding with the budgeting and planned standards and to evaluate the managers' achievements. The effect scope of ABM/ABC system to achieve the goal, the budget and facilities provided used is potentially much more developed than the traditional systems.

TECHNICAL WEAKNESS

Technical weaknesses are the ones originated from issues related to nature of ABM/ABC system and are the same as follows:

- When understanding information and the financial issues is difficult for most ordinary people, we know that the new accounting and budgeting information cannot be transferred to people obligatorily, and we should try to make people aware of advantages of ABM/ABC systems as a comprehensive information system and also try to make them aware of disadvantages of the traditional systems and we should allow them to understand its advantages consciously. Although ABC system is a system of fame for its costing role, such a role is only one of its basic functions not all functions.
- When activity cost drivers do not reflect the consumption rate or pattern related to various activities and there is a weak correlation between activity costing and activity drivers. And due to this reports of ABM/ABC system seems wrong and far from reality. When selecting cost drivers, some factors including cost of driver's determination, correlation between activities and activity drivers and behavior effect stemmed from driver's determination should be taken into account.
- Design engineering of ABM/ABC systems may be very strict and pay attention to details extremely. In designing any system, there should be a logical exchange between details or complexity and interests extracted for information using. Although paying attention to the details will increase system exactness but sometimes, the added exactness will not make any change in decisions made i.e. It is not related to make decision. In other words, such a method will increase cost of new system and will make the new system unjustifiable based on cost-benefit standard.
- Another disadvantages of such systems are that activities in such systems have not been defined exactly and there are many kinds of activity cost drivers and there has not been specific cost object which consume activities. When designing ABM/ABC systems, we should have a close look at identifying the activities and classifying the similar activities and also avoiding a large number of costing centers and activity levels.
- To collect the information needed for activity-based systems in early stages of implementing is of difficulty. Since data resources and provider are not aware of related and unrelated information, much forgotten information which has not been used in traditional systems will be used in ABM/ABC system and such an issue will make the users in doubt.

THE USER DENIAL

Sometimes, the users may deny using ABM/ABC system for the following reasons:

- -When employees in various parts do not know how to react against the new information for instance, selling and marketing employees do not know how to react against the new results obtained by selling new products and they show wrong behaviors. Do they go on their activities i.e. producing, marketing, selling and services now? ABC system is able to solve

minimizing and maximizing product cost issue in high volume product cost issue in low volume and through this, such a system can give new information to the decision – makers.

- -When ABM/ABC system does not provide all necessary information for making producing–decision and planning and does not reflect various and wrong use of sources and their costs in a good way. Using ABM/ABC system, we may find new results on market strategies, goods producing in trade circle and following this, much more information made be used by the managers in decision – making on customers, market and function related to this.
- -Plans in ABM/ABC system is viewed as a competitor improvement program. ABM/ABC system can increase the capabilities in the existing improvement programs. The main point is that continuous improvement is a survival myth of an organization in today's competition trade environment. In such an age i.e. information technology and using new sciences, designing, and implementing the new information systems which are of much more real output are much more essential for an organization. The new system should be much more understandable and be able to boost organization learning. It would be better to determine the goals expected by an organization. First, we can use new system in one specific part then generalize and develop it to other parts gradually.
- - Data in ABM/ABC system may bother some employees. It may make employees review their method of working and also it may cause to consider new ways for doing works or delete and substitute some employees or equipments. Deleting and outsourcing activities recognized valueless should be done carefully. ABM system will make head of every center in an organization do his/her job in an effective way so that product costs and function can be measured much more fairly. When employees understand the new system much better, they will be much more motivated and they will resist against changeless and as a result they will play better in decision made by the organization.

ORGANIZATIONAL OBSTACLES

The organizational obstacles in ABM/ABC system are the same as follows.

- -To launch a project well is always of importance but sometimes the other steps will be taken slowly if the various steps to launch ABM/ABC plans take a long time, much energy and human sources will be destroyed. Sometimes the employees with such a feeling (often true) that managers themselves don't believe in effective performance of new system will miss their early motivation. It is also essential to use a full-time team working on implementation project in order to put an end to implement project in a logical time. If so, much more attraction is paid to apply such a new system. To have a time – table even for the coming years and to have a perspective for the future goals and what should be done will facilitate to evaluate function of group responsible for finishing the project in a logical time.

- -When the considerate part is center of cost system and is not of responsibility against loss and profit, it will be considered less and less and will not make any attraction for launching new systems. To make familiar different parts of an organization including cost center with each other and to make competition among them via encouraging to be much more efficient and to delete additional or value less activities will lead to make applying new systems attractive. On the other hand, there may be wrong belief that activity based costing system is not useful for non-profit centers such as governmental offices and may be avid to be present in such organizations. It is obvious that such a system is a kind accelerating movement for improvement in every condition.
- -There is a long belief that costs of every product or service has been accounted in a wrong way, when there is a little difference on results and figures of the new system and it will result in a little change in the final prices. The documents simplified should be received by every body in order to understand the differences between measurements practically.
- -When the high ranking officials are responsible directly for running the ABM/ABC operation and define standards and activities. If so, they stop the users and employees cooperation and many advantages of the new system will be destroyed.
- -Using new techniques of cost management to improve supporting decision will lead to the past experiences in the new system are not used and if training and changing the views do not occur, the new systems will not be used in a good way.
- -When fame and validity of activity based management or costing are destroyed by the opponents and under the pretext of being expensive and inefficient. A good solution to tackle such an issue is to present successful experiences by other corporations and the effect of using activity-based management and costing to improve their condition.

THE OTHER CASES

The other effective factors on activity based management or costing success are the same as follows:

- - The leader of designing team is not of enough braveness to make changes needed. The leader should be the one much more interested among other qualified persons and should be ready to receive information and analyze it and also working under hard conditions. The leader also can make decision to use the seasoned advisors. The seasoned advisors will provide a clear perspective to do capacities necessary for the system. However, it is of importance the advisors should not be responsible for doing a project. The designing team is responsible for doing a project.

- - Training and awareness will happen on ABM/ABC systems when the internal users are enjoyed the advantages of using such a system and all persons based on qualifications and organizational position are trained or they will use the system unconsciously in a wrong way. The managers and implementer of such a project should try not to be deceived by such an attitude that "the details activity based management and costing has been given to all".
- -When the data measurable such as the number of material movement, time of doing various activities, the amount of using sources are not ready and are out of reach. So in designing stage, knowing and documenting and making the quantitative data needed is of significance.
- -When the scope of cost model is only restricted to producing operation and many significant activities in organizations such as research and development, designing, marketing, distribution and after-selling services are not included. Activity– based management and costing are one part of the whole body of total quality system in an organization which is effective on other parts in an organization.
- -Documenting every new system is of significance and will increase its efficiency. One danger existing is that such documents when being prepared are considered as a successful project which has met its final goal. However, documenting is a stage which the real function i.e. implementing ABC/ABM system as a strategic management tool in all body of organization has been started.
- -Using one strategic plan is much more useful. In such a plan, different parts of value chain of organization, its objectives, the way of effect of new system on such parts, expectation of the new system, etc. are clarified.

CONCLUSIONS

To implement new informational management and budgeting systems like ABC/ABM in organization is inevitable. So, for many different reasons the success is such systems when they are implementing is not so much. Such reasons can be classified in the five following groups including the deterrent reasons, technical weakness, the user denial, organization obstacles and the others. The best solution to the problems existing for implementing ABC/ABM systems is to train employees and managers in a good way and to make them much more aware of the new system and also to introduce their advantages in the organization concerned.

In general, to know the failure reasons for implementing ABC/ABM systems will lead to decrease and minimize the failure possibility. Such reasons can be predicted before and when they are ignored the new system will be failed. To reform the system, many financial and human sources will be destroyed. Being aware of the failure reasons we can find the solution to remove the problems and we can pose new approaches to achieve success. Therefore in such condition, organization can enjoy advantages of ABM/ABC systems and finally increase its value.

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SAVING BEHAVIOR IN MALAYSIA: AN EMPIRICAL STUDY

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ABSTRACT

Saving is an important indicator of economic development where it is viewed as an element which finances domestic investment to achieve economic growth. Malaysia is one of the emerging economies in the Asian region and has a high aggregate savings among the developing countries as well. It is vital to have a better understanding of saving behavior for the purpose of tax evaluation and formulation of macroeconomics policies in every country around the world, including Malaysia. Therefore, the purpose of this paper is to review the determinants of the saving function in Malaysia. Theoretical framework of this paper is based on the Life Cycle Hypothesis. This study employs a saving function which includes income per capita, saving account deposit rate, the rate of inflation and money supply as the determinants of savings from the period 1980 to 2006. The findings support the hypothesis that income level has a positive impact on the national saving. Real interest rate also showed a positive impact on saving but is not statistically significant. The degrees of macroeconomic volatility – inflation has a positive impact on national saving in Malaysia. Financial depth and development of Malaysia tend to have higher national saving.

Keywords: *saving, life-cycle hypothesis*

INTRODUCTION

Generally, saving may be defined as resources created or outputs produced in the current period that are not consumed in the current period but rather are made available for future consumption (Gale and Sablehouse, 1999).

Saving is an important indicator of economic development where it is viewed as an element which finances domestic investment to achieve economic growth. Malaysia is one of the emerging economies in the Asian region and has a high aggregate savings among the developing countries as well. Economic theory anticipates higher savings and increase in related capital accumulation can lead to permanent increase in growth rates. Causal remark also shows that countries that obtained higher saving rates have also enjoyed higher levels of growth rates and per capita income (Abdul Malik and Baharumshah, 2007). According to Aziz (2004), as a high savings country like Malaysia, it has the potential to promote a higher level of consumption without undermining the prospect for financing of private investment from domestic sources.

This study investigates the determinants of saving behavior such as government policies, macroeconomic stability, national income and financial variables in Malaysia.

OBJECTIVE OF THE STUDY

The objectives of this study are:

- to identify the determinants of Malaysia's saving.
- to investigate the relationship between income level, interest rate, inflation, money supply and national saving in Malaysia

OVERVIEW OF ECONOMIC GROWTH AND MALAYSIAN SAVINGS

Generally, Malaysia economy was a relatively open economy, maintained a relative high saving rate over the 30 years. Malaysia saving has trended upward slightly during the period 1980-2006 as in Figure 1. Malaysia saving is positively correlated with real growth.

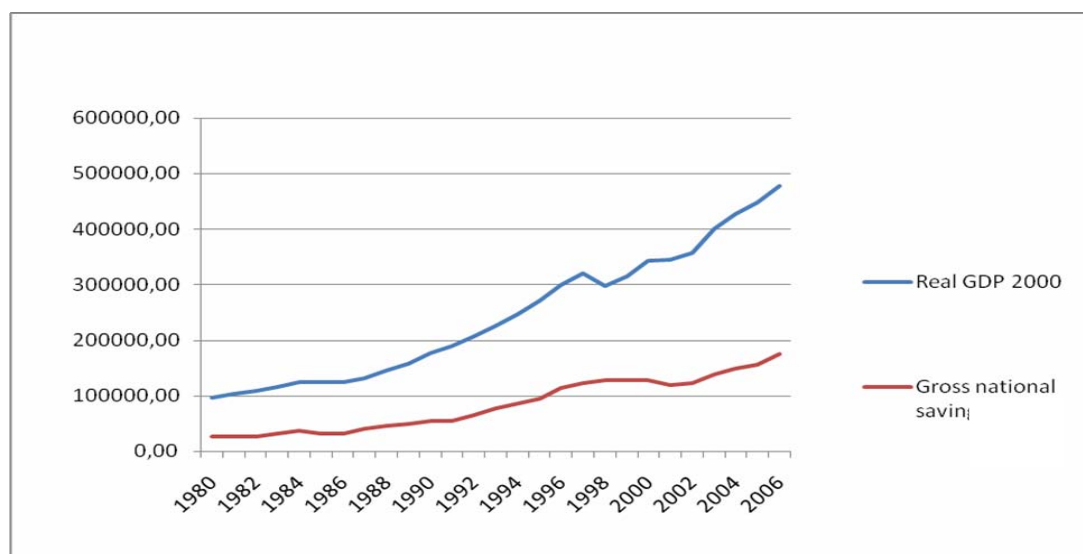


Figure 1: Malaysia Gross National Saving and Real Gross Domestic Product.
Source: ADB Key Indicators Report, various years.

Malaysia achieved a remarkable record of consistently high economic growth in the past three decades. From 1971 to 2002, the real GDP has grown on an average of 6.8 percent per annum. During 1985-1986, Malaysia experienced recession as commodity prices collapsed. After the economic recession in the late 1980s, Malaysia has achieved a remarkable high growth rate from 1988 until prior to the onset of the Asian Financial crisis in 1997. The growth rate of Malaysia had average around 7 percent, which significantly above the world average growth rate (around 2 percent). Malaysia's real GDP contracted by 7.5 percent in the year 1998 following the Asian Financial crisis in 1997. In 1999-2000, Malaysia economic recovered and register 5 percent growth rate in real GDP due to the supportive external and domestic demands. The growth rate was around 6 percent between 2001 – 2006.

The gross national saving in Malaysia showed an increasing trend constantly from year 1980 to 2006 as in figure 1. This increasing trend partially was contributed by the compulsory saving by government under the EPF scheme. In between 1997 and 1998 the real GDP has gone down but the

real gross national saving still increase. This might be caused by the precautionary and unconfident on the future economic condition by the people.

LITERATURE REVIEW

A glance at the literature reveals that there emerge two major hypotheses in studying savings. The first one is the Permanent Income Hypothesis of Friedman. According to this hypothesis, permanent and transitory components of income are determinants of saving. The other is Life Cycle Hypothesis by Ando and Modigliani. This hypothesis showed that individuals spread their saving lifetime consumption over their lives by accumulating savings to support their retirement live. The empirical studies are concerned with the effect of demographic factors such as dependency ratios, financial variables like interest rates and inflation rate on the saving behavior.

In the past, there has been studied done to determine private saving behavior in a particular country or for cross-country comparisons (Haron, et al. 2006). The first research on this aspect was carried out by Lambert and Hoselitz (1963) who compiled and edited the work of other researchers on saving behavior household in Ceylon, Hong Kong, Malaya, Pakistan, India, Philippines and Vietnam. Synder (1974) had the same study but had focused on econometric studies. Browning and Lusardi (1996) presented review on micro theories and facts on household saving. Loayza et al. (2000b) compiled a list on papers and publications on determinants of savings for a particular country. Those are part of the names among the researches done in this area.

The net impact of the real interest rate on saving is unclear both theoretically and empirically. This mainly due to the differences between resulting income and substitution effects from an interest rate change (Agrawal, 2001; Giovannini, 1983, 1985). The impact of interest rates on saving could be positive or negative depending on which effect is larger. Fry (1980, 1995) found that interest rates have a positive but small impact on saving while Giovannini (1983, 1985) found no statistically significant relationship between saving and interest rates.

Based on industrial countries, Bosworth (1993) finds a positive interest rate coefficient in a time-series estimation for individual countries but a negative coefficient in a cross country estimation. For developing countries, Schmidt-Hebbel, Webb, and Corsetti (1992) find no clear effects on saving. However, Ogaki, Ostry, and Reinhart (1996) find positive interest rate effects that vary with income but are still small. Masson et al. (1998) report positive, but less robust, effects on interest rates on private savings. Bandiera et al. (2000) find that there is no strong interest rate effect on saving. Only when the data are pooled, then they report a significant, positive, interest rate effect on saving, even the effect is small.

Loayza and Shankar (2000), using cointegration approach in India, found real interest rate had a positive relationship with savings. Athukorala and Sen (2003) also conducted study in India and had the same findings where real interest rate on bank deposits and saving is positively related. Athukorala and Tsai (2003) show interest rate had a significant positive impact on saving. Agrawal (2001) and

Anoruo (2001) found Malaysia's saving and interest rate are significantly positive related. To recap, empirical research has reported mixed results between saving and interest rate. Another relevant variable is the Financial liberalization. Ratio of M2 to GNP has used as an indicator of financial depth. The sign of this variable has been found to be positive across empirical studies (Edwards, 1996, Dayal-Gulhati & Thimann, 1997)

On top of that, there are also study being done on Gross National Product per capital (GNPpc) and also Gross National Product growth (GNPg). Kuznets (1960) and Houthakkar (1965) suggest that one should expect a positive sign on GNPpc. In the life cycle model, the rate of income growth favorably affects aggregate saving. Therefore, GNPg also expects to have a positive sign. Carroll and Weil (1994) confirm that lagged values of increases in income growth seem to explain higher saving rates. Ogaki, Ostry, and Reinhart (1996) find that the process of development involves initially low saving rates, a period of high growth accompanied by high saving rates, lower saving rates in more mature economies. Loayza and Shankar (2000), using cointegration approach in India, found per capital income had a positive relationship with savings. Athukorala and Sen (2003) also conducted study in India and had the same findings where the rate of growth and saving is positively related. Ozcan et al (2003) show income level had positive impact on saving in Turkey.

The issue of inflation rate and savings are ambiguous and can be connected to higher or lower saving rates. Higher inflation rates are associated with higher nominal interest rates and consequently higher measured household income and saving. On the contrary, inflation may be linked to uncertainty and may lower saving (Hondroyannis, 2004). Corbo and Schmidt-Hebbel (1991), Masson et al. (1998), Haque et al. (1999)'s empirical research have produced negative or zero coefficients of inflation. Meanwhile, Athukorala and Sen (2003); Loayza and Shankar (2000), Ozcan et al (2003) showed that inflation and saving is positively related. Athukorala and Tsai (2003) found that inflation moves the opposite. Haron et al (2007) found negative relationship between saving and inflation in Malaysia.

Money supply (M2) is one of the tools used by the government in its monetary policy. Therefore any changes in money supply can have a big impact on economic conditions. An increase in money supply would reduce interest rate, thus making cost of borrowing cheaper and increase the loans made by corporate and individual customers. According to Haron et. al (2006) , people will increase consumption and reduce savings. This shows that money supply will have negative relationship with savings.

METHODOLOGY

There are two major hypotheses in saving studies – Permanent Income Hypothesis and Life Cycle Hypothesis. Permanent Income Hypothesis differentiates permanent and transitory components of income as determinants of savings². According to Life Cycle Hypothesis, individual accumulating

² Permanent income is the long time income expectation and transitory income is the difference between actual and permanent income.

savings during their earning years to support their consumption during retirement. The empirical studies on Life-Cycle Hypothesis which concerned with the effect of demographic factors, such as dependency ratio, financial variables as interest rates, inflation rate and financial depth (M2) on the saving behavior.

The national saving of Malaysia has effected by several determinants. To identify the determinants of Malaysia saving behaviour, the general saving equation including relevant variables is constructed as follows

$$S = \beta_0 + \beta_1 Y + \beta_2 I + \beta_3 CPI + \beta_4 M2$$

The dependent variable is real Gross National Saving (base year 2000) in Malaysia. The independent variables are Y = real income per capita (base year 2000). It is said that saving rate tends to increase with economic growth for developing countries; I = interest rate, the net impact of real interest rate on savings is unclear both theoretically and empirically, though the usual presumption is that the total effect is positive (Narayan and Narayan, 2006); CPI= consumer price index (base year 2000), the inflation rate is negatively affects the saving rate; and M2 = money plus quasi money, increase in money supply leads to decrease in savings.

In our saving model we fit the annual data for the period 1980-2006. These data will be analyzed on ordinary Least Squares (OLS) technique.

EMPIRICAL RESULT

The results of this project are presented in the form of overall table to give the reader the general outcome. Results analysis will present the explanation and analysis of the independent variable (X) in the context of the overall model.

Table 1: Specification of the variables used in the empirical test.

Variable	Definition	Expected sign
S	GNS of Malaysia	
Y	Income Per Capita	(+)
I	Deposit saving interest rate	(+)
CPI	Consumer Price Index	(+)
M2	Money Supply	(+)

An empirical test on our statistical model was performed, the results of which are presented in Table 2.

Table 2: The Result of the Overall Equation

Variables	
Intercept	-100092.5 (-5.032)
Y	5.33 (3.11)**
I	1435.75 (1.00)
CPI	1322.8 (3.99)**
M2	0.039 (1.84)**
R Square	0.983
R-adjusted	0.980
F	323.09

All explanatory variables have coefficients with a positive sign, implying a positive contribution of income per capita, interest rate, inflation and money supply to the national saving in Malaysia.

Our analysis reveals that the level of income is statistically significant positive effect on the national saving. Subsistence-consumption theories suggest that those countries with higher income levels tend to have higher saving rate. The life-cycle approach suggests that an increase in income growth will lead the increasing in aggregate saving which through the increase in active workers' saving.

The coefficient of interest rate variable is positive and it is insignificant. This was due to the substitution and human-wealth effects are greater than the income effect – positive sign in real interest rate indicate that Malaysian tend to increase their saving when real interest rate increases. Previous empirical studies have found an insignificant impact of the real interest rate. The finding is also consistence with Giovannini (1983, 1985).

The empirical result shows the high significance of macroeconomic uncertainty, proxies' inflation to influence Malaysian saving. Inflation variable coefficient is positive which indicates that inflation have a positive impact on saving. People in uncertain economic environment would try to hedge risk by saving.

For the coefficient of “financial depth” - money supply also showed a positive sign as and statistically significant. The sign of this variable has been found to be positive across empirical studies (Edwards, 1996, Dayal-Gulhati & Thimann, 1997). An increase in “financial depth” is likely important in Malaysia which undergoing a financial liberalization process.

From the above table result of the overall equation in Table 2, the model summary provides an explanation as to how much of the variation in GDP growth is explained by the model. The R-square value places the explanatory power of the overall model at 98.3 percent of the total variation of the dependent variable. This is highly strong by social science standards. The adjusted R-square for the analysis shows 98.0 percent. This indicates that the model is well explained by the independent

variables. F- test (323.09) shows the overall model is significant at 5 percent level. This implies a strong relationship between independent variables and dependent variable in the study.

CONCLUSION

This paper examines the empirical determinants of saving for Malaysia. The independent variables are income level, interest rate, inflation and financial depth and development. The results show that all the variables tend to have positive impact on Malaysian saving behavior. For the improvement of this study, it is suggested that dependency ratio, age structure and current account deficit are used for the future research.

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BM(05)

A COMPARATIVE STUDY ON CORPORATE GOVERNANCE COMPLIANCE VERSUS SYARIA' COMPLIANCE IN MALAYSIA

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ABSTRACT

The purpose of this study is to investigate level of compliance by corporate governance (CG) code of best practices and sharia' principles among public listed companies in main board of Bursa Malaysia and to provide insight views in determining significance association between the corporate governance and sharia' compliance with firm's performance. Corporate governance compliance was measured by three board of directors (henceforth; BOD) facets; (i) director's remuneration, (ii) directors training and (iii) number of family members. Meanwhile, syaria' compliance is based on five proxies, (i) riba, (ii) gambling, (iii) sale of non halal product, (iv) conventional insurance, (v) entertainment and (vi) stockbroking. The data are gathered from the analysis of companies' annual report and Thompson DataStream for a sample of 147 companies (for corporate governance compliance) and 36 companies (for syaria' compliance) over the period of 2003 to 2007. The study employs multiple regression analyses and Pearson correlation on the hypotheses tested. The preliminary results reveal most of the company has complied well with the code of best practices and syaria' principles and there is a significant association to the firm's performance.

Keywords: *corporate governance, syariah, compliance, firm's performance, board of directors' facets*

INTRODUCTION

Corporate governance is important for several reasons. First, corporate governance is most often viewed as both the structure and the relationships, which determine corporate direction and performance. Second, the board of directors is typically central to corporate governance. Its relationship to the other primary participants, typically shareholders and management, is critical. Additional participants include employees, customers, suppliers, and creditors. The corporate governance framework also depends on the legal, regulatory, institutional and ethical environment of the community whereas the 20th century might be viewed as the age of management, the early 21st century, on the other hand, is predicted to be more focused on governance. Both terms address control of corporations, but governance has always required an examination of underlying purpose and legitimacy.

The evidence on the empirical failure of the Enron and others mentioned has brought attention to the duties and responsibility played by the board of directors (BOD) in the company. Its failure also produced discussion of further regulations that is hoped, can prevent another company from collapsed that is similar to the Enron. For that reason, after detailed study and recommendation by the high-level finance committee, which was formed in 1998, Malaysian Code of Corporate Governance was introduced in March 2000 with the objectives of improving the corporate governance practice by the

corporate sectors. In this code of best practice, it was highlighted that the company was highly recommended to comply with the code such as the company should disclose the number of board meeting during the financial year in the annual report to ensure the interest of the company and the goal is achieved. The company also should have a detail of level remuneration received per directors, have a clear job description on BOD in order to avoid management conflict especially those who have family members among company's director. Besides, also disclose in companies' annual report on the training attended by BOD for Mandatory Accreditation Program (MAP) as highlighted in the MCCG code of best practices.

A Compliant to syaria' principle is different with corporate governance where it does not have a code of best practices to follow. However, the Syariah Advisory Council (SAC) has applied a standard criterion in focusing on the activities of the companies listed on Bursa Malaysia. As such, subject to certain conditions, companies whose activities are not contrary to the Sharia' principles will be classified as Sharia'-compliant securities. On the other hand, companies will be classified as Sharia' non-compliant securities if they are involved in the following core activities such as financial services based on riba (interest), gambling and gaming, manufacture or sale of non-halal products or related products, conventional insurance, entertainment activities that are non-permissible according to Sharia', manufacture or sale of tobacco-based products or related products and stockbroking or share trading in Sharia' non-compliant securities and other activities deemed non-permissible according to Sharia'.

From the Securities Commission Malaysia Book, (Nov 2007). List of Shariah-compliant Securities by the Shariah Advisory Council of the Securities Commission, pp 15, paragraph 2 said that, the SAC also takes into account the level of contribution of interest income received by the company from conventional fixed deposits or other interest bearing financial instruments. In addition, dividends received from investment in Sharia' non-compliant securities are also considered in the analysis carried out by the SAC. For companies with activities comprising both permissible and non-permissible elements, the SAC considers two additional criteria which is the public perception or image of the company must be good and the core activities of the company are important and considered *masalah* ("benefit" in general) to the Muslim ummah (nation) and the country, and the non-permissible element is very small and involves matters such as *'ulum balwa* (common plight and difficult to avoid), *'uruf* (custom) and the rights of the non-Muslim community which are accepted by Islam.

In this new era, most of the investors are demanding nearly perfect information to analyze the companies' performance to make sure their investment can generate income and increase their satisfaction in the business market. Measuring companies' performance is important especially to the management, shareholders, government, customers, suppliers, and other stakeholders that have interest to the company directly or indirectly. Consider to this issue, this study used three important financial ratios to measure the companies' performance, that is return on assets (ROA), return on equity (ROE) and operating profit margin (OPM). It was also used in order to forecast the future success of companies, while the researcher's main interest is to develop models exploiting this ratio.

The remainder of the study is structured as follows. Section 2 reviews the existing literature on corporate governance and syaria' compliance towards firm's performance. Section 3 describes the data and methodology. Section 4 presents the findings and discussion on the results while, section 5 focuses on conclusions and recommendations to the company.

LITERATURE REVIEW

The discussion on Corporate Governance in Malaysia as well as other East Asian countries should be initiated from the event of East Asian economies which collapsed in the second half of 1997. The period placed a greater concern and recognition of Corporate Governance to the public and private sector in those countries. The financial crisis was triggered in Thailand when foreign investors lost their confidence and started to withdraw capital due to currency devaluation. The problems transmitted to other neighboring countries. The most affected countries were Indonesia, Malaysia, South Korea, and the Philippines. In Malaysia, attempts to contain further devaluation caused higher level of interest rate and credit contraction. This created severe contractions in output and corporate profitability which was reflected in massive fall of equity prices. The Kuala Lumpur Composite Index declined by 72% during the period from end-June 1997 to end-August 1998. Real estate markets declined sharply due to high interest rates and in crisis environment. Banks, which had significant portion of their loan exposure in the construction and real estate sector; and stock purchase financing, were badly affected.

From the economic perspective, corporate governance is an important element of achieving an allocative efficiency in which scarce funds are moved to investment project with the highest returns. In practice, efficiency is achieved when at given level of risk, investment projects offer the highest return exceeding its cost of capital. The crisis indicated how the failure to regulate good governance affected the mobilization of funds in an effective way. Corporate finance, on the other hand, concerns on the effectiveness of corporate governance as an assurance in protecting the invested funds and to generate returns. As highlighted by Scheifer and Vishny (1997), corporate governance mechanisms assure investor in organizations that they will receive adequate returns in their investments.

Hollis Ashbaugh-Skaife, Daniel W. Collins, and Ryan LaFond (2006) investigate whether firms with strong corporate governance benefit from higher credit ratings relative to firms with weaker governance. They concluded that weak corporate governance has been singled out as the leading cause for recent high-profile cases of corporate fraud. They provide evidence that, CEOs of firms with speculative-grade credit ratings are overcompensated to a greater degree than their counterparts at firms with investment-grade ratings, thus providing one explanation for why some firms operate with weak governance.

Allan Chang Aik Leng (2004) analyzes the impacts of corporate governance practices with the firm's performance. Using return on equity as the dependent variables, the degree of impact on firm's performance followed a quadratic fashion, with performance increase with the size of the firm, up to an optimal size of RM8, 839 million in turnover. Beyond that size, firm's performance declined with the increasing size. Another definition of corporate governance is about promoting corporate fairness,

transparency and accountability. It was defined by J. Wolfensohn, president of the World Bank, as quoted by an article in Financial Times, June 21, 1999.

As highlighted by Scheifer and Vishny (1997), corporate governance mechanisms assure investors in organizations that they will receive adequate returns in their investments. To relate this with the crisis, it is concluded that efforts on shareholders protection were inadequate during the crisis and as such contributed to the destruction of the value of their investment.

A definition by the Finance Committee on Corporate Governance in Malaysia in the Report on Corporate Governance (2002) stated that: "Corporate governance is the process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long term shareholder value, whilst taking account the interests of other stakeholders". This indicates that corporate governance is not only applied to the shareholders, but the other stakeholders as well.

From the economic perspective, Abdul Hadi bin Zulkafli (2006) defined that corporate governance is an important element of achieving an allocate efficiency in which scarce funds are moved to investment project with the highest returns. In practice, efficiency is achieved when at given level of risk, investment projects offer the highest return exceeding its cost of capital. The crisis indicated how the failure to regulate good governance affected the mobilization of funds in an effective way. Corporate finance on the other hand, concerns on the effectiveness of corporate governance as an assurance in protecting the invested funds and to generate returns.

The first reasoning holds for Sharia' compliance in that price, competitive and profitability differences may accrue from adherence to Islamic principles. However, it is not clear how Sharia' compliance may improve efficiency or create new opportunities relative to a non-constrained universe. If the universe for Islamic investment is defined differently, then there is, in theory, no inefficiency or loss in opportunities. At the property-investment level, there is a belief held by some investors that Sharia' compliance leads to a poorer portfolio performance, even though there is no clear consensus viewed. (Ibrahim, Ong and Parsa, 2006).

RESEARCH METHODOLOGY

Data Sampling

This study focuses on the company listed on the main board of Bursa Malaysia. A sample of 147 companies for corporate governance compliance and 36 companies for syaria' compliance firms listed in the Main Board, Bursa Malaysia had been randomly selected over the period of 2003 to 2007. The industry that involved in this corporate governance analysis are consumer product, industrial product, trading & service, construction, plantation, properties and hotels while industry involved in sharia' compliance analysis are consumer products, trading, construction, plantation, properties, and infrastructure. For more precise result, the annual report of the selected sample of the companies that are included in this study was taken from Bursa Malaysia website (www.bursamalaysia.com) and also

from Bloomberg. Data is collected on annual basis for 5 years starting from 2003 until 2007 based on statement of Corporate Governance and list of Sharia' Compliant Securities by the Sharia' Advisory Council of the Securities Commission, which is related to the main variables of this study.

Variables

For this study, it differentiates the variables into two parts, which is dependent and independent variables. The dependent variables for the corporate governance and sharia' compliance consists of return on asset, return on equity and operating profit margin while the independent variables for the corporate governance are board remuneration, board training, and board family members while for the sharia' compliance are gambling, riba, sale/ manufacture non-halal products, conventional insurance, entertainment activities and stockbroking transaction that are non permissible according to sharia' principle.

Methodology

There are two main purposes of this study, which is to identify the level of compliance in corporate governance and syaria' practices and the effects of compliance level among BOD and to the syaria' principles towards companies' ROA, ROE and OPM.

The companies' ROA, ROE and OPM is calculated using the following equation;

$$ROA_i = \frac{Net\ Profit_i}{TotalAssets_i}$$

$$ROE_i = \frac{Net\ Profit_i}{TotalEquity_i}$$

$$OPM_i = \frac{Operating\ Profit_i}{Sales_i}$$

Where $Net\ Profit_i$ = Net profit of the ith company for each year,

$TotalAssets_i$ = Total assets of the ith company for each year,

$TotalEquity_i$ = Total equity of the ith company for each year, and

$Sales_i$ = Sales of the ith company for each year.

Next, the relationship between the BOD facets and syaria' principles to the firm's performance will be estimated using the following regression equations:

$$ROA_i = \alpha + \beta_1(BR_i) + \beta_2(DT_i) + \beta_3(FM_i) + \varepsilon_i \quad (1)$$

$$ROE_i = \alpha + \beta_1(BR_i) + \beta_2(DT_i) + \beta_3(FM_i) + \varepsilon_i \quad (2)$$

$$OPM_i = \alpha + \beta_1(BR_i) + \beta_2(DT_i) + \beta_3(FM_i) + \varepsilon_i \quad (3)$$

$$ROA_i = \alpha + \beta_1(RB_i) + \beta_2(GB_i) + \beta_3(NHP_i) + \beta_4(CI_i) + \beta_5(ENT_i) + \beta_6(SB_i) + \varepsilon_i \quad (4)$$

$$ROE_i = \alpha + \beta_1(RB_i) + \beta_2(GB_i) + \beta_3(NHP_i) + \beta_4(CI_i) + \beta_5(ENT_i) + \beta_6(SB_i) + \varepsilon_i \quad (5)$$

$$OPM_i = \alpha + \beta_1(RB_i) + \beta_2(GB_i) + \beta_3(NHP_i) + \beta_4(CI_i) + \beta_5(ENT_i) + \beta_6(SB_i) + \varepsilon_i \quad (6)$$

Where α = the constant term,

β = the slope or coefficient estimates of the explanatory variables,

BR_i = the Board remuneration of the i th company,

DT_i = the directors training of the i th company,

FM_i = the board of family members of the i th company,

RB_i = the riba of the i th company,

GB_i = the gambling of the i th company,

NHP_i = the non halal product of the i th company,

CI_i = the conventional insurance of the i th company,

ENT_i = the entertainment of the i th company,

SB_i = the stockbroking of the i th company,

ROA_i = the return on assets of the i th company,

ROE_i = the return on equity of the i th company, and

OPM_i = the operating profit margin of the i th company.

The Hypothesis

The hypothesis of the study is developed to cater for the pooling regression model. The hypotheses are:

Hypothesis 1

H0: There will be no relationship between dependent variables and all independent variables among BOD facets.

H1: There will be a relationship between dependent variables and all independent variables among BOD facets.

Hypothesis 2

H0: There will be no relationship between dependent variables and all independent variables on syaria' principles.

H1: There will be a relationship between dependent variables and all independent variables on syaria' principles.

RESULTS AND DISCUSSION

Analysis of Descriptive Statistics on Corporate Governance Compliance in Malaysia

Board Remuneration

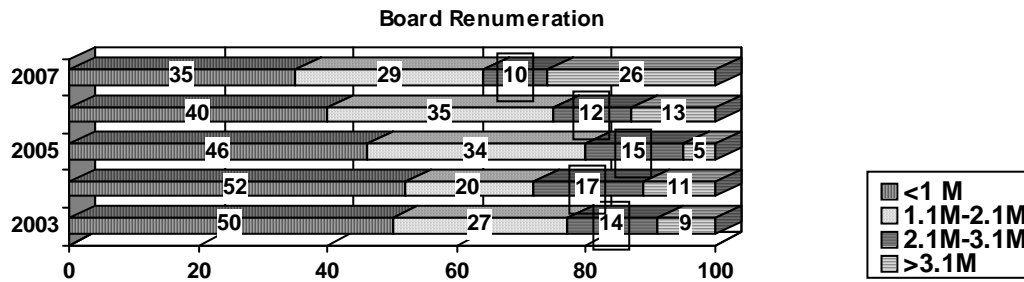


Figure 1: Level of Directors' Remuneration

Malaysia code of corporate governance practices stated that the level of remuneration must be adequate to attract and hold the required directors in running the business. The level also should be reasonable and appropriate with the expertise and experience of the directors. It is recommended that the amounts of remuneration be represented in the annual report of the company for stakeholder review. By referring to figure 1, it was found that for 5 successive years from 2003 to 2007, majority of the companies (around 52%) spent the total remuneration below 1 million a year to attract and retain the directors needed to run the company successfully. In the study also, it was found that the total remuneration of 1.1 million to 2.1 million has increased from 2003 till 2006 meanwhile the total remuneration below 1 million from year to year starting from 2004 decrease which means that the companies might start to pay more to their directors to make sure their directors give a full commitment and good performance to achieve their goal in organization.

Director Training

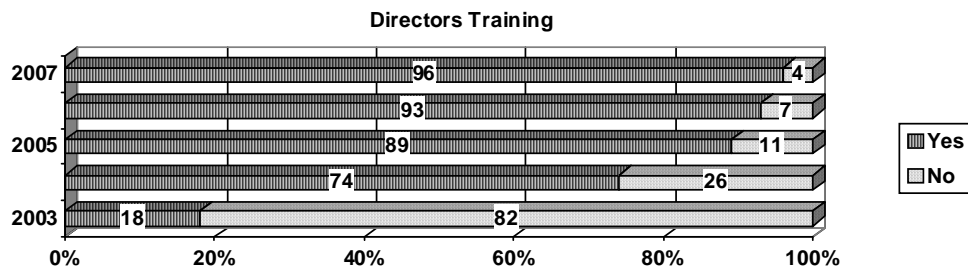


Figure 2: Training attended by directors

For the board training starting in 2003, all the companies listed in Bursa Malaysia have to send their directors to the Mandatory Accreditation Program (MAP) conducted by the Research Institute of Investment Analysts Malaysia (RIIAM) in accordance with the Listing Requirements of the Bursa Malaysia Securities Berhad in order to have a good director in their rank. The program also can be assumed as the formal orientation program that could be a one or two day program that involves educating the director as to the environment of the business, the company's current issues and the corporate strategy, the prospect of the company with reference to the input from director and the common responsibilities of directors. In the analysis, for the year 2003 majority of the companies (82%) does not send their directors to MAP for their formal orientation program instead only 18% of the companies did send their directors to MAP. Based on figure 2 above, the statistics shows that for 4

continuous years, majority of the companies sent their directors to MAP despite the fact that small amount of the companies still does not comply with the code. Overall, since the introduction of the Malaysian Code on Corporate Governance by the Finance Committee in 2000, most of the companies complied with the code of best practice.

Number of Family Members in Board of Directors

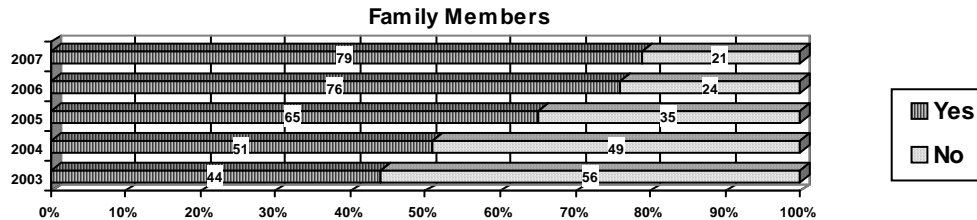


Figure 3: Numbers of Family Members in Board of Directors

Several directors in companies tend to appoint their family as the executive or non-executive directors. The presence of family members in the board of directors will lead to conflict of interest among the directors. To make it more wary, there is a tendency that more than half of the directors have family connections. The information might not be transparent due to easy access for internal activities and stakeholder’s interest is not well protected. Based on figure 3, an average of 37% of the companies did not have any family members who sit in the board from 2003 till 2007. The annual percentage comparison from 2006 and 2007 show similarity. Company with existing family members on board is likely to have their family to pursue the business as inheritance, whereas, company with no family members might have policy not to appoint their relatives in the board to avoid conflict of interest.

Analysis of Descriptive Statistics on Sharia’ Compliance among companies in Malaysia.

Number of companies involve in Riba

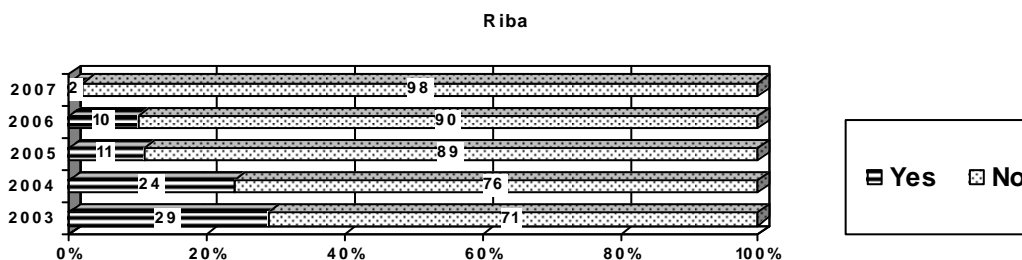


Figure 4: Financial service based on Riba

Riba means usury and is forbidden in Islamic economic jurisprudence. According to some, this refers to excessive or exploitative charging of interest, though according to others, it refers to the concept of interest itself. Based on figure 4 in 2003, 71% of the companies were not involved in riba ,meanwhile the total number of companies not involved in riba increased 13% from 2005 to 2006 and

8% from 2006 to 2007. The number of the companies which were not involved in riba increased from year to year starting in 2003 till 2004.

Number of companies involve in Gambling

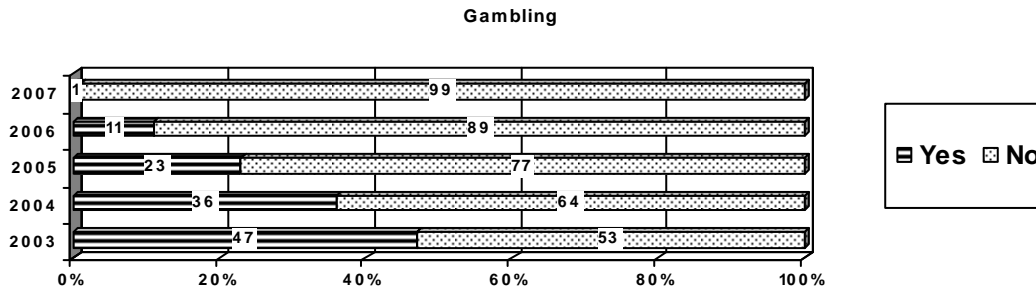


Figure 5: Gambling

Gambling has a specific [economic definition](#), referring to wagering [money](#) or something of material [value](#) on an event with an uncertain outcome with the primary intent of winning additional money and or material goods. Typically, the outcome of the wager is evident within a short period of time. Based on figure 5, 53% of the companies were not involved in gambling in 2003, meanwhile the total number of the companies not involved in gambling increased 13% from 2004 to 2005 and 10% from 2006 to 2007. The number of the companies that were not involved in gambling decreased from year to year from 2003 till 2007.

Number of companies involve in Non Halal Product

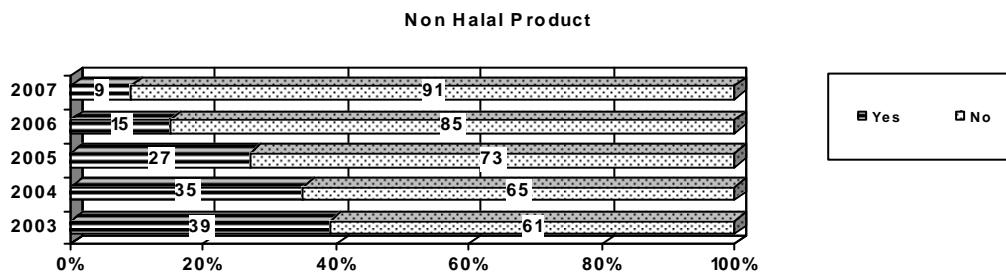


Figure 6: Manufacture / sale Non Halal Products

Halal applies not only to food products but also to all aspects of life and social context. One may hear of, "Halal Money" being mentioned. Money derived from gambling, the selling of alcohol, drug trafficking, illicit social vices, or any illegal activity is considered haram or detrimental to society and therefore not acceptable or considered a halal income. Based on figure 6, there were 39% of the companies involved in non- Halal Products. In 2004, there were 65% of the companies not involved in non-halal product and the number decreased from 4 % (2004), 8% (2005), 12% (2006) and 4% (2007). The number of the companies that were not involved in non- halal products decreased from year to year from 2003 till 2007.

Number of companies involve in Conventional Insurance

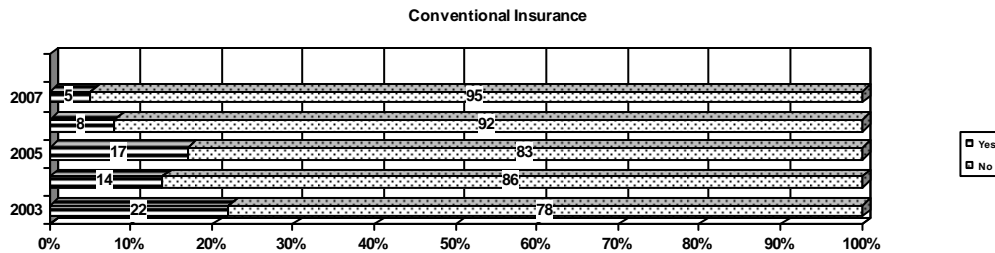


Figure 7: Conventional Insurance

Conventional insurance products are in conflict with Islamic beliefs for three reasons. Insurance involves an element of uncertainty, gambling and the charging of interest, which are prohibited by the Quran. Based on figure 7, there were 78% of the companies not involved in Conventional Insurance in 2003, meanwhile the total number of the companies involved in Conventional Insurance increased 8% in 2004 but slightly decreased 3% in 2005. In 2006, the number of the company that were not involved in Conventional Insurance increased from 9% and 3% in 2007. The number of the companies that were not involved in Conventional Insurance decreased from year to year from 2005 till 2007.

Number of companies involve in Entertainment

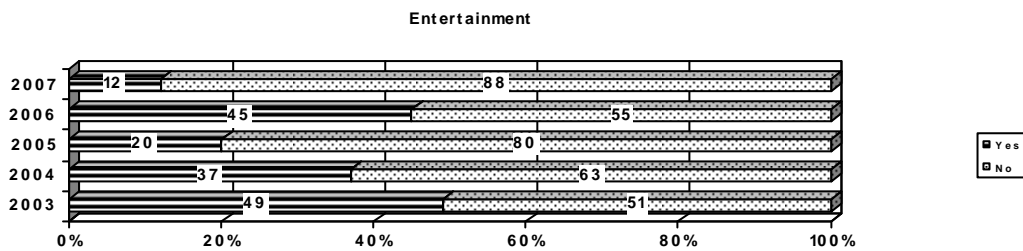


Figure 8: Entertainment Activities

Entertainment is an activity designed to give pleasure or [relaxation](#) to an audience (although in the case of a [computer game](#) the "audience" may be only one person). The audience may participate in the entertainment passively as in watching [opera](#) or a [movie](#), or actively as in computer games. Based on figure 8, there were 51% of the companies in 2003 not involved in entertainment activities that are not permissible according to Sharia', and in 2004, the number of the companies not involved has increased to 12%, meanwhile the total number slightly decreased 25% from 2005 (80%) but the number of companies not involved in entertainment decreased till 2007.

Number of companies involve in Stockbroking

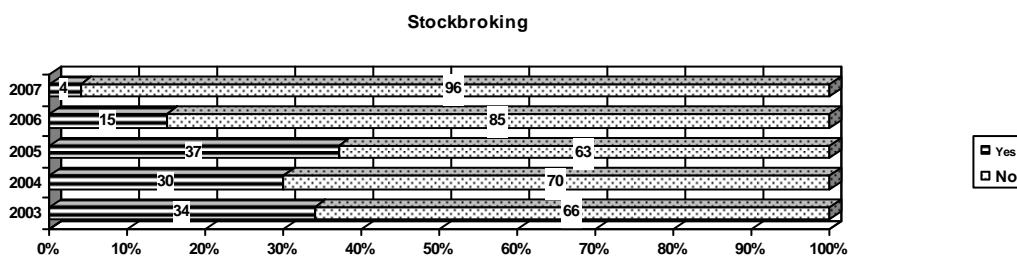


Figure 9: Stockbroking

Islamic Stockbroking (ISB) is an alternative of investment tools that allows an investor to invest based on sharia' principles. ISB allows investors to deal only in 'halal' securities approved and reviewed periodically by the Shariah Advisory Council of the Securities Commission. Halal securities are investments in companies listed on the Bursa Securities whom,se activities do not contravene sharia' principles. For the stockbroking which is not permissible according to sharia', based on figure 9, there were 66% of the companies not involved in 2003, meanwhile the total number of the companies not involved in stockbroking increased 4% in 2004 but slightly decreased 7% in 2005. The number of companies not involved in non-permissible stockbroking decreased from year to year until 2007.

Relationship between Dependent and Independent variables

Corporate Governance and Syaria' Principles with the Firm's Performance

Table 1. The Results of Multiple Regression Analysis

	ROA	ROE	OPM
Variables	Model 1	Model 2	Model 3
Panel A: CORPORATE GOVERNANCE COMPLIANCE			
Constant	3.419	3.313	0.228
	0.001	0.001	0.820
Board Remuneration (BR)	0.076	-1.453	1.980
	0.939	0.147	0.048**
Directors' Training (DT)	1.043	0.862	0.021
	0.298	0.389	0.983
Family Members (FM)	-1.406	-0.953	-0.007
	0.160	0.341	0.995
R	0.105	0.091	0.094
R Square	0.011	0.008	0.009
Adj. R	0.005	0.003	0.003
F-Statistic change	2.001	1.497	1.623
Std. Error of the Estimate	12.562	19.867	38.729
Panel B: SYARIA' COMPLIANCE			
Constant	3.698	2.684	0.341
	0.000	0.008	0.734
Riba (RB)	-3.148	-1.874	-0.311
	0.002***	0.063*	0.756
Gambling (GB)	1.580	1.531	2.254
	0.116	0.128	0.025**
Non Halal Product (NHP)	-2.807	-1.708	-0.812
	0.006***	0.089*	0.418
Conventional Insurance (CI)	-1.904	-1.993	-0.828
	0.058*	0.048**	0.409
Entertainment (ENT)	-4.011	-2.575	-0.638
	0.000***	0.011**	0.524
Stockbroking (SB)	-0.098	-1.032	0.047
	0.922	0.303	0.963
R	0.409	0.302	0.209
R Square	0.167	0.091	0.044
Adj. R	0.14	0.061	0.012
F-Statistic change	6.128***	3.059***	1.388
Std. Error of the Estimate	6.268	18.499	46.087

Notes: In each cell, t-value appears in the first row and p-value (sig.) is in the second row. Symbols * indicates significance at the 10 percent level while ** indicates significance at the 5 percent level and *** indicates significance at the 1 percent level.

Based on table1 (panel A), there is no relationship between FM, BR and DT. Therefore, the alternate hypothesis will be accepted at this level. BR is not related to ROA with the significance level of 0.939 with T-Ratio is 0.076 while DT also not related to ROA with 0.298 significant levels with their T-Ratio value at 1.043. However, when we look at the value of R, it indicates 10.5% and it's not a very strong relationship and the R-Square indicates that 1.1% of the variation in ROA is explained by the variation in the corporate governance. None of the independent variables have significant relationship with ROE. Thus, the null hypothesis is rejected. The R value indicates the model have a relationship but not strong enough that is only 9.1% while the value of R Square indicates only 0.8% of the variation in ROE is explained in the corporate governance. So, the null hypothesis will be rejected because all the P-Value has value less than 0.05 significant levels. There is a relationship between OPM with BR and the relationship is significant 0.048 levels and the T-Ratio value indicates 1.980. The standardized coefficient of 0.093 indicates the parallel relationship between OPM and BR. So, the null hypothesis can be rejected at this level. The R-Square indicates only 0.9% of the variation in OPM is explained by the variation in corporate governance while the R-value indicates that the model does not have a strong relationship (9.4%).

Panel B shows that there is a relationship between RB, NHP, CI and ENT. Therefore, the alternate hypothesis will be accepted at this level. RB is negative related to ROA with the significant level of 0.002 and T-Ratio at -3.148 while NHP is also negative related to ROA with 0.006 significant levels with their T-Ratio value at -2.807 which is the same with CI and ENT and which are both negative at -1.904 and -4.011 with the significant level of 0.058 and 0.000. However, when we look at the value of R, it indicates 40.9% and it's not a very strong relationship and the R-Square indicates that 16.7% of the variation in ROA is explained by the variation in the Sharia' Compliance. It means that the good Sharia' Compliance can help the company to increase their profit and achieve their organizational goals. However, none of the independent variables have significant relationship with ROE. Thus, the null hypothesis is rejected. The R value indicates the model have a relationship but not strong enough, only 9.1% while the value of R Square indicates only 0.8% of the variation in ROE is explained in the corporate governance. So, the null hypothesis will be rejected because all the P-Value has value less than 0.05 significant levels. There is a relationship between OPM with GB and the relationship is significant 0.025 levels and the T-Ratio value indicates 2.254. The standardized coefficient of 0.170 indicates the parallel relationship between OPM and GB. So, the null hypothesis can be rejected at this level. The R-Square indicates only 4.4 % of the variation in OPM is explained by the variation in Sharia' compliance while the R-value indicates that the model does not have a strong relationship (20.9%).

Pearson Correlation analysis among variables

Table 2. The Results of Pearson Correlation Analysis

Panel A: CORPORATE GOVERNANCE COMPLIANCE							
Variables	Correlation	ROA	ROE	OPM	BR	DT	FM
ROA	Pearson Sig. (2-tailed)	1					
ROE	Pearson Sig. (2-tailed)	0.515** 0.000	1				
OPM	Pearson Sig. (2-tailed)	0.480** 0.000	0.200** 0.000	1			
BR	Pearson Sig. (2-tailed)	-0.036 0.403	-0.079 0.065	0.094* 0.028	1		
DT	Pearson Sig. (2-tailed)	-0.086 0.000	-0.048 0.266	0.041 0.336	0.404** 0.000	1	
FM	Pearson Sig. (2-tailed)	-0.095 0.027	-0.055 0.201	0.042 0.331	0.410* 0.000	0.985** 0.000	1

Panel B: SYARIA' COMPLIANCE										
Variables	Correlation	ROA	ROE	OPM	RB	GB	NHP	CI	ENT	SB
ROA	Pearson Sig. (2-tailed)	1								
ROE	Pearson Sig. (2-tailed)	0.903** 0.000	1							
OPM	Pearson Sig. (2-tailed)	0.480** 0.000	0.520** 0.000	1						
RB	Pearson Sig. (2-tailed)	-0.168 0.021	-0.092 0.206	-0.016 0.829	1					
GB	Pearson Sig. (2-tailed)	0.188** 0.009	0.177* 0.014	0.189** 0.009	-0.041 0.575	1				
NHP	Pearson Sig. (2-tailed)	-0.149 0.041	-0.085 0.245	-0.070 0.339	-0.098 0.180	-0.118 0.106	1			
CI	Pearson Sig. (2-tailed)	-0.088 0.225	-0.113 0.120	-0.066 0.366	-0.069 0.344	-0.083 0.254	-0.079 0.281	1		
ENT	Pearson Sig. (2-tailed)	0.243** 0.001	0.156* 0.032	-0.055 0.454	-0.095 0.194	-0.114 0.117	-0.108 0.139	-0.076 0.296	1	
SB	Pearson Sig. (2-tailed)	0.074 0.308	-0.025 0.736	0.003 0.972	-0.111 0.126	-0.134 0.065	-0.127 0.081	-0.900 0.219	-0.123 0.190	1

Notes: In all cases of Pearson correlation the symbols * indicates correlation is significant at the ≤ 5 percent level while ** indicates correlation is significant at the ≤ 1 percent level (2-tailed).

Based on table 2 in panel A, the presence of independent directors resulted with insignificant value. There is no relationship between ROA with the Board Remuneration proxies. Director's remuneration results indicate that a good deal of salary has no impact towards the firm's stock price. For the director's training and family members, there is a relationship between both of the proxies. Although the board had complied with the code by holding the director's training, there is an effect to the ROA that has a negative correlation of at 5% significant level and same with the family members, ROE not correlated with any proxies in corporate governance while OPM with the board remuneration at 5% significant level. Thus, the decision is to reject H0 for hypothesis H1 and H2. Other proxies are

more than 5% significant level. Therefore, the decision is to reject H₀. This argument is supported by the correlation coefficient and R² where both value show 0.9% and 9.4%, which are considered weak. According to panel B, there are significant relationship between the ROA and the sharia' compliance proxies for riba, gambling, non-halal products and entertainment. The proxies are greater than 5% for the riba and non-halal products and 1% for gambling and entertainment. ROE correlated at the significant level of 5% only for gambling and entertainment while OPM has a positive correlated 0.189 at 1% significant level. Thus, the decision is to accept hypothesis H₁ and H₂. Other proxies are more than 5% significant level. Therefore, the decision is to reject H₀.

CONCLUSIONS AND RECOMMENDATIONS

This study attempts to investigate the corporate governance and sharia' compliance practices among main board Bursa Malaysia companies for the period of 2003 till 2007. Generally this study is trying (1) to find out the performance of Corporate Governance and Sharia' Compliance practices in the company. (2) to identify whether there is a relationship of corporate governance and sharia' compliance with the firm's profitability. In this study, it can be concluded that majority of the companies that are listed in Bursa Malaysia have complied very well with the code in corporate governance practices. However, as we can see in the statistics in chapter four, it's proven that the Corporate Governance companies' independent variables are not significant with the dependent variables which are ROA and ROE and only significant for the OPM. These results are broadly consistent with other studies (eg. Shamsul Nahar Abdullah, (2004) Corporate Governance, Board Composition, CEO Duality & performance among Malaysian listed companies Vol. 4, pp 57.

From the analysis, Sharia' compliance proxies which are non-permissible according to sharia' has also been gathered to examine the relationship dependent variables in sharia' compliant are significant with the dependent variable (ROA, ROE, and OPM). The statistical result of the correlation coefficient is substantiated at 5% level ($p\text{-value} < 0.05$). The null hypothesis can be rejected at 5% level of significant. From the analysis, it indicates significance on ROA and ROE tends to sharia' compliance over the period between 2003 till 2007. From the selected companies, sharia' compliance shows the best performance for the ROA and ROE. Overall, this study had found that there is a proof stating the shariah compliant can help company achieve their organizational goals and good in firm's performance the company that did not comply with shariah compliance, they should follow the practice because it will bring a lot of benefits to the company. The key result is that sharia' compliance seems to create a higher return on profitability while the corporate governance less restrictive than sharia' compliance while the sharia' compliance requirements appear to provide better historical returns. Sharia' compliance rules and regulations must be restricted to the newly classified sharia'-compliant securities to ensure the better performance and protect stakeholder's interest.

However, corporate governance does not consider and allow differing sensitivities to benchmark its profitability returns. In summary, corporate governance regulators must be strict in ensuring all the companies comply with code of conduct and exercise fair treatment. Companies themselves should take own initiative to comply or make continuous improvements on what their corporate governance

practices. In ethical view, corporate governance has a positive effect towards the company's performance.

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BM(06)

KECENDERUNGAN UMAT ISLAM TERHADAP KONSEP PEMAKANAN HALAL : KAJIAN DI UiTM PULAU PINANG

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ABSTRAK

Halal dan haram adalah garis pemisah penggunaan sesuatu produk dalam syariat Islam. Kemajuan dan perubahan persekitaran tidak mempengaruhi prinsip-prinsip halal haram yang telah digariskan oleh Islam. Tiada sesiapa berhak mengubah ketentuan yang telah ditentukan. Setiap individu wajib memastikan aspek halal dan haram dalam pemakanan mereka. Banyak ayat al-Qur'an dan al-Sunnah menjelaskan isu-isu berkaitan halal dan haram. Ia menjadi pengukur tahap keimanan seseorang. Pengharaman sesuatu perkara kerana sifat negatif yang ada padanya melibatkan kemerbahayaan kepada individu dan juga masyarakat. Pelanggaran terhadap peraturan-peraturan ini akan menimbulkan implikasi negatif kepada masyarakat secara umumnya. Islam turut menggariskan beberapa etika berkaitan penghasilan dan penggunaan sesuatu produk. Makanan memberi kesan kepada perkembangan fizikal dan spiritual manusia. Anak-anak yang saleh terhasil melalui pemakanan yang halal. Bagi tujuan tersebut, ibubapa amat berperanan dalam menentukan proses pemakanan anak-anak mereka. Kajian ini bertujuan mengenalpasti kecenderungan staf UiTM Pulau Pinang yang sudah berumahtangga terhadap pemakanan dalam Islam, pemakanan halal dan kesan pemakanan terhadap anak-anak mereka .

Kata kunci: makanan halal, sikap ibubapa

PENDAHULUAN

Memelihara jiwa manusia adalah antara perkara yang dijamin oleh Syariat Islam. Manusia dilarang memusnahkan kehidupan diri sendiri dan juga orang lain. Pemeliharaan jiwa berlaku melalui beberapa keperluan yang antaranya adalah pemakanan. Manusia memerlukan makanan dan minuman untuk meneruskan kehidupan. Justeru kita melihat manusia menumpukan sebahagian besar usaha seharian mereka untuk memenuhi keperluan tersebut. Kehidupan manusia dilingkari tuntutan bagi memenuhi keperluan makan dan minum. Syariat Islam mengiktiraf usaha tersebut dengan meletakkan beberapa garis panduan tertentu. Ia diterjemahkan melalui konsep halal, haram dan syubhah. Halal bermaksud dibenar atau dibolehkan, haram bererti ditegah atau dilarang dan syubhah membawa maksud diragui sama ada ianya halal atau haram.

Umat Islam diminta memastikan segala tindakan mereka jauh daripada perkara-perkara yang diharamkan dan yang menimbulkan syubhat. Selain fizikal, makanan turut mempengaruhi perkembangan spiritual manusia. Atas asas tersebut Islam memberi penekanan agar segala perlakuan manusia mematuhi kehendak halal yang dikehendaki. Sewajibnya status halal menjadi kriteria utama dalam menentukan sesuatu tindakan atau usaha termasuk juga soal pemakanan. Makanan yang halal dan baik akan mempengaruhi pemakannya untuk berbuat kebaikan. Untuk membentuk anak-anak yang baik, pemakanan perlu diberi perhatian. Dalam kehidupan berkeluarga, sudah tentulah ibubapa merupakan golongan penting bagi memastikan kedudukan halal pemakanan ini dilaksanakan. Kajian

terhadap kecenderungan staf UiTM Pulau Pinang adalah relevan dengan kedudukannya sebagai sebuah institusi akademik Bumiputera yang majoriti staf dan pelajarinya beragama Islam. Kedudukan minat dan kecenderungan mereka terhadap pemakanan halal akan mempengaruhi warga lain di UiTM Pulau Pinang.

PEMAKANAN HALAL

Firman Allah S.W.T. dalam surah al-Baqarah ayat 168 yang bermaksud: “*Wahai sekalian manusia! makanlah dari apa yang ada di bumi yang halal lagi baik, dan janganlah kamu ikut jejak langkah syaitan; kerana sesungguhnya syaitan itu ialah musuh yang terang nyata bagi kamu.*”

Ungkapan *halalan tayyiban* disebut dalam ayat di atas berkait rapat dengan soal pemakanan yang menjadi keperluan harian manusia. Pemakanan yang baik menurut Islam bukan sekadar berkhasiat tetapi mematuhi kriteria halal yang ditetapkan. Ia disebut sebagai *halalan tayyiban* dengan maksud bukan sekadar halal sahaja tetapi baik menurut perspektif Islam. *Halalan tayyiban* bermaksud makanan itu halal, bersih serta selamat untuk dimakan. Situasi ini secara tidak langsung menampakkan betapa telitinya ajaran Islam dalam mendidik para penganutnya. Membentuk umat yang patuh bukan hanya sekadar penekanan kepada mematuhi peraturan malahan terhadap segala perlakuan yang memberi kesan terhadap individu tersebut. Dalam ayat di atas digambarkan manusia yang gagal mematuhi prinsip halal Islam dalam pemakanan sebagai menuruti jejak langkah syaitan. Syaitan selaku musuh yang nyata akan mudah mempengaruhi manusia yang tidak memberi perhatian dalam soal pemakanan halal. Ia berusaha mempengaruhi manusia agar mengharamkan kebaikan-kebaikan yang telah dihalalkan oleh Allah S.W.T. dan menjerumuskan manusia ke dalam kesesatan. (Yusuf Qardhawi, 1984:53) Keadaan ini menunjukkan betapa Islam memberi penekanan dalam soal pemakanan halal. Pemilihan makanan halal sebagai adalah satu tanda ketundukan dan kepatuhan kepada Allah S.W.T. Memilih yang haram bermakna bersekutu dengan syaitan dan menentang hukum Allah S.W.T.

Konsep *halalan tayyiban* ini juga turut mengambil kira sumber kewangan bagi mendapatkan makanan tersebut. Selain itu kaedah penyediaannya meliputi penggunaan peralatan, cara memproses, penyimpanan, pembungkusan dan kawasan persekitaran hendaklah bebas daripada najis serta mematuhi tahap amalan kebersihan yang ditetapkan. Adalah satu kesilapan jika menganggap makanan halal sekadar ianya bukan binatang yang diharamkan atau binatang tersebut disembelih secara Islam. Salah tanggapan ini menjadi penyebab tindakan sesetengah ibubapa yang tidak mempedulikan persoalan kebersihan ketika mengunjungi premis perniagaan umat Islam. Mereka tidak mempedulikan keadaan jijik dan kotor di premis perniagaan tersebut untuk menjamu selera bersama anak-anak. Keadaan ini sudah tentunya bercanggah dengan prinsip *halalan tayyiban* yang wajib dipatuhi oleh umat Islam.

Pengharaman sesuatu benda kerana masalah yang terdapat padanya dan bukan satu bentuk penderaan Allah S.W.T. terhadap umat Islam. Yang diharamkan adalah sesuatu yang kotor dan keji. Umat Islam dianggap termasuk golongan yang berjaya jika mereka menjauhi segala kekejian tersebut. Allah S.W.T. menghalalkan segala perkara yang baik dan mengharamkan yang kotor sebagaimana firmanNya dalam surah al-A`raf ayat 157 yang bermaksud: “*Iaitu orang-orang yang mengikut*

Rasulullah (Muhammad s.a.w) Nabi yang ummi, yang mereka dapati tertulis (namanya dan sifat-sifatnya) di dalam Taurat dan Injil yang ada di sisi mereka. Dia menyuruh mereka dengan perkara-perkara yang baik, dan melarang mereka daripada melakukan perkara-perkara yang keji; dan Dia menghalalkan bagi mereka segala benda yang baik, dan mengharamkan kepada mereka segala benda yang buruk; dan Dia juga menghapuskan dari mereka beban-beban dan belunggu-belunggu yang ada pada mereka. Maka orang-orang yang beriman kepadanya, dan memuliakannya, juga menolongnya, serta mengikut nur (cahaya) yang diturunkan kepadanya (al-Quran), mereka itulah orang-orang yang berjaya.”

Untuk itu umat Islam wajib memastikan segala tindakan mereka selari dengan konsep halal dalam Islam ketika mencari rezeki. Berusaha mencari pemakanan halal ini adalah merupakan satu tuntutan sebagaimana tuntutan kefardhuan lain. Adalah merupakan satu kesalahan dan dosa bagi umat Islam yang mengabaikan tuntutan ini. Rasulullah S.A.W. bersabda yang bermaksud: *“Bahawa mencari rezeki yang halal itu adalah wajib selepas perkara-perkara fardhu yang lain.”* (Riwayat al-Baihaqi)

Secara ringkasnya dapat difahami pemakanan halal sebagai pemakanan yang dibenarkan atau tidak dilarang dalam Islam. Pemakanan tersebut adalah berasaskan kepada kriteria-kriteria berikut: (http://www.halal.gov.my/corporate.php?ID=109&parent_id=91)

- a) bukanlah terdiri daripada atau mengandungi apa-apa bahagian atau benda dari binatang yang orang Islam dilarang oleh Hukum Syarak memakannya atau yang tidak disembelih mengikut Hukum Syarak;
- b) tidaklah mengandungi apa-apa benda yang dihukum sebagai najis mengikut Hukum Syarak;
- c) tidak disedia, diproses atau dikilang dengan menggunakan apa-apa alat yang tidak bebas dari benda-benda najis mengikut Hukum Syarak; dan
- d) tidaklah dalam masa menyedia, memproses atau menyimpannya itu bersentuhan atau berdekatan dengan apa-apa makanan yang tidak memenuhi kehendak-kehendak perenggan (a), (b) atau (c) atau apa-apa benda yang dihukum sebagai najis mengikut Hukum Syarak.

Kedudukan kita dalam sebuah negara yang berkongsi kehidupan dengan masyarakat Islam menuntut agar lebih prihatin dalam memilih pemakanan halal. Dalam soal penyediaan makanan terdapat beberapa perkara yang perlu diberi perhatian iaitu: (<http://www.islam.gov.my/e-rujukan/lihat.php?jakim=2090>)

- 1) Punca makanan tersebut iaitu seperti daging yang digunakan. Kebanyakan masyarakat bukan Islam menganggap hanya khinzir makanan yang haram dalam Islam tetapi mereka perlu dijelaskan tentang konsep binatang yang haram dimakan dalam Islam seperti binatang yang bertaring serta binatang yang hidup dua alam dan binatang yang jijik seperti cicak dan sebagainya.
- 2) Seterusnya ialah kaedah penyembelihan haiwan. Masyarakat bukan Islam tidak tahu konsep penyembelihan haiwan dalam Islam. Lebih menakutkan adalah sekiranya mereka

sendiri yang menyembelih haiwan tersebut dan menjual di pasaran terbuka. Sedangkan antara syarat penyembelihan dalam Islam adalah penyembelih mestilah orang Islam. Selain itu, peniaga makanan bukan Islam juga perlu memastikan haiwan yang mereka beli di pasaran dibeli daripada peniaga Islam atau dari syarikat penyembelihan yang mendapat pengiktirafan halal oleh badan bertanggungjawab.

- 3) Mereka juga perlu dijelaskan tentang cara pengurusan makanan dan pemprosesan sesuatu bahan makanan. Adakah tempat untuk mereka proses terhindar dari sebarang najis. Adakah tempat penyimpanan makanan tersebut bercampur dengan bahan-bahan yang haram disisi Islam. Begitu juga dari segi pengangkutan. Adakah barang makanan tersebut dibawa dengan pengangkutan yang juga memuatkan bahan makanan yang haram disisi Islam seperti daging khinzir yang dicampur dengan ayam dalam sebuah lori.
- 4) Aspek seterusnya yang perlu diberi perhatian adalah dari segi ramuan dalam bahan makanan. Sebagai contoh bahan makanan yang dicampur dengan alkohol, minyak dari lemak khinzir dan sebagainya. Malah kedapatan restoran yang memaparkan lambang halal tetapi bahan makanannya dicampur dengan ramuan seperti alkohol dan sebagainya. Ini sering berlaku dikebanyakan restoran-restoran dan hotel yang menggunakan khidmat chef dari luar negara.
- 5) Seterusnya dari segi peralatan yang digunakan untuk memasak dan memproses sesuatu bahan makanan. Pihak berkenaan perlu memastikan bahawa peralatan seperti kualiti, periuk, pisau dan sebagainya tidak pernah digunakan untuk memasak bahan makanan yang haram mengikut syariat Islam. Kita tidak mahu kualiti yang pernah digunakan untuk memasak daging khinzir digunakan pula untuk memasak makanan bagi orang Islam pula.
- 6) Perkara terakhir yang perlu diberi perhatian adalah dari segi penjagaan kebersihan makanan dari benda-benda yang dianggap mengotorkan dalam Islam dan tidak suci. Mungkin pelanggan tidak menyangka restoran yang memaparkan logo halal dan mempunyai persekitaran yang bersih di luar tetapi di bahagian dapur berada dalam keadaan yang sangat kotor dan tidak memenuhi ciri-ciri konsep halal dalam Islam.

MENJAUHI SYUBHAT

Firman Allah S.W.T. dalam surah al-An`am ayat 119 yang bermaksud: *“.....padahal Allah telah menerangkan satu persatu kepada kamu apa yang diharamkanNya atas kamu, kecuali apa yang kamu terpaksa memakannya.....”*

Daripada al-Hasan bin Ali r.a. an-huma katanya, aku telah menghafaz sabda Nabi s.a.w. iaitu: *“Tinggalkan apa yang membimbangkan kamu kepada apa yang tidak membimbangkan kamu”*.
Riwayat al-Tirmizi

Allah S.W.T. menerangkan secara jelas perkara-perkara yang diharamkan. Umat Islam ditegah melakukannya kecuali diberi kelonggaran ketika keadaan darurat. Keadaan darurat dapat diketahui dengan merujuk kepada kitab-kitab fekah yang membicarakan persoalan tersebut. Selain halal dan

haram terdapat juga perbincangan mengenai permasalahan syubhat. Syubhat bermaksud persoalan yang tidak jelas iaitu di antara halal dan haram. Keadaan ini berlaku kemungkinannya kerana dalil yang tidak jelas atau tidak jelasnya cara untuk menetapkan dalil yang ada terhadap sesuatu peristiwa. (Yusuf Qardhawi, 1984:42). Ia berasaskan kepada sabda Rasulullah S.A.W. yang bermaksud: *"Halal itu jelas dan haram juga jelas dan diantara keduanya terdapat beberapa perkara yang syubhat (belum jelas), ramai manusia tidak mengetahuinya sama ada ianya halal atau haram? Sesiapa yang menjauhinya atas asas hendak membersihkan agama dan kehormatannya, maka dia selamat; dan barangsiapa mengerjakan sedikitpun daripadanya, hampir-hampir dia akan jatuh ke dalam haram sebagaimana pengembala kambing berdekatan kawasan larangan, dia hampir-hampir akan jatuh kepadanya. Ingatlah bahawa setiap raja mempunyai daerah larangan. Ingatlah bahawa kawasan larangan Allah S.W.T. adalah setiap yang diharamkanNya."* (riwayat al-Bukhari, Muslim dan al-Tirmizi - lafaz al-Tirmizi)

Kepatuhan dengan menjauhi yang syubhat akan menyelamatkan umat Islam daripada terjerumus ke dalam perkara yang haram. Justeru ianya juga bermaksud perkara yang diragui juga perlu dijauhi.

PERANAN IBUBAPA

Bagi mengelakkan diri daripada terjebak dengan yang haram, umat Islam sepatutnya menjauhi perkara-perkara yang meragukan. Dalam suasana industri makanan halal di Malaysia dikuasai oleh bukan Islam, mengambil sikap berhati-hati adalah satu keperluan yang mendesak. Berdasarkan statistik permohonan sijil halal Jabatan Kemajuan Islam Malaysia (JAKIM) didapati 95 peratus permohonan adalah terdiri daripada syarikat-syarikat yang bukan Islam. (<http://www.islam.gov.my/khutbahjakim/>). Statistik yang menunjukkan penguasaan industri makanan halal oleh kalangan bukan Islam sepatutnya menjadi cabaran kepada umat Islam untuk menceburinya. Kejayaan tersebut banyak bergantung kepada kesedaran penggunaannya dalam kalangan umat Islam.

Golongan yang berpotensi mempengaruhi adalah kalangan ibubapa. Pendidikan sejak kecil terhadap anak-anak akan mempengaruhi kecenderungan mereka setelah dewasa. Anak-anak akan terikut dengan kebiasaan yang diamalkan oleh ibubapa mereka. Pengaruh ibubapa amat besar dalam membentuk kehidupan anak-anak. Rasulullah S.A.W. bersabda yang bermaksud: *"Setiap anak dilahirkan menurut fitrah (ciptaan asli). Kedua ibu bapanya yang menyebabkan anak itu beragama Yahudi dan Nasrani. Sebagaimana binatang ternak dilahirkan, adakah kamu dapati yang telah dipotong (dilubangi) hidungnya sehingga kamu tidak perlu lagi memotongnya?" Mereka bertanya lagi: "Ya Rasulullah! Bagaimana pendapat engkau tentang anak yang meninggal di waktu kecil?" Jawab Nabi: "Allah lebih mengetahui apa yang mereka kerjakan."* (Riwayat al-Bukhari)

Ibubapa berperanan mendidik anak-anak memakan makanan yang halal. Ianya sudah tentu bermula dengan kesedaran daripada ibubapa sendiri khususnya kaedah pencarian pendapatan bagi mendapatkan makanan tersebut. Kita sendiri yang memilih jalan tersebut sama ada mensyukuri dengan mentaati perintah Allah atau mengkufurinya dengan tidak mengikut apa yang diperintahkan oleh Allah. Firman Allah dalam surah al-Dahr ayat 3 yang bermaksud: *"Kerana keadaan itu tidak*

mencukupi, maka) Sesungguhnya Kami telah menunjukkan kepadanya (melalui akal dan Rasul) akan jalan-jalan (yang benar dan Yang salah; maka terserahlah kepadaNya) sama ada ia bersyukur (dengan beriman dan taat), ataupun ia berlaku kufur (dengan mengingkari kebenaran atau menderhaka).”

Anak-anak yang baik dan taat berpunca daripada rezeki yang halal. Umat Islam diminta mencari rezeki yang halal dan mengelakkan diri daripada terlibat dengan perkara-perkara haram (maksiat). Sumber pendapatan hendaklah diusahakan daripada sumber yang halal. Rasulullah s.a.w bersabda yang maksudnya: *“Sesungguhnya roh al-Qudus telah datang kepada aku memberitahu bahawa seseorang itu tidak akan mati selagi tidak sempurna rezeki Allah S.W.T. kepadanya. Maka takutlah kepada Allah S.W.T. dan berusaha dengan baik; dan lambatnya datang sesuatu rezeki itu janganlah menjadi pendorong kepada kamu untuk melakukan usaha mencari rezeki berbentuk maksiat kerana sesungguhnya rezeki Allah S.W.T. tidak akan dapat diperolehi melainkan dengan cara ketaatan.”* (Riwayat Ibn Majah dan al-Tabrani)

Fokus perbincangan dalam kertas ini adalah untuk melihat tahap kecenderungan staf UiTM Pulau Pinang yang telah berumahtangga terhadap pemakanan halal. Sebanyak 53 borang soal selidik telah dikembalikan oleh responden yang terdiri daripada 18 lelaki dan 35 perempuan. Pelbagai aspek berkaitan halal, haram dan syubhat diutarakan dalam borang soal selidik yang diedar kepada responden.

KEPATUHAN TERHADAP AJARAN ISLAM

Firman Allah S.W.T. dalam surah al-`Ankabut ayat 45 yang bermaksud: *“Bacalah serta Ikutlah (Wahai Muhammad) akan apa yang diwahyukan kepadamu dari al-Quran, dan dirikanlah sembahyang (dengan tekun); Sesungguhnya solat itu mencegah dari perbuatan yang keji dan mungkar; dan sesungguhnya mengingati Allah adalah lebih besar (faedahnya dan kesannya); dan (ingatlah) Allah mengetahui akan apa yang kamu kerjakan.”*

Adalah menjadi kewajipan umat Islam mematuhi seluruh keseluruhan ajaran Islam. Kepatuhan suami dan isteri terhadap ajaran Islam akan mempengaruhi pembentukan ahli keluarga mereka. Seramai 17 responden iaitu 32.1% mengakui sangat patuh terhadap ajaran Islam, 32 responden iaitu 60.4% patuh dan 4 responden iaitu 7.5% mematuhi secara sederhana. Mengenai persoalan hukum halal dan haram pula, 30 responden iaitu 56.6% menjawab sangat mematuhi diikuti 22 responden iaitu 41.5% mematuhi dan 1 responden iaitu 1.9% secara sederhana mematuhi. Bagi persoalan kepatuhan pasangan masing-masing terhadap ajaran Islam, 18 responden iaitu 34% menyatakan pasangan mereka sangat mematuhi, 31 responden iaitu 58.5% patuh dan 4 responden iaitu 7.5% menyatakan pasangan mereka secara sederhana mematuhi.

Mengenai penunaian solat pula, seramai 38 responden iaitu 71.7% menjawab mereka menunaikannya pada setiap waktu. 10 responden iaitu 18.9% kerap menunaikannya. 4 responden iaitu 7.5% menunaikannya secara sederhana. Didapati 1 responden iaitu 1.9% tidak menjawabnya.

Mengenai pasangan masing-masing pula, 36 responden iaitu 67.9% menyatakan pasangan mereka menunaikannya setiap waktu, 10 responden iaitu 18.9% kerap menunaikannya dan 5 responden iaitu 9.4% secara sederhana menunaikannya. 2 responden iaitu 3.8% tidak menjawabnya. Bagi soalan penunaian solat ketika kurang sihat, 31 responden iaitu 58.5% kekal menunaikannya setiap waktu, 12 responden iaitu 22.6% menyatakan kerap menunaikannya dan 8 responden iaitu 15.1% menjawab secara sederhana.

Hasil maklum balas ini, dapat dirumuskan majoriti responden mematuhi ajaran Islam, hukum halal dan haram serta menunaikan solat (walaupun ketika tidak sihat) yang terkandung dalam ajaran Islam. Kepatuhan ini secara majoriti turut dikongsi bersama pasangan masing-masing. Namun usaha perlu dilakukan bagi memperbaiki keputusan sebaliknya walaupun terjumlah dalam peratusan yang kecil. Pengabaian solat akan menyukarkan seseorang individu untuk patuh kepada peraturan Islam yang lainnya. Semua pihak wajar berusaha membantu bagi mengatasi permasalahan ini agar ianya tidak membarah dalam masyarakat.

TAHAP PENGETAHUAN KONSEP HALAL DAN HARAM

Proses untuk memastikan kepenggunaan produk halal adalah bergantung kepada kefahaman pengguna tentang isu tersebut. Agak sukar untuk pengguna memastikan mereka akan menggunakan produk halal jika konsep halal dan haram itu sendiri tidak difahami sepenuhnya. Bagi persoalan tahap pengetahuan responden tentang konsep halal dan haram dalam Islam, hanya 10 responden iaitu 18.9% menjawab memiliki tahap pengetahuan yang sangat banyak, 28 responden iaitu 52.8% menjawab banyak, 13 responden iaitu 24.5% sederhana dan 2 responden iaitu 3.8% menjawab mereka memiliki pengetahuan yang sangat sedikit berkaitan konsep halal dan haram. Mengenai tahap pengetahuan tentang sumber, ramuan, pemprosesan dan pengeluaran makanan pula, 3 responden iaitu 5.7% menjawab tahap pengetahuan mereka sangat banyak, 23 responden iaitu 43.4% menjawab banyak, 20 responden iaitu 37.7% mengetahui secara sederhana dan 7 responden iaitu 13.2% mengakui sangat sedikit pengetahuan mereka.

SIKAP KETIKA MEMBELI DAN MEMAKAN

Daripada Anas r.a bahawasanya Nabi s.a.w. telah terjumpa sebiji buah kurma di tengah jalan lalu Baginda bersabda: *“Kalaulah aku tidak takut bahawa kurma ini termasuk daripada benda-benda sedekah, nescaya aku akan memakannya”*. – riwayat Bukhari dan Muslim

Kehalalan produk berasaskan daging haiwan seperti lembu, kambing dan seumpamanya bergantung kepada kaedah penyembelihan dan pemrosesannya. Justeru umat Islam wajar mengambil sikap berhati-hati ketika berurusan dengan penggunaan produk-produk berasaskan daging haiwan ini. Namun agak malang tidak semua umat Islam mengambil sikap berhati-hati dalam hal ini. Berdasarkan kajian yang dijalankan, majoriti responden mengambil sikap berhati-hati ketika membeli dan memakan produk berasaskan daging. 35 responden iaitu 66% menyatakan mereka setiap kali akan berhati-hati dalam hal ini. 9 responden iaitu 17% menyatakan mereka kerap berhati-hati, 6 responden iaitu 11.3% secara sederhana berhati-hati dan 2 responden iaitu 3.8% mengakui kadangkala mereka berhati-hati. 1

responden iaitu 1.9% menyatakan tidak pernah berhati-hati ketika membeli atau memakan produk berasaskan daging.

Selain barangan tempatan, terdapat juga dalam pasaran kita produk yang diimport dari luar negara. Kajian menunjukkan 32 responden iaitu 60.4% sentiasa berhati-hati pada setiap kali membeli atau memakan produk yang diimport. 12 responden iaitu 22.6% kerap berhati-hati, 4 responden iaitu 7.5% mengambil sikap sederhana, 4 responden iaitu 7.5% juga kadangkala berhati-hati dan 1 responden iaitu 1.9% tidak pernah berhati-hati dalam permasalahan ini. Bagi produk yang dimasak atau dihasilkan oleh bukan Islam, 31 responden iaitu 58.5% menjawab mereka setiap kali akan berhati-hati ketika berhadapan dengannya, 11 responden iaitu 20.8% kerap berhati-hati, 4 responden iaitu 7.5% bersikap sederhana, 1 responden iaitu 1.9% kadangkala berhati-hati dan 6 responden iaitu 11.3% tidak pernah mempedulikannya. Jumlah yang tidak mengambil sikap sentiasa berhati-hati agak besar iaitu lebih kurang 40%. Situasi ini perlu diperbaiki dengan menimbulkan kesedaran tentang kesan pemakanan terhadap pemakannya.

PEMBELIAN BERASASKAN PENELITIAN

Firman Allah S.W.T. dalam surah al-An`am ayat 119 yang bermaksud: *“Dan tidak ada sebab bagi kamu, (yang menjadikan) kamu tidak mahu makan dari (sembelihan binatang-binatang halal) yang disebut nama Allah ketika menyembelihnya, padahal Allah telah menerangkan satu persatu kepada kamu apa yang diharamkanNya atas kamu, kecuali apa yang kamu terpaksa memakannya? Dan sesungguhnya kebanyakan manusia hendak menyesatkan dengan hawa nafsu mereka dengan tidak berdasarkan pengetahuan. Sesungguhnya Tuhanmu, Dia lah yang lebih mengetahui akan orang-orang yang melampaui batas.”*

Sebelum membeli sesuatu produk, status kehalalannya perlu diberi perhatian. Pengguna antaranya hendaklah terlebih dahulu meneliti status pengesahan halalnya. Melalui kajian yang dibuat, didapati responden agak teliti dalam hal ini. 39 responden iaitu 73.6% menjawab mereka akan meneliti status pengesahan halal sesuatu produk sebelum membelinya. 13 responden iaitu 24.5% kerap menelitinya dan 1 responden iaitu 1.9% secara sederhana akan menelitinya.

Majoriti mereka juga terlebih dahulu akan mengenalpasti autoriti badan Islam yang membuat pengesahan halal. Sikap ini wajar dipuji apabila kita dapati berlakunya pelbagai bentuk penipuan pengesahan halal dalam pasaran kini. 36 responden iaitu 67.9% menyatakan mereka akan mengenalpasti autoriti badan Islam terlebih dahulu setiap kali membeli sesuatu produk makanan, 9 responden iaitu 17% menyatakan mereka kerap berbuat demikian, 6 responden iaitu 11.3% bersikap sederhana dalam soal ini, 1 responden iaitu 1.9% kadangkala mengenalpastinya dan 1 responden iaitu 1.9% tidak pernah mempedulikannya.

Persoalan mengenai kebersihan premis jualan turut dikemukakan. Responden ditanya tentang sikap mereka terhadap kebersihan premis jualan ketika membeli sesuatu produk makanan. 26 responden iaitu 49.1% menjawab mereka setiap kali akan memastikannya sebelum membeli sesuatu produk makanan,

19 responden iaitu 35.8% menjawab kerap dan 8 responden iaitu 15.1% secara sederhana melakukannya. Kajian menunjukkan pemastian kebersihan premis sebelum membeli sesuatu produk makanan masih belum menjadi sikap yang menyeluruh dalam kalangan responden.

KEFAHAMAN RESPONDEN TENTANG MAKANAN HALAL

Sabda Rasulullah S.A.W. yang bermaksud: “Halal itu jelas dan haram juga jelas dan diantara keduanya terdapat beberapa perkara yang syubhat (belum jelas), ramai manusia tidak mengetahuinya sama ada ianya halal atau haram?” (riwayat al-Bukhari, Muslim dan al-Tirmizi - lafaz al-Tirmizi)

Kenyataan makanan yang halal adalah diperolehi daripada sumber yang halal dan jelas diakui oleh 45 responden iaitu 84.9% sebagai sangat benar, 6 responden iaitu 11.3% menyatakan ianya benar dan 1 responden iaitu 1.9% menjawab tidak pasti. 1 responden iaitu 1.9% tidak menjawabnya. Bagi kenyataan ianya bermaksud tidak menggunakan bahan yang haram, 42 responden iaitu 79.2% menjawab sangat benar dan 10 responden iaitu 18.9% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Makanan halal bermaksud bersih dan suci daripada najis diakui sangat benar oleh 42 responden iaitu 79.2%, 9 responden iaitu 17% mengakui benar dan 1 responden iaitu 1.9% tidak pasti. 1 responden iaitu 1.9% tidak menjawabnya.

Bagi soalan makanan yang halal adalah tidak menggunakan peralatan memproses benda haram dan najis, 43 responden iaitu 81.1% menyatakan sangat benar, 6 responden iaitu 11.3% menyatakan benar, 1 responden iaitu 1.9% menjawab tidak pasti dan 2 responden iaitu 3.8% menyatakan tidak benar. 1 responden iaitu 1.9% tidak menjawabnya. Makanan yang halal juga bukan makanan yang disimpan atau bersentuhan dengan benda yang haram dan najis. 42 responden iaitu 79.2% mengakuinya sebagai sangat benar, 8 responden iaitu 15.1% menjawab benar, 1 responden iaitu 1.9% menjawab tidak pasti dan 1 responden iaitu 1.9% menjawab tidak benar. 1 responden iaitu 1.9% tidak menjawabnya. Bagi kenyataan makanan yang halal terdiri daripada makanan yang berkhasiat, bersih dan tidak memudaratkan kesihatan, 38 responden iaitu 71.7% menerimanya sebagai sangat benar, 12 responden iaitu 22.6% menyatakan benar, 1 responden iaitu 1.9% menjawab tidak pasti dan 1 responden iaitu 1.9% menjawab sangat tidak benar. 1 responden iaitu 1.9% tidak menjawabnya.

PENYEDIAAN MAKANAN YANG HALAL DAN BAIK UNTUK ANAK-ANAK

Setiap ibubapa perlu memastikan segala pemikiran dan perlakuan mereka adalah selari dengan kehendak Islam. Anak-anak akan terkesan dengan apa yang dilakukan oleh ibubapa mereka. Sedari kecil anak-anak perlu didedahkan dengan persekitaran halal dan mendidik mereka menjauhi segala bentuk yang haram dan juga syubhat. Didikan ini akan meninggalkan kesan hingga ianya sebatu dalam jiwa anak-anak.

Melalui persoalan yang dikemukakan berkaitan peranan ibubapa menyediakan makanan daripada sumber yang halal untuk ahli keluarganya, 48 responden iaitu 90.6% menjawab sangat benar dan 4 responden iaitu 7.5% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Kajian ini memperlihatkan kesedaran responden tentang peranan yang wajar mereka lakukan iaitu menyediakan

makanan daripada sumber yang halal untuk ahli keluarga. Kesemua mereka bersetuju dengannya malahan majoriti menunjukkan kesungguhan masing-masing.

Ibubapa juga berperanan menyediakan makanan yang bersih, baik dan tidak memudaratkan kesihatan ahli keluarganya. Dalam hal ini 48 responden iaitu 90.6% menjawab sangat benar dan 4 responden iaitu 7.5% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Respon ini dapat membantu dalam mewujudkan kesedaran terhadap keperluan makanan yang halal lagi baik sebagaimana yang dituntut oleh syariat Islam.

Mereka turut berperanan memastikan anak-anak sentiasa terpelihara akhlakunya dan melaksanakan segala perintah Allah S.W.T. 48 responden iaitu 90.6% menjawab sangat benar dan 4 responden iaitu 7.5% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Tanggungjawab inilah yang wajib dilaksanakan oleh semua ibubapa muslim selaras dengan firman dalam surah al-A`raf ayat 189 yang bermaksud: *"Dia lah (Allah) yang menciptakan kamu semua dari (hakikat) diri yang satu, dan Dia mengadakan daripada hakikat itu pasangannya (diri suami isteri), untuk bersenang hati dan hidup mesra yang satu kepada yang lain. Ketika suami mencampuri isterinya, mengandunglah dia dengan kandungan yang ringan, serta teruslah dia dengan keadaan itu (ke suatu waktu). Kemudian ketika dia merasa berat (dan menaruh bimbang) berdoalah suami isteri itu kepada Tuhan mereka (dengan berkata):" Sesungguhnya jika Engkau (Wahai Tuhan kami) mengurniakan kami nikmat yang baik, tentulah kami menjadi orang-orang yang bersyukur"*.

KESAN MEMAKAN MAKANAN YANG HALAL DAN BAIK

Ajaran Islam memberi penekanan terhadap pemakanan halal kerana ia juga memberi kesan terhadap perkembangan spiritual manusia. Makanan bukan setakat mempengaruhi pembesaran fizikal manusia semata-mata. Manusia tidak akan dapat memasuki syurga jika kehidupannya diselaputi sumber yang haram. Daripada Jabir bin Abdullah RA bahawa Rasulullah SAW bersabda yang maksudnya: *"Wahai Kaab bin 'Ujrah sesungguhnya seseorang tidak akan masuk syurga jika terdapat daging yang tumbuh di dalam tubuh badannya daripada sumber yang haram."* (Riwayat Ad-Darimi)

Pemakanan halal amat jelas turut mempengaruhi hubungan manusia dengan Allah S.W.T. Allah S.W.T. tidak menerima doa individu yang terlibat dengan pemakanan yang diharamkan. Ia berasaskan kepada hadith Rasulullah S.A.W. yang bermaksud: *".....kemudian terdapat seorang lelaki yang datang daripada tempat yang jauh, rambutnya tidak terurus penuh dengan debu, dia mengangkat tangannya ke langit sambil berdoa: Ya Rab, Ya Rab (hai Tuhanku, hai Tuhanku), walhal makanannya haram, pakaiannya haram dan diberi makan dengan dengan barang yang haram pula, maka mana mungkin doanya diterima?* (Riwayat Muslim dan al-Tirmizi)

Responden diminta mengemukakan pandangan mereka tentang kesan pemakanan yang halal dan baik, antaranya makanan yang halal dan baik menjamin kesihatan fizikal dan mental anak-anak. Bagi persoalan ini, 47 responden iaitu 88.7% menjawab sangat benar dan 5 responden iaitu 9.4% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Bagi soalan makanan yang halal dan baik

menyumbang kepada perkembangan minda yang sihat pula, 48 responden iaitu 90.6% menjawab sangat benar dan 4 responden iaitu 7.5% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya.

Soalan sebaliknya iaitu makanan yang dibeli dengan sumber pendapatan yang syubhah dan haram memberi impak yang tidak baik kepada perkembangan rohani dan akhlak, 49 responden iaitu 92.5% menjawab sangat benar dan 3 responden iaitu 5.7% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Persoalan bahawa setiap makanan yang haram akan memudaratkan kesihatan mental, fizikal dan rohani pula dijawab oleh 49 responden iaitu 92.5% sebagai sangat benar dan 3 responden iaitu 5.7% sebagai benar. 1 responden iaitu 1.9% tidak menjawabnya. Makanan yang halal dan haram mempengaruhi pembentukan akhlak dan sahsiah anak-anak, 48 responden iaitu 90.6% menjawab sangat benar dan 4 responden iaitu 7.5% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Bagi penutupnya responden dikemukakan persoalan bahawa makanan yang tidak halal bukan sahaja memberi impak negatif di dunia malah balasan neraka di akhirat. 49 responden iaitu 92.5% menjawab sangat benar dan 3 responden iaitu 5.7% menjawab benar. 1 responden iaitu 1.9% tidak menjawabnya. Responden secara majoriti mengakui hakikat tersebut sesuai dengan ingatan Rasulullah S.A.W. yang bermaksud: *“Manusia yang paling dukacita di hari kiamat kelak ialah orang yang berusaha mencari harta yang tidak halal (haram), maka dia akan masuk ke dalam neraka”*. (Riwayat al-Bukhari)

PENUTUP

Peraturan halal, haram dan syubhat bukan satu bentuk penyiksaan terhadap umat Islam. Ia merupakan satu proses pembentukan rohani dan jasmani manusia agar mampu memikul amanah sebagai khalifah dan hamba Allah S.W.T. Firman Allah S.W.T. dalam surah al-Ma'idah ayat 6 yang bermaksud: *“Allah tidak mahu menjadikan kamu menanggung sesuatu kesusahan (kepayahan), tetapi Dia berkehendak membersihkan (mensucikan) kamu dan hendak menyempurnakan nikmatNya kepada kamu, supaya kamu bersyukur.”*

Kajian ini menunjukkan majoriti ibubapa muslim memahami peranan yang perlu mereka mainkan dalam membentuk anak yang saleh melalui pemakanan yang halal. Namun usaha menjana kesedaran perlu dipertingkatkan lagi agar kefahaman ini menjalar kepada keseluruhan masyarakat Islam. Pemakanan yang halal bukan sahaja melahirkan individu yang cergas malahan akan menjana ekonomi umat Islam. Usaha Malaysia untuk menjadikan negara ini sebagai hub halal dunia adalah bergantung kepada sikap umat Islam sendiri. Tanpa kesedaran kepada penggunaan produk halal, usaha ini tidak mungkin mencapai matlamat yang sepatutnya. Sokongan bukan Islam akan membantu mempercepatkan lagi proses ini. Dalam mencapai matlamat ini juga, umat Islam tidak sepatutnya mengambil sikap sebagai pengguna semata-mata. Justeru kecenderungan ibubapa dalam menanamkan kesedaran kepada penggunaan produk halal adalah antara faktor penyumbang.

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BM(07)

THE PATH TOWARDS CONVERGENCE OF MALAYSIA'S CORPORATE GOVERNANCE SYSTEM

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ABSTRACT

It is argued that Malaysia is converging towards the Anglo-Saxon corporate governance system. With the current development, it may be taken that Malaysia is slowly converging towards the outsider system. Thus, this paper seeks to determine the possibility to import different countries' regimes into another to tackle its poor governance whereby the business relationship, board culture and share ownership structures differ considerably. To demonstrate this, this paper will set out the theoretical consideration of corporate governance. It will highlight the international benchmark of corporate governance and the definition of corporate governance as adopted by Malaysia. This paper will then look into Malaysia's historical background where it will take up the Malaysia's economic policies and the implication of these policies. The third part of this paper will then look at the development of corporate governance and its reforms. Part IV of this paper highlights the concern of corporate governance as observed by various scholars internationally and look into the invocation of the concept of convergence as an alternative. This paper will finally conclude by the proposition that Malaysia has a combination of insider systems with a strong level of ownership concentration but it is now slowly converging towards the outsider system.

Keywords: *convergence, corporate governance, insider system, outsider system*

INTRODUCTION

The various literatures on the different principles of corporate governance and the possibility of convergence from one governance system to another has led to numerous research and studies thereon with the emergence of new principles. There has been great change since the Berle and Means theory of separation of ownership and control found in *The Modern Corporation and Private Property* and time and again, various studies have shown the importance of corporate governance not just in the corporation alone or any private sector but to the national economy as a whole.

In an attempt to differentiate and distinguish between each system (be it insider, outsider, family or state-based systems), one still could not find a straight line that separate each systems. Careful examination on any given systems would show an overlapping of principles from all systems.

Despite the diversity in its interpretation, one can observe that, the defined term of corporate governance seeks to answer these common questions;

- (1) what is the objective of the company³; and
- (2) what is the mechanism used in achieving those objectives.

These fundamental questions was posed by John Parkinson when he interpreted 'corporate governance' as 'the system through which those involved in the company's management are held

³ J. Parkinson (1997): 'Company Law and Stakeholder Governance', in G. Kelly, D. Kelly and A. Gamble (eds.): *Stakeholder Capitalism*, MacMillan.

accountable for their performance, with the aim of ensuring that they adhere to the company's proper objectives.'⁴

In essence, the answer to the questions posed can be regarded as the determinant factor to the approach to be undertaken.⁵

Thus, this paper will attempt to answer the questions whether convergence is possible to another system in order to tackle poor governance given the fact that each system has its distinct character. By focusing on the corporate culture in Malaysia, this paper will demonstrate that, it is not possible to invoke a total convergence of a governance system to another.

DEFINITION OF CORPORATE GOVERNANCE

The term corporate governance, has been subjected to various interpretation. The interpretations undertaken by one government will determine the government's policy on the country's corporate governance and this will be obvious in how one country views corporate governance in its country.

To this end, the Organisation for Economic Co-operation and Development (OECD) ⁶ Principles of Corporate Governance has been branded by all disciplines as the international benchmark for good governance. The definition provided therein has been widely accepted wherein the OECD ⁷ has defined corporate governance as;

*"a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined"*⁸

Looking at this comprehensive definition, one may put it simply that corporate governance is all about the mechanism used to determine the direction of a company. As in the case of Malaysia, the term has been interpreted as;

*"the process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long term shareholder value, whilst taking account the interests of other stakeholders."*⁹

⁴ J. Parkinson, Ibid.

⁵ See also J. Salacuse (2003): 'Corporate Governance, Culture and Convergence : Corporations American Style or with a European Touch?', *EBLR* 473 at page 480 wherein the writer made reference to Berle and Means test and seek any system of corporate governance to determine the objectives of the corporation .

⁶ OECD (2004): 'Principles of Corporate Governance' (Revised version of 1999), OECD, <<http://www.oecd.org/dataoecd/32/18/31557724.pdf>>, accessed on 27 April 2008.

⁷ The OECD published its first Principles of Corporate Governance in 1999 and it has since been revised in the year 2004.

⁸ OECD (2004): 'Principles of Corporate Governance' (Revised version of 1999), Ibid.

⁹ Finance Committee on Corporate Governance (1999): 'Report on Corporate Governance', February 1999.

The reason behind the difference in each country's corporate governance system could be due to the country's national policy, be it economically or politically and also its culture historically. This is demonstrated by the corporate governance system as adopted by Malaysia and the approach undertaken in respect thereto.

HISTORICAL BACKGROUND OF CORPORATE GOVERNANCE

Malaysia's Economic Policies : Influence the Corporate Culture

Historically, Malaysia's economic policies of the New Economic Policy (NEP) (1971) and the National Development Policy (NDP)¹⁰ (1991), have been the two integral policies that built the national socio-economic. These policies propel the idea of economic growth as being parallel to the country's harmony and unity between different ethnic and religious groups.

The two major tenet adopted by the country under NEP was: (1) to reduce absolute poverty irrespective of race through raising income levels and increasing employment opportunities for all Malaysians¹¹; and (2) to restructure society to correct economic imbalances so as to reduce and eventually eliminate the identification of race with economic function.¹²

As it is not the intend of this paper to embark into details on the policies, one key element that should be noted however, that, by the launched of NEP, it has been targeted for the corporate equity restructuring to be 30 : 40 : 30 in respect of the individual holdings (other Malaysians: Bumiputeras: foreigners) per cent in the context of expanding the economy by 1990.¹³

Though, positively the policies are important to public policies, the national's corporate wealth and the general improvement of Malaysia's economy, it should on the one hand be highlighted that, these factors has been said or linked to be amongst the factor causing poor governance structure in Malaysia, particularly in respect to the following:

- i. the patriarchal concentrated family ownership of companies¹⁴;
- ii. Capitalists through government patronage via NEP's policies such as privatisation by 'major conglomerates controlled by Bumiputera with close links to the political elite'¹⁵. As privatisation opportunities found its basis from the policies adopted, resentment and criticism of rent-seeking and cronyism grew more as such disbursement of privatization opportunities also strengthened the leadership's means for patronage, in

¹⁰NDP takes effect after the expiry of NEP.

¹¹Though many would dispute to say that it is designed more to benefit the ethnic Malays and bumiputera (the indigenous). See J. Sundaram (2004): 'The New Economic Policy and Inter-ethnic Relations in Malaysia', United Nations Research Institute for Social Development.

¹²www.NEP.com

¹³www.NEP.com

¹⁴OECD (2003): *White Paper on Corporate Governance in Asia*, OECD.

¹⁵J. Pascoe and S. Rachagan (2005): 'Key Developments in Corporate Law Reform in Malaysia', *Singapore Journal of Legal Studies*, 93-113.

turn encouraging competition for party and government political office and upward mobility¹⁶; and

- iii. Cross directorship, inadequate monitoring and abuse of minority shareholders' position which detracts the related party dealings.

This discriminatory tension can be seen particularly in the interethnic business coalitions with 'ethnic Malay partner securing rents for gaining access to government-determined business opportunities, and the ethnic Chinese partner with access to capital and business acumen getting the job done'¹⁷.

Implication of the government's policy

It has been argued that, Malaysia's recession in the year 1997-1998 may be due to the Asian financial crisis in 1997 and also the unregulated government's policies. It has also been suggested that a weak corporate governance system and the lack of proper observation to corporate governance may also be the cause which includes excessive debts in private sector and poor risk management by directors of the company.

After the Asian financial crisis, Malaysia starts its comprehensive review on the overall framework of corporate governance and had in 1998 formed a High Level Finance Committee on Corporate Governance giving them the task to identify and deal with the weaknesses in corporate governance, the members of which consist of representatives from the public and private bodies in the industry.¹⁸

DEVELOPMENT OF CORPORATE GOVERNANCE IN MALAYSIA

Corporate governance in Malaysia starts developing vigorously after the Asian financial crisis in 1997. Though, the initiatives for improvement of corporate governance have started since 1987,¹⁹ the year where the Federation of Public Listed Companies Bhd was published and major amendments was made to the Companies Act 1965.

It was also thereafter that Malaysia started its comprehensive review on the overall framework on corporate governance, forming High Level Finance Committee on Corporate Governance in 1998.²⁰

¹⁶ J. Sundaram, Ibid.

¹⁷ Ibid.

¹⁸ See also Z. Anwar (Ybg. Datin) (2003), 'Towards a World Class Regulatory Framework: Enhanced Transparency and Governance', Keynote Address at the Meeting of CPA Australia's International Board of Directors, Shangri-La Hotel, Kuala Lumpur, 16 August 2003, <http://www.sc.com.my/ENG/HTML/resources/speech/sp_20030816.htm>.

¹⁹ S. Susela Devi (2003): 'Corporate Governance as an Evolutionary Process : A Malaysian Perspective', in *Selected Issues in Corporate Governance: Regional and Country Experiences*, United Nations Conference on Trade and Development, New York and Geneva.

²⁰ Finance Committee on Corporate Governance, Ibid.

Summary of Legislative Framework

Realising the importance of corporate governance in the country, Malaysia have taken various steps to strengthen the national legislative framework which exist side by side with the common law rules and equity.

The most relevant statutory law that governs corporations in Malaysia is Companies Act, 1965 which is based heavily on the UK's Companies Act 1948 and Australian Uniform Companies Act 1961. The Companies Act, 1965 amongst others provide legislation to govern the formation of companies and its powers, shares and its holdings and management and administration of the companies. This paper will only focus on the one relevant within the realm of corporate governance.

Though it should be noted that most authoritative documents would be the Report of the Finance Committee on Corporate Governance and the Malaysian Code on Corporate Governance. The other soft-laws which supplements the same will be the codes of conduct and codes of best practices and also self-regulation available in Malaysia.²¹

Other statutory law which is of relevance are the Securities Commission Act 1993, Securities Industries Act, Financial Reporting Act 1997 and the Companies Regulation 1966.

The Malaysian Code on Corporate Governance is one of a self-regulation as it was thought to promote better compliance rather than the usual 'box-ticking' formalities²² would be the Malaysian Code on Corporate Governance which was first introduced in 2000²³ based on the recommendation made by the Finance Committee in which reference was made to the Hampel Report and modelled from the UK's Combined Code.

Other soft laws that provide some form of regulation within the realm of corporate governance are the Malaysian Code on Takeovers and Mergers 1998²⁴, the Code of Ethics for Directors, the Best Practices in Corporate Disclosure, the Guidelines on the Regulation of Acquisition of Assets, Mergers and Takeovers and the Listing Requirements of Bursa Malaysia²⁵.

The Companies Act 1965

It has been widely commented that the statutory reforms in improving corporate governance provisions related has been slow in Malaysia in which, the recent amendments in 2007 to the Companies Act 1965 is a great welcome. The most significant amendments that give a highlight would

²¹ Report on the Strategic Framework for the Corporate Law Reform Programme.

²² See also D. S. Shim (2006): 'Governance in the Markets: Malaysian perspective', *Journal of Financial Crime* 13 (3), 300-322.

²³ The Code was revised in 2007 principally to give particular attention to principles in regulating the board of directors and the audit committee.

²⁴ The Code replaced the earlier 1987 version, revised to enhance transparency and to protect the interest of the minority shareholders

²⁵ It regulates the stock markets in Malaysia, formerly known as Kuala Lumpur Stock Exchange, the name was change after the demutualisation process.

be the statutory codification to the directors duties of skill, care and diligence as compared to the previous common law fiduciary test.

Among the significant amendments made to the Companies Act 1965 would be the amendments to section 132 as to the duty and liability of officers. It has been the much awaited codification to the fiduciary duties of directors. Section 132 (1) of the Companies Act, 1965 is produced below highlighting the amendments made :

The old section 132(1):

‘A director shall at all times act honestly and use reasonable diligence in the discharge of the duties of his office.’²⁶

The new section 132(1):

‘A director of a company shall at all times exercise his powers for a proper purpose and in good faith in the best interest of the company.’

The change of ‘honesty’ test to ‘bona fide’ test will not only enhance the directors’ duties, but, it will also set clear the rules into Companies Act, 1965 and will give a reinforcement to the principle that the duty of a director is to the best interest of the company and not his own.²⁷

It is clear that Malaysia has been nothing but very proactive in its effort to raise the standards of the country’s corporate governance and to fill in the gap that the provisions might have as highlighted by the Finance Committee²⁸

The Malaysian Code on Corporate Governance : Not rule of form over substance

The Code, when it was first introduced, focused on the board of directors, director’s remuneration, shareholders and accountability and audit. It was initiated to create a reformed standard of corporate governance at a micro level by using a flexible, self-regulation methods as opposed to ‘black and white response engendered by statute or regulation’²⁹

The Finance Committee in proposing the approach to be undertaken in the Malaysian Code explains that the Hampel model would be most suitable for the Malaysia scene given the fact for its hybrid approach and broad principles with flexible set of rules that varies depending on each individual company’s circumstances. As the Committee further provided, not only that by going to the extremes of implementing corporate governance practice to the lacking standards in Malaysia would not

²⁶ Section 132 (1) of the Companies Act, 1965 (Act 125), as amended by A1299.

²⁷ See also J. Pascoe and S. Rachagan (2005): ‘Key Developments in Corporate Law Reform in Malaysia’, *Singapore Journal of Legal Studies*, 93-113.

²⁸ Finance Committee on Corporate Governance, *Ibid.* See also J. Pascoe and S. Rachagan, *Ibid.*, page 109

²⁹ See page 1 of the Malaysian Code on Corporate Governance by the Finance Committee on Corporate Governance, March 2000.

establish a sound approach but it is also for the fact that Malaysia supports the notion that the companies should want have the desire to have good governance system.

As pointed out by Hampel and the Finance Committee, prescriptive approach of specific disclosure of compliance leading to 'box-ticking system' would hamper the spirit of wanting to achieve the desired governance system. This will not only lead to compliance in form rather than substance but also will lead to concealed irregularities.

The Form

The Code, as thus adopted, adopts a "comply or explain" approach and provides a very extensive gave a detailed principles and practices. The Code set out 3 forms of recommendations: (1) the principles of corporate governance (2) the best practices in corporate governance; and (3) exhortations to other participants, such as the investors and auditors.

Though it is not mandatory, the compliance of the Code is mandatory to the listed companies wherein it would be govern under the Listing Requirements of Bursa Malaysia. The listed companies to this effect are required to include in their annual reports a narrative account of how they have applied the principles and best practices set out in the Code, and to identify and give reasons for areas of non-compliance, together with alternative practices adopted, if any, failure of which, Bursa Malaysia can take action against any non-disclosure.

The Code, as revised in 2007 concentrates at strengthening the roles and responsibilities of board of directors and audit committees and to ensure that they discharge their duties effectively. Amongst the amendments made are in respect of :

- (1) eligibility criteria for appointment of directors;
- (2) composition of the board of directors;
- (3) role of the nominating committee;
- (4) role of independent non-executive directors; and
- (5) composition of audit committees, the frequency of meetings, continuous trainings for audit committee members.

The Regulators and Other Agencies

Apart from the initiatives taken in respect of reforming or implementing the statutory laws, soft laws and regulations, Malaysia also recognised the importance of external control to improve corporate governance. The Finance Committee on Corporate Governance had, in its report³⁰ listed 3 major bodies involved, that is (1) auditors (2) corporate advisers; and (3) regulators.

The main principal regulator or the enforcement agencies, amongst others would be the Securities Commission, the Companies Commission of Malaysia, Bursa Malaysia Berhad and Bank Negara.

³⁰ Malaysian Finance Committee on Corporate Governance (1999): 'Report on Corporate Governance', February 1999, also known as the 'Green Book'

The auditors having been regulated under its association, the Malaysian Accounting Standards Board³¹, was given an important function of supervisory to protect the minority shareholders and for any irregularities in exercising corporate governance. It was under the new regulatory framework that a Financial Reporting Foundation³² was established and the auditors are now subjected to statutory obligation to the Securities Commission and the Companies Commission of Malaysia. Note may also need to be made to the Malaysian Institute of Accountants which assumed the authority empowered by law to manifest itself as the authoritative body regulating the accounting profession.³³

The corporate advisers as introduced by the Finance Committee are normally the merchant bankers who will be particularly important in any corporate exercise.³⁴

Other agencies that may be relevant and that have been given a significant role introduced to improve corporate governance in Malaysia would be the Malaysian Institute of Corporate Governance (MICG)³⁵, Minority Shareholders Watchdog Group (MSWG)³⁶ and also the Malaysian Institute of Integrity (IIM).³⁷

CONCERNS OF CORPORATE GOVERNANCE : CONVERGENCE AS AN ALTERNATIVE?

The various studies of comparative corporate governance have not only highlighted the distinction between each national corporate governance systems but also have identified the problems that arise thereon in an attempt to build good governance. In an attempt to solve the problems that may have arisen, consideration for convergence towards other system is inevitable. In this respect, there are many proposition made by the scholars that should be highlighted.

(1) Gilson, Ronald J. in his article, 'Globalizing Corporate Governance : Convergence of Form or Function, are of the view that, as soon as one are able to understand the governance system of the other, the competition starts. In debating which systems would be more desirable, Gilson predicts for the one which is successful at that material time.

³¹ It marked as the first statutory framework for accounting standards, setting and compliance in the region. See Z. Anwar and M. T. Kar, Ibid.

³² The Financial Reporting Foundation regulates the accounting profession and exercise oversight authority over the Malaysian Accounting Standards Board. See Z. Anwar and M.T. Kar, Ibid.

³³ See <http://www.mia.org.my/mainpage.asp>

³⁴ See also D. S. Shim, Ibid.

³⁵ Since its establishment in 1998, MICG has been as a complement to the regulators in facilitating the development of Malaysian corporations. See <http://www.micg.net/home.htm> for its establishment, mission and objectives.

³⁶ MSWG was set up to protect the rights of small investors and at the same time to improve the standard of corporate governance. Though it has been argued that MSWG has failed to achieve its purpose.

³⁷ IIM, having been established in 2004 will be the tool to enhance the integrity and ethics among the Malaysians in general. See http://www.iim.com.my/v3/st_corporate/index.php for the background of IIM.

Gilson, in his observation, argues that, the movement of governance of a given national systems is normally determined by what he called as 'the accident of history or the design of politics'³⁸ and such circumstances is referred to as the path dependency. Path dependency is thus, considered as one of the many factors that influence the movement of the corporate governance system of the country.³⁹

Gilson, in considering whether to adopt the functional or the formal convergence argues that one should only resort to formal convergence when all else fail.⁴⁰

(2). Hansmann and Kraakman, in 'The End of History for Corporate Law'⁴¹ on the other hand is of the view that despite the divergence and differences of governance system and characteristics, there appears to have a uniformed corporate governance which may converge to become a standard system. Hansmann and Kraakman of the view that convergence of the general rule of the corporations have started since 19th century ago and only details thereto that is left to be shaped.

Hansmann and Kraakman towards establishing their standard model, identified 3 possible factors; (1) the 'failure of alternative models'⁴² wherein Hansmann and Kraakman maintain that stakeholder system were based from the manager-oriented and labour-oriented model which, like the state-oriented model, are no longer applicable. The shareholder system is said to be the standard model which have become normative. (2) the 'competitive pressures of global commerce'⁴³ recognises 3 'by force' methods of logic, example and competition to determine a superior corporate governance; and (3) the 'shift of interest group influence in favour of emerging shareholder class'⁴⁴ proposing the public shareholder class as the standard model to be applied.

Hansmann and Kraakman to this effect, argued that, there have been instances that formal convergence of legal rules especially in respect to board structure, securities regulation, accounting methods and takeover rules, have been achieved.⁴⁵

(3) Bratton William W. and McCahery Joseph A., in their article, 'Comparative Corporate Governance and the Theory of the Firm : The Case Against Global Cross Reference'⁴⁶ on the other hand made a distinction between a weak convergence and a strong convergence and identified a

³⁸ R. J. Gilson (2000): 'Globalizing Corporate Governance: Convergence of Form or Function', Stanford Law and Economics Olin Working Paper No. 192; and Columbia Law and Economics Working Paper No. 174 (May)., page 7

³⁹ R. J. Gilson, Ibid. page 10

⁴⁰ Ibid.

⁴¹ H. Hansmann and R. Kraakman (2000): 'The End Of History For Corporate Law', Yale Law School Working Paper No. 235, NYU Working Paper No. 013; Harvard Law School Discussion Paper No. 280; Yale SOM Working Paper No. ICF - 00-09 (January).

⁴² H. Hansmann and R. Kraakman, Ibid., page 3

⁴³ Ibid. page 11

⁴⁴ Ibid. page 14

⁴⁵ Ibid. page 18.

⁴⁶ W. W. Bratton and J. A. McCahery (1999): 'Comparative Corporate Governance and the Theory of the Firm: The Case Against Global Cross Reference', *Columbia Journal of Transnational Law* 38 (2).

determinative factor to that effect. Bratton and McCahery also highlighted the second distinction of divisibility or indivisibility of governance system as an alternative.⁴⁷

By highlighting different proposition by the various scholars goes on to show that there have been numerous studies to determine which corporate governance system would fit the other. The tests proposed herein also dictate the importance of the determinant factor of convergence before embarking into one.

Pressure for Change and / or Convergence

There have been many studies made in respect of convergence of corporate governance system between one country and the other. Gilson in his article, 'Globalizing Corporate Governance: Convergence of Form or Function' examined the factors that will influence the convergence of corporate governance to be either formal or functional corporate governance.⁴⁸ In his article, he had highlighted 2 factors, that is, the functional adaptively and the institutional persistence or known as path dependency.⁴⁹

To that effect, he has surveyed 3 kinds of convergence; functional, formal and contractual convergence.⁵⁰ Functional convergence is when there is flexible governance to adapt to the demand for any change in circumstances without having to change its formalities. Gilson in explaining this type of convergence, have set out a number of examples such as in a case when the bank-centered system retained a capital market structure by providing funding or financing for new companies, this may be a form of convergence without going through a formal methods.

Formal convergence on the other hand, Gilson explains as when the basic structure of the governance system in force is amended by way of necessary legislative amendments.

Contractual convergence⁵¹ on the other hand depicts changes by way of contract. This type of convergence would arise in the event where there is the governance system is not flexible and where the formal convergence is not possible due to its political cost.

As such, it can be observed that, whatever the reason behind the convergence, be it functional, formally or contractual, a careful examination must be made to avoid serious problem when converge to an inefficient systems.

⁴⁷ W. W. Bratton and J. A. McCahery, *Ibid.* page 32

⁴⁸ R. J. Gilson, *Ibid.*

⁴⁹ R. J. Gilson, *Ibid.*

⁵⁰ R. J. Gilson, page 13, 34

⁵¹ See also J. C. Coffee (1999): 'The Future as History: The Prospects for Global Convergence in Corporate Governance and Its Implications' (February), Columbia Law School Center for Law and Economic Studies Working Paper No. 144, <<http://ssrn.com/abstract=142833>> or DOI: <[10.2139/ssrn.142833](https://doi.org/10.2139/ssrn.142833)>, accessed 4 March 2008.

CONCLUSION

Looking at the discussion above on the efforts undertaken by Malaysia to develop corporate governance system in Malaysia, a preliminary observation would entail that there is a convergence towards Anglo-American system despite the block holder concentrated ownership in certain corporation and the high degree of family ownership as opposed to institutional investors which highlighted the control by pyramid structure and cross holdings of shares indicates lacking in separate supervisory management function of the board.

On the other hand, the legislation and the soft-laws entails that Malaysia operates a unitary board system and practices management domination in its systems rules that provide strong shareholder rights.

Arguably, Malaysia has a combination of insider system with a strong level of family and state ownership. With the current development to the legislation and the many efforts undertaken by the government to impose outsider system into Malaysia, it may be taken that Malaysia is slowly converging towards the outsider system. However, one cannot help but wonder whether is it possible to adopt a different countries' regime into another to tackle poor governance in that country whereby the business relationship, the board culture and the share ownership differs considerably.

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BM(08)

LOCAL CUISINES IN THE MARKETING OF TOURISM DESTINATIONS: THE CASE OF KELANTAN

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ABSTRACT

This paper proposes how food can be used in the marketing activities of a tourist destination. The primary objective of this study is to address the gap in the destination marketing literature. This exploratory study used content analysis of brochures, booklets and web sites. The literature emphasizes that each destination should differentiate itself by highlighting its unique tangible and intangible products and services. The point of differentiation should be real and substantial enough to induce visitation. The findings imply that when using food in destination marketing, some expertise and knowledge are essential not only in marketing destinations but also in local cuisines as well as in socio cultural characteristics of potential tourists. The study provides discussions on how destinations can learn valuable lessons to differentiate themselves using their unique cuisines.

Keywords: *tourism, destination marketing, food*

INTRODUCTION

Today's tourist is more cultured than visitors of 20 years ago, is well travelled, is searching for new experiences, is concerned about the environment, is interested in taking part in a health or well-being lifestyle and wants to experience the local culture when he/she goes on holiday. Trend analyst, Ian Yeoman (2008) writes that food is a significant aspect of the tourist's experience of a destination, driven by the growing trends of authenticity and the need to have a high-quality experience. Food tourism shapes gastro destinations such as France, Italy and California whereas in emerging destinations such as Croatia, Vietnam and Mexico food plays an important part of the overall experience.

Food and beverage expenditures amount to one third of overall tourist expenditures of the global tourism turnover (Meler and Cerovic, 2003). Despite the importance of food as an input in the tourism sector, it continues to receive very little attention in the literature (Telfer and Wall, 1996)

Food and beverage can form one of the most important destination product portfolio and can act as either a primary or secondary trip motivator (Quan and Wang, 2004) that adds value to the image of a destination (Boniface, 2003; Boyne, Hall & Williams, 2003; du rand, Heath & Alberts , 2003; Long, 2004). Food is one of the most enjoyable activities that tourists undertake during their holiday (Ryan, 1997) and is the item that they are least likely to consider reducing expenditure to consume (Pyo, Uysal & Mclellan, 1991). Local cuisines represent a core manifestation of a destination's intangible heritage and through its consumption, tourist can gain a truly authentic cultural experience.

People are now travelling for reasons of gastronomy (Bessiere, 1998; Hall & Sharples, 2003; Long, 2004). As a result, food tourism, in its broadest sense has gained a higher profile as a pull factor in destination marketing (Boniface, 2003; Cohen & Evieli, 2004; Hall & Sharples, 2003; Hjalager & Richards, 2002).

While food is growing in importance, not all destinations capitalize on the potential opportunities it provides and not all that try to use food in their marketing activities do it effectively. Although there are numerous studies on promoting tourism destinations, the empirical evidence on how far food is used in tourism marketing is still scarce. The primary objective of this study is to address the gap in the destination marketing literature. This exploratory study investigates how Kelantan use their cuisines in their print and e-marketing activities.

LITERATURE

From a destination marketer's or the tourism industry's perspective, the tourist is a consumer and the economic and marketing significance of the tourist activity lies in its consumption and spending. However food study in the tourism social science is simply ignored or taken for granted. As Scarpato (2002) argued, within the area of cultural tourism study, art, music and history are commonly seen as the main cultural resources. Food, along with other phenomena such as religion, events, festivals and architecture are considered to be 'gray zones' of cultural tourism (Scarpato, 2002). As Hudman (1986) suggests, food has become an increasingly important element in the tourist industry and 25% of total tourist expenditure is accounted for by foods.

More and more researchers are now focusing on the role of food in culture (Hegarty & O'Mahony, 2001; Williams, 1997). Food has been regarded as not only being a basic necessity for tourist consumption but as an essential element of regional culture (Jones & Jenkins, 2002). Since food has been proven to be an important means of selling the identity and culture of a destination, food consumption is regarded as one of the important factors in the destination marketing development.

It is important to recognize that food consumption is not only a means of generating revenues for a destination, but also an important part of the tourist experience (Dittermer, 2001; Hjalager & Richards, 2002) . Although there is little literature on food in tourism, there is much that can be borrowed from the literature on foods in unusual and non-daily contexts such as restaurants (Martens & Warde, 1997; Warde & Martens, 2000) and festivals (Humphrey & Humphrey, 1991). While occasion, ambience, company and celebration bring special meanings to food consumption, these unusual context make food experience a source of pleasure and enjoyment (Humphrey & Humphrey, 1991). Similarly, tourism can be seen as an unusual context in which food consumption gains special meanings and pleasure (Hjalager & Richards, 2002). No matter whether trying different kinds of food is the main purpose for tourist to travel , food can at least provide extra opportunities for tourists to be in a more memorable and enjoyable holiday atmosphere than they expected. Gastronomy is thus seen as an important source of marketable images and experiences for the tourist.

The study by Decrop and Snelders (2005) brings a new approach to travel decision making and views it as an ongoing process with many contextual influences. They identified different types of vacationers, namely the habitual, hedonic, opportunistic, constrained and adaptable vacationer and illustrated how people under each typology may search for information and make travel decisions.

Klenosky (2002) likens travel decision making to means end theory, whereby the product or destination represents the means by which the consumers can gain the benefits they seek. Whether the destination is seen to meet these ends depends on the images and perceptions potential travelers use to form their own awareness sets (Sirakaya, Sonmez & Choi, 2002). Tourist wish to experience the exotic but only to the extent that it is non-threatening.

One available technique to create an image of 'safe exoticism' is to highlight unique tangible and intangible products and services, with local cuisines as one such potential point of differentiation (Boyne et.al., 2003). While food tourism is a relatively new field of academic enquiry, a growing body of literature suggests that trying authentic food may be the main or an important reason for travelling (Bessiere, 1998; Boniface 2003; Long, 2004; Quan & Wang, 2004) and most significantly, as an important source of visitor satisfaction (Bessiere, 1998; Ryan, 1997).

Food related tourism can allow tourists to achieve desired goals of relaxation , excitement, escapism status, education and lifestyle.(Frochot, 2003). Hu and Ritchie (1993) found that food was the fourth most important attribute in the way tourists perceived the attractiveness of a destination while Jenkins (1999) ranked food in the ninth position. Remington and Yuksel (1998) found that food was the fourth most important contributor to the satisfaction of visitors and the most important reason why tourist return to Turkey. Yuksel (2001) again found that both the first time and repeat visitor commonly regard quality of food as one of the main reasons to go back to Turkey. Studies by Enright and Newton (2005) found that food was the second most important attractor for Hong Kong, fourth for Bangkok and fifth for Singapore.

Of greater importance is the realization that tourists' buying behavior can be influenced positively towards consuming local food through active marketing. Boyne, Williams and Hall (2002) in a study in Scotland, determined that visitors who had read a guidebook were ready to spend more money on meals consisting of locally produced food, preferred eating out more often and would buy local groceries. Nichol森 and Pearce (2000) further found two food festivals in South Island of New Zealand attracted a significant number of young female tourists.

These findings suggest that images of food can be used effectively in destination promotion, although Boyne et.al.(2003) note that adopting a marketing philosophy approach to develop food related tourism is challenging. However the consensus appears to be that using food will appeal to a wide spectrum of tourists for it is evocative of cultural experiences, cultural identity, communication, and Mitchell (1990) state "food means more than eating. Food relates to issues of identity, culture, production, consumption and increasingly, issues of sustainability." Thus food should be considered explicitly and implicitly when marketing local and regional destinations.

METHODOLOGY

The purpose of this study was to analyse the use of food in the marketing of Kelantan. This study focused on three interrelated topics: (1) an analysis of the presentation of cuisines promoted in Kelantan (2) an assessment of the range and diversity of food images presented and (3) an assessment of the current role of food in marketing of Kelantan as a tourist destination.

Content analysis is an appropriate method when the phenomenon to be observed is communication, rather than behavioral or physical objects. It is defined as the objective, systematic and quantitative description of the manifest content of a communication which include observation and analysis. The unit of analysis may be words, characters, themes or topics and the marketing application involve observing and analyzing the content and message of advertisements, newspaper articles and the like.

Content analysis is high on the degree of structure (relates to specification of what is to be observed and how the measurement are to be recorded) and it is high on the degree of disguise as the data are collected “after the fact” that is after the relative advantages of observation. It permits measurement of actual behavior, no reporting bias and potential bias. Observation bias is medium for content analysis because human observer are involved and the characteristics to be observed are not that well defined. However, the observers typically do not interact with human respondent during the observation process thus lessening then degree of bias. Data analysis bias is also low because the variables are precisely defined. (Malhotra, 2007)

There is no right or wrong way of undertaking content analysis (Finn, Elliot-White & Walton, 2000; Miles & Huberman, 2002). The findings can be treated and presented in quantitative and qualitative forms (Neumann, 2003). In this study, the research findings are presented in qualitative form which is considered to be appropriate, as the objective of this exploratory study is to provide insights in an area where there is limited knowledge.

The five-stage content analysis model was used as identified by Finn et.al.(2000) and Neumann (2003). First, the aims and objectives of the research were identified. Then, in the next stage, up to date print and electronic brochures and booklets in English and Bahasa Malaysia were collected from the Tourism Information Centre, Kelantan and their respective official websites. Only materials produced officially by the tourism offices was considered. Table 1 provides details on the titles and contents of the brochures, booklets and web pages that were analysed. In the third stage the materials were analysed using frequency, intensity and space allocated for food in brochures, booklets and web pages. In the next stage , the initial results were examined and in the final stage the research findings were finalized.

List 1

- Brochures, booklets and web pages studied
- Brochures, booklets
- Kelantan Travel Insight 2008
- Kelantan Tempat Bermula Budaya Melayu
- Gelanggang Seni , Cultural Centre Kota Bharu, Kelantan
- Kelantan Malaysia
- Welcome to Kelantan Travel tips in Kelantan
- Welcome Food in Kelantan
- Web pages
- www.tic.kelantan.gov.my
- www.tourism.gov.my

FINDINGS

Kelantan is a charming destination with colorful traditions, interesting pastimes and superb handicrafts. The state also has tempting varieties of local delicacies, continental food available in major hotels while fast food can be found in the main towns.

Sustainability of the tourism industry is crucial for Kelantan what more 2008 is Visit Kelantan year. As the competitive advantage of Kelantan's tourism industry depends on a number of areas including shopping, quality of food and culture the Tourism Board invests heavily in tourism to produce materials with high production values.

The brochures identified the most popular food corner in Jalan Pekeliling, Kota Bharu The Islamic City and Jalan HUSM, Kubang Kerian with clear and easy to follow maps showing directions of seventeen centres in those areas, The presentation of food in promotional materials focuses on Kelantan's unique traditional food with brief explanation of the food which tourists will not forget and will dream to have it again.

Table 2 lists the traditional food promoted in the brochures and web pages.

List 2

Food promoted in brochures and web pages

Nasi Kerabu	Jala Mas
Nasi Dagang	Lompat Tikam
Nasi Berlauk	Ketupat Sotong
Nasi Tumpang	Dodol
Laksam	Lempok
Solok Lada	Pulut Manis
Sambal Daging	Pulut Bakar
Gulai Darat	Pulut Panggang
Budu	Taik Itik
Ayam Percik	Buah Tanjung
Puteri Mandi	Akok

Food features prominently in both print and online promotional materials presenting Kelantan as a traditional culinary destination. In the content-analysed material Kelantan Tourism Events for 2008 was provided which include cooking demonstration in March, Kelantan Traditional Cuisine and Fruit Fiesta, and 100 Rice Dishes and Asean Food Festival in July. Brochures, booklets and web sites provide detailed and appealing materials and photos.

Food is also used to bring the tourist closer to the local residents enhancing the authenticity of the visit. Food was clearly pictured, well decorated and delicious looking. Of the brochures, booklet and website content-analysed, only one on culture centre did not allocate space for food. Information is provided online similar to what is shown in the brochure,

DISCUSSION AND CONCLUSIONS

The aim of this research is to investigate how Kelantan use food in marketing its destination. The findings indicate that Kelantan use food in their marketing efforts. Kelantan focus on its traditional cuisines and convey the message that its unique eternal originality traditional cuisines would appeal to everyone's tastes. Pictures of food were of high quality standards implying a great level of investment was made to lure tourists to Kelantan.

Dubbed the "Cradle of Malay Civilization," Kelantan focus its Visit Kelantan Year 2008 campaign on its unique culture with special highlights on folk-based activities such as traditional games, cultural performances like Kelantan Cultural Performances on the first Saturday of each month, the Kite Festival May 24 to 27 and traditional food festivals; 100 Rice Dishes & ASEAN Food Festival July 12 to 14. This explain the fact that Kelantan has considered the potential of food; more specifically its traditional cuisine as a marketing factor.

The natural features, appealing climate and resort are point of differentiation of destinations but these are readily substitutable and once that novelty wears off, the destination usually differentiates itself as a low cost destination relying on high volume tourists to ward off stagnation. True differentiation occurs when the differences between destinations are seen to be real and substantial from the tourists' perspective. It is for this reason that many destinations are moving towards cultural tourism, as each destination's cultural assets are unique. Highlighting local culture and traditions provide an opportunity to showcase the destination's rich intangible heritage, local traditions, ethnic backgrounds and cultural landscapes tourism products (Copley & Robson, 1996).

As sophisticated promotional materials influence tourists' destination choices (Baloglu, 2001) good images and information can help foster positive destination image. Creating such materials requires a level of expertise and knowledge of destination marketing as well as local cuisines. The research findings do not indicate much difference in contents and appearance of food in brochures, booklets and web sites considering different potential tourists. Previous studies indicate that different cultures have different perception of satisfaction as well as evaluation frameworks for food (Neild, Kozak & LeGrys, 2000; Riley, 2000). Therefore in using food when promoting a destination in

different cultures studies can perhaps investigate how to design brochures, booklets and websites for tourists from different cross-cultural backgrounds.

There is not much evidence as to what type of food related that tourists, either travelling primarily for food or for other reasons, need. Asking potential tourists who may use brochures, booklets and web sites can provide further insights. Decision making by tourists who primarily go on holiday for food can also be studied. Future studies looking at brochures and websites designed by tour operators and hotels can also be examined to see the extent of how local cuisine are being promoted which definitely can add to the destination literature.

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BM(09)

THE FACTORS INFLUENCING CHANGES OF SHOPPING ORIENTATION TOWARDS HYPERMARKET AMONG THE KELANTANESE

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ABSTRACT

Globalization has changed the traditional retail sector for consumer goods with the emergence of many hypermarkets in Malaysia. The advantages offered by these large stores have seen the change in shopping orientation among Kelantanese customers towards hypermarkets from their traditional markets namely mini markets, wet markets, and pasar tani across the state. This study is conducted to determine the factors contributing to the loyalty of customers towards hypermarkets when purchasing the fast-moving consumer goods. The study obtained data from 309 respondents who patron the Tesco hypermarket in Kota Baru using the self-administered questionnaire. The constructs measured were service quality, customer satisfaction, and customer loyalty. The Factor Analysis procedure was employed to reduce the number of items under each construct into manageable components. The study modeled the inter-relationships among the constructs using the Structural Equation Modeling in AMOS 7.0. The study found service quality performance of the hypermarket has an indirect impact on customer loyalty towards the hypermarket through customer satisfaction regarding the service provided. Furthermore, the direct effect of service quality performance on customer loyalty is not significant. In this case, the hypothesis of customer satisfaction construct mediates the relationship between service quality and customer loyalty constructs is well supported. The study also evaluates the importance of each service quality component on the main construct of service quality itself as far as hypermarket shopping is concerned.

Keywords: *traditional market, hypermarket, consumer goods, service quality*

PROBLEM STATEMENT LEADING TO THE STUDY

Globalization has changed the shopping trends of the Malaysians with the emergence of many hypermarkets selling the fast-moving consumer goods across the country. The development of these modern retail outlets has seen tremendous growth since the 1990s (Mad and Jinap, 2004). According to The Ministry of International Trade and Industry Malaysia, in 2006 alone, some 207 projects were approved in the wholesale and retail sectors, with total investment amounted to RM249.9 million. TNS World-Panel Malaysia has reported the sales of three hypermarkets namely Tesco, Giants and Mydin in 2007 alone has accounted for 18 percent of the total sales of the fast-moving consumer goods (FMGC) in the country. The World-Panel's report also indicates the fast growth of market share for these hypermarkets in a short span of time.

Academic researchers have constantly debated and agree that the basic strategy for success in almost all business ventures is through satisfying customers. According to Zainudin (2007), the company could survive and grow into the future amid stiff competition by differentiating itself from its competitors, and one form of differentiation is through providing excellent quality of service. The

immediate effect of providing excellent quality to the existing customers is market retention. In fact, it is already sufficient for the company to survive in the business if it could maintain to do business with the existing customer. This is due to the fact that as the time goes, these customers would increase their transaction. And if the company is lucky enough, the existing customers could help spread positive words of mouth and recommendation regarding the company to their friends and families. According to Zainudin et al. (2005d), the customers must have experienced certain level of satisfaction in their previous transaction in order to trigger their loyalty in the form of positive attitudes towards the company. In fact, Zainudin (2007) found two components of customer loyalty (resulted from customer satisfaction) namely market retention and positive recommendation. More importantly, academic researchers and practitioners alike have agreed that positive recommendation made by satisfied customers is the most powerful form of advertisement in getting new customers for the company.

LITERATURE REVIEW

Service Quality

The construct of service quality performance of service providers has attracted considerable interest by academic researchers since it first introduced through the work of Parasuraman et al. (1985). In fact, providing excellent quality of service to the customers is increasingly being adopted as a marketing strategy by marketers, especially in the service-related industry, to position themselves more effectively in the marketplace (Parasuraman et al., 1988).

There are many researchers who have defined service quality in different ways. For example, Bitner et al. (1994) define service quality as ‘the consumers’ overall impression of the relative superiority of the organisation and its services’. Meanwhile, Cronin and Taylor (1994) view service quality as a form of attitude representing a long-run overall evaluation of service encounter experience. Parasuraman et al. (1985) defined service quality as ‘a function of the differences between service expectation and actual performance along the specified service quality dimensions. The definition is has consistent with Roest and Pieters’ (1997) who define service quality as a relativistic and cognitive discrepancy between experience-based norms and performances concerning service benefits.

A popular measure of service quality is SERVQUAL, developed by Parasuraman et al. (1985). They originally identified ten dimensions Reliability, Tangibles, Courtesy, Competency, Credibility, Security, Responsiveness, Communication, Accessibility, and Understanding the customer. These ten dimensions were later reduced to five dimensions namely Reliability, Tangibles, Assurance, Responsiveness and Empathy.

However, Dabholkar et al. (1996) stated SERVQUAL, which has been empirically tested in a number of studies involving “pure” service settings (e.g. banking, long-distance telephone service, securities brokerage, and credit card service), has not been successfully adapted and validated in a retail store environment. They believe that a measure of retail service quality must capture some additional dimensions. As a result of numerous focus groups discussions, they have developed a scale entitled *Retail Service Quality Scale* which includes the following five dimensions as shown in Table 1.0.

Table 1: Service Quality Components for Retail Service Industry

1. Physical aspects	The quality of store appearance, and convenience of store layout
2. Reliability	The store keeps its promises to customers and “does things right”
3. Personal interaction	Store associates are courteous, helpful, and inspire confidence & trust from the customer.
4. Problem solving	Associates are trained to handle problems such as customer complaints, returns and exchanges, and certain technical advice
5. Policy	Convenience operating hours, payment options, store charge cards, parking and so forth

Customer Satisfaction

Oliver (1981) defines customer satisfaction as post-choice evaluative judgments concerning specific purchase decisions. Meanwhile, Woodside et al. (1989) define customer satisfaction as overall satisfaction with the service as a function of overall service quality. Fornell (1992) defines customer satisfaction as customers’ general evaluation based on the result of the service perceived after purchase compared with their expectations prior to purchase. Anderson et al. (1994) define customer satisfaction or cumulative customer satisfaction as an overall evaluation based on the total purchase and consumption experience with a good or service over time. Spreng et al. (1996) define customer satisfaction as the emotional reaction to a product or service experience; it is influenced by consumer’s satisfaction with the product itself (attribute satisfaction) and also with the information used in choosing the product (information satisfaction). As the study view, one of the key global constructs predicting consumer behavior was the overall customer satisfaction.

Generally, there are two general conceptualizations of satisfaction namely transaction-specific satisfaction and cumulative satisfaction (Yi and La, 2004). Transaction-specific satisfaction is the customers’ evaluation of their experience and reactions to a particular service encounter (Boshoff and Gray, 2004), whereby cumulative satisfaction refers to the customers’ overall evaluation of the consumption experience to date (Johnson et al., 1995).

Customer Loyalty

Intentions are subjective judgments about how a person will behave in the future and usually serves as dependent variables in many service researches and customer satisfaction models (Soderlund and Ohman, 2003). There are several definitions of customer loyalty. Dick and Basu (1994) summarized the definition of customer loyalty as the intensity between personal attitude and repatronage, and the perspectives of cognition, emotion and resistance were the aspects that influence attitude. Jones and Sasser (1995) define loyalty as customers repurchase intention of certain product or service in the future. Customer loyalty means the customer is very satisfied with company’s product or service, and is willing to advertise for the company through providing certain positive words of mouth (Bhote, 1996). Oliver (1997) believes that once the customer loyalty level is achieved, the customers would continue to repurchase and repatronage the store in the future even though the environment and marketing manners may change. Hellier et al. (2003) define repurchase intention as ‘the individual’s

judgments about buying again a designated service from the same company, taking into account his or her current situation and the likely circumstances’.

The Relationship among Service Quality, Customer Satisfaction, and Customer Loyalty

Substantial empirical and theoretical evidence in the literature suggests that there is a direct link between service quality and behavioural intentions (Bolton and Drew, 1991). Among the various behavioural intentions, considerable emphasis has been placed on the impact of service quality in determining repeat purchase and customer loyalty (Jones and Farquhar, 2003). As pointed out by Bolton (1998), the service quality performance provided by service provider influences the customer’s subsequent behaviour, intentions and preferences towards that particular service provider. Once the customer chooses a company which provides service quality that meets or exceeds his or her expectations, he or she is more likely to choose the same provider again in subsequent encounter. Besides, Taylor and Cronin (1994) also found that service quality performance has a significant effect on customers’ repurchase intentions. Other studies which support that repurchase intentions are positively influenced by service quality include Cronin and Taylor (1994), Cronin et al. (2000), and Choi et al. (2004).

A wide variety of studies by prominent researchers in various service industries also support the link between customer satisfaction and behavioural intentions (Fornell, 1992; Taylor and Baker, 1994; Patterson and Spreng, 1997). Bearden and Teel (1983,) argue that customer satisfaction is important to the marketer because it is generally assumed to be a significant determinant of repeat sales, positive word of mouth, and customer loyalty. Similarly, Anderson and Sullivan (1993) also argued that the more satisfied the customers are, the greater is their retention. This view is also supported by Ranaweera and Prabhu (2003) that the positive affects of customer satisfaction on customer retention is significant. Specifically, the levels of customer satisfaction will influence the level of repurchase intentions and this is supported by past research in a wide variety of studies (Patterson and Spreng, 1997; Bolton, 1998; Hellier et al., 2003).

Both service quality and customer satisfaction have been widely recognised as antecedents of repurchase intentions. An important fact for marketing researchers is the result of recent study by Ravald and Fronroos (1996) reveals that customer satisfaction is a better predictor of intentions to repurchase than service quality. Even the similar evidence was discovered earlier in the study by Cronin and Taylor (1992) who found a much stronger relationship between customers satisfaction and repurchase intentions than the relationship between service quality and repurchase intentions.

Academically, from the practitioner’s point of view, customer satisfaction is deemed to be more influential on repurchase intentions (Dabholkar, 1995). Parasuraman et al. (1994) also revealed in their analyses that customer satisfaction is likely to achieve a greater level of statistical significance when both service quality and customer satisfaction have a significant effect on repurchase intentions.

Consequently, recent research also offers some evidence that perceived service quality has an impact on customer satisfaction which, in turn, leads to positive behavioural intention towards the service firm (Andreassen and Lindestad, 1998). Therefore, service quality construct appears to be causal antecedent of customer satisfaction, which mediates the relationship between service quality judgments and customers' behavioural intentions (Taylor and Baker, 1994).

THE OBJECTIVES OF THE STUDY

The study is specifically designed to achieve the following objectives:

- i. To examine the direct effect of service quality performances (provided at the selected hypermarket) on the level of customer satisfaction.
- ii. To examine the indirect effect of service quality performances (provided at the selected hypermarket) on customer loyalty through the effect of service quality
- iii. To examine the direct effect of customer satisfaction regarding the quality of service (provided at the selected hypermarket) and customer loyalty towards that particular hypermarket.

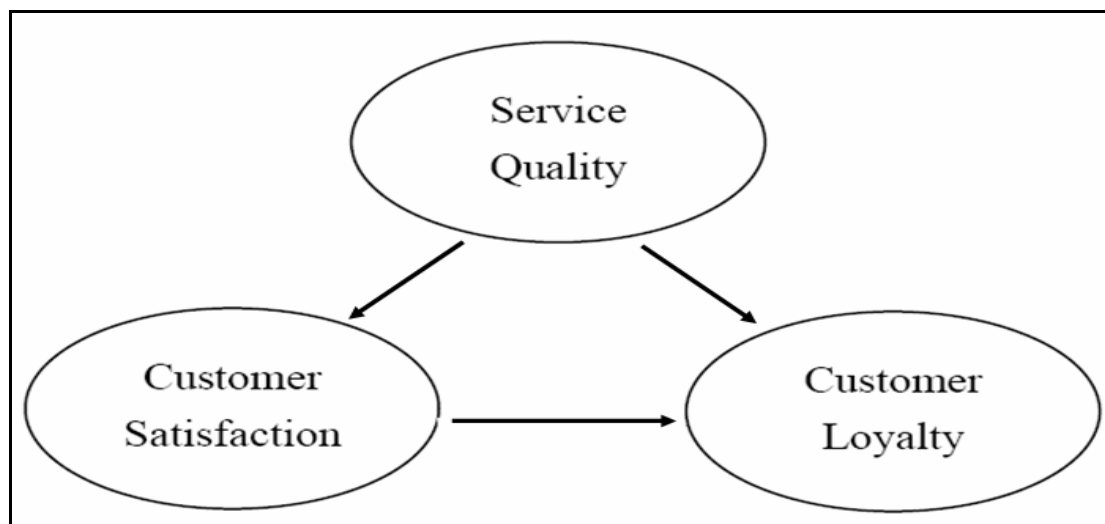


Figure 1: The schematic diagram of the proposed model for the study

The research questions

The research is also designed to clarify certain ambiguities shrouded the inter-relationships among the three constructs of the study namely:

- i. To what extent does service quality construct influence the construct of customer satisfaction?
- ii. To what extent does service quality construct influence the construct of customer loyalty?
- iii. To what extent does customer satisfaction construct influence the construct of customer loyalty?

THE RESEARCH HYPOTHESES

The study has three main hypotheses to prove namely:

- H1: Service quality has a positive and significant impact on customer satisfaction
- H2: Service Quality has a positive and significant impact on customer loyalty
- H3: Customer Satisfaction has a positive and significant impact on customer loyalty

THE RESEARCH METHODOLOGY

Population and Sample

Target population of this study is customers who patronage Tesco hypermarket in Kota Baru for consumer items. The study assumes that these people have been experiencing various markets in the state such as wet market and pasar tani prior to the existence of Tesco.

This study decides to follow the rules set by Hair et al (1995) which state that for any research that requires doing the factor analysis procedure to determine the dimensionality for the items employed, the sample size obtained should be at least five times as many items to be analysed. However, the authors highly preferred if the study could obtain a sample based on a ration of ten times the number of measuring items in questionnaire.

This study has a total of 28 items in questionnaire which consists of 18 items for service quality, 5 items for customer satisfaction and customer loyalty respectively. Hence, this study should obtain a total of 280 random samples from its population. The study distributed almost 400 set of self-administered questionnaire individually to the Tesco shoppers in a span of ten days. However, the study obtains 303 completed questionnaires qualified to proceed into data analysis stage.

Data analysis procedure

The study employed the model developed by Caruana (2002). The model involves the computation of three regression models. First: The regression of mediating variable (customer satisfaction) on the independent variable (service quality). Second: The regression of dependent variable (customer loyalty) on the independent variable (service quality). Third: The regression of the dependent variable (customer loyalty) on both variables service quality and customer satisfaction. In the study customer satisfaction construct mediates the link between service quality and customer loyalty.

The model has become too complicated and impossible to analyze using the ordinary regression analysis when one construct has more than one measuring items. Thus, the study decided to employ the Structural Equation Modeling (SEM) to model these inter-relationships among the constructs and among items in each construct. The study used AMOS 7.0 software. The original model was converted into AMOS Syntax as shown below.

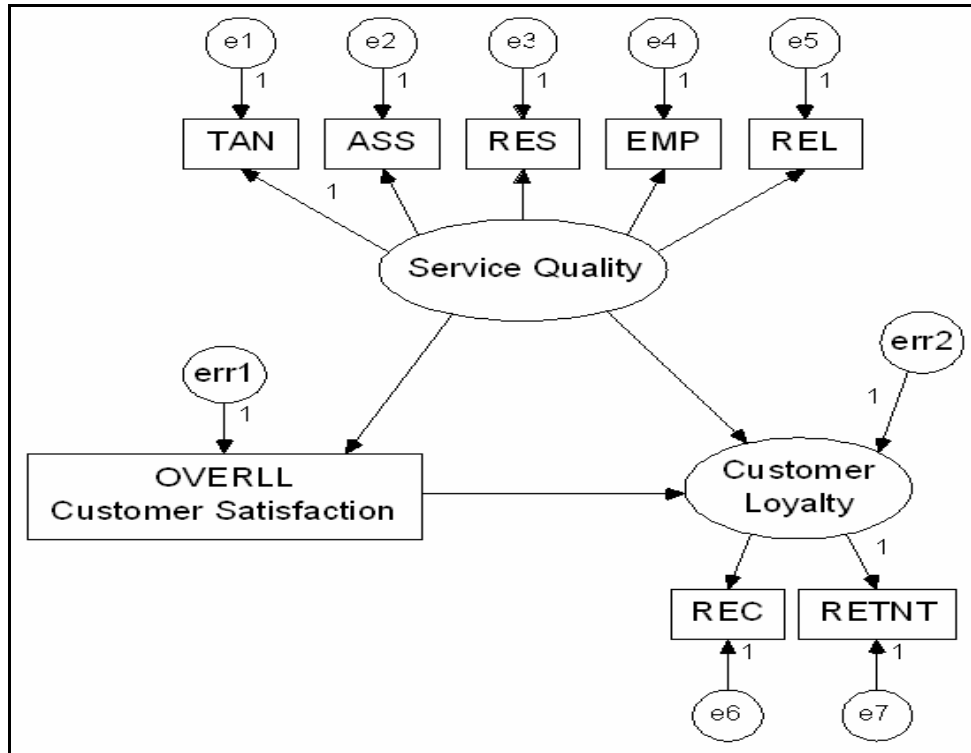


Figure 2: The proposed model converted into AMOS 7.0 syntax

Indicators:

- TAN - (Tangibles): Consists of items related to shopping facilities available and physical appearance of the hypermarket.
- RES - (Responsiveness): Consists of items related to knowledge and courtesy of employees and their ability to convey customer trust and confidence
- ASS - (Assurance): Consists of items related to employees willingness to help customers and provide prompt service whenever required
- REL - (Reliability): Consists of items related the ability to perform the promised service dependably and accurately.
- EMP - (Empathy): Consists of items related to caring, individualized attention of which the store employees provide their customer
- OVERLL - (Overall Satisfaction): Items related to the customer satisfaction towards the store based on their various encounter experience with the store and its employees.
- RETNT - (Retention): Items related to the customers' intention to repatronage, repurchase and priority of customer to go the hypermarket.
- REC - (Recommendation): Items related to the customers' willingness to provide positive words of mouth and recommendation concerning the hypermarket to friends and families whenever they have a chance to do so.

RESULTS AND DISCUSSION

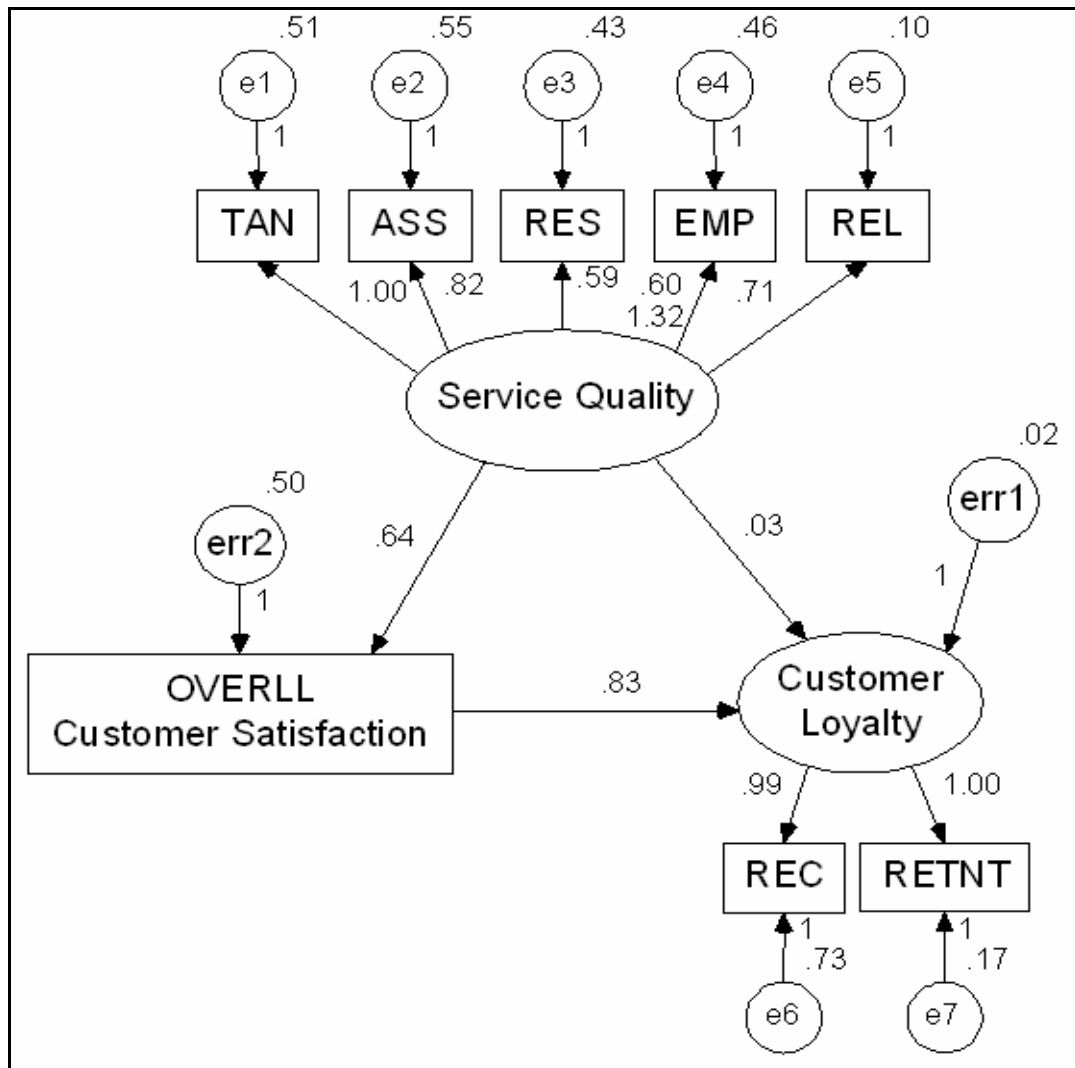


Figure 3: The results obtained after running the AMOS 7.0

Table 1: The Goodness of Fit Index

Model	GFI	AGFI	PGFI
Default model	0.920	0.933	0.515

GFI (Goodness of Fit Index) = 0.920 (the closer to 1.00 is the better)
 AGFI (Adjusted Goodness of Fit Index) = 0.933 (the closer to 1.00 is the better)
 PGFI (Parsimony Goodness of Fit Index) = 0.515 (the closer to 0.50 is the better)

The above indexes indicate that the proposed model fits the data well (no significant discrepancy between the theorized model and the actual model)

Table 2: The Path Analysis of the main construct and its respective components

Variables	PATH	Variables	Parameter Estimate	S.E.	C.R.	P
Customer Satisfaction	<---	Service Quality	0.635	0.055	13.324	***
Customer Loyalty	<---	Service Quality	0.029	0.033	.886	0.375
Customer Loyalty	<---	Customer Satisfaction	0.830	0.033	28.109	***
Tangibles	<---	Service Quality	1.000			
Assurance	<---	Service Quality	0.823	0.060	13.719	***
Responsiveness	<---	Service Quality	0.586	0.055	10.559	***
Empathy	<---	Service Quality	0.597	0.061	9.710	***
Reliability	<---	Service Quality	0.707	0.068	10.447	***
Retention	<---	Customer Loyalty	1.000			
Recommendation	<---	Customer Loyalty	0.993	0.055	18.207	***

*** indicates highly significant at 0.001

The Result of Hypothesis Testing

- H1: Service quality has a positive and significant impact on customer satisfaction
- From above table, p-value is 0.001 (smaller than 0.05). Thus, this hypothesis is supported
- H2: Service Quality has a positive and significant impact on customer loyalty
- From above table, p-value is 0.001 (larger than 0.05). Thus, this hypothesis is not supported
- H3: Customer Satisfaction has a positive and significant impact on customer loyalty
- From above table, p-value is 0.001 (smaller than 0.05). Thus, this hypothesis is supported

CONCLUSION

The study found service quality performance provided by the hypermarket to its customers has a significant and positive impact on customer satisfaction (Table 2). The service quality component which provides the greatest contribution on the service quality is the tangible aspects, which consist of shopping facilities available to customers and also the physical appearance of the hypermarket (Figure 3). This is very true since the hypermarket provides its customers with convenience parking, shopping cart, credit-card payment, wide floor area with systematic arrangement of items, cleanliness, availability of eating outlets and many other outlets in one area. As opposed to traditional market such as mini markets and wet markets, the facilities available at a hypermarket manage to attract the whole family members to enjoy shopping. In fact, all other service quality components of the hypermarket namely assurance, responsiveness, empathy, and reliability contribute significantly to the overall service quality itself (Figure 3 and Table 2).

The study also found customer satisfaction resulting from the performance of service quality components of a hypermarket has a positive and significant impact on customer loyalty towards the hypermarket (Table 2). It is important to note that both loyalty components namely market retention (consists of intentions to repatronage and repurchase) and recommendation (consists of intentions to provide positive words of mouth to friends and families) contribute significantly to the overall customer loyalty (Table 2). Once the loyalty of its customers is achieved by the company, one would guarantee that that particular company could survive and grow into the future. This is because the company is not only ensure of keeping the existing customer base (market retention), but more

importantly these customers would bring in some new customers through providing positive words of mouth and recommendation to their friends and families.

Once these Kelantanese customers are satisfied and become loyal to convenience shopping at the hypermarket, they would no longer go back to the “inconvenience shopping” at the traditional markets except for very rare circumstances such as for items not available at the hypermarket etc. Only the time could tell the day when the traditional markets would be wiped out completely from the competition.

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APPLICATION OF HUMAN RESOURCE INFORMATION SYSTEM (HRIS) IN HIGHER EDUCATION – HOLISTIC APPROACH

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ABSTRACT

The competitive environment is becoming complex and keen between the existing higher educational institutions and new providers who have fielded themselves with the prime motive of profit. The influence of globalization process on higher education demonstrates the trends that this tug and pull is not only within national boundaries but has become a global phenomenon. Global networks and market place for academic researches has grown significantly. Efforts are being made internationally to converge and standardize undergraduate and graduate degree programmes. International collaborations with other academic institutions and business are now common place. Universities seek new avenues to fund and promote the commoditization of their knowledge production capabilities. Many higher educational institutions are recruiting relatively new pools of students outside national borders. In this quest, most are seeking to apply new instructional technologies to expand enrolments and to enhance the viability and profitability of international ventures. The essential components of an HRIS are accuracy, combined with timeliness, to increase reporting capacity and controlling the whole system to achieve accuracy, confidentiality. The efficiency and effectiveness – quality of an HRIS will enable an institution to format a profile of its staff – their strengths and weaknesses. In this way the institution will know what it has in the personnel sense. By knowing where it is going, through clear mission and goals, then the organization will be able to structure appropriate development promotion training and recruitment. In this way right people will be in the right place at right time-quality human resource and personnel management. HRIS moves from isolation to integration and facilitates holistic approach of education. Whatever the final format and sophistication of the scheme, the bottom line is that personnel functions should be able to account for themselves in cost-benefit terms. This is without doubt the most important criterion for an HRIS.

Keywords: human resource information system, instructional technologies, higher institution and personnel management

INTRODUCTION

Higher education is moving from old culture that considers, “what is in it for me”? to a new culture that says, “what is in for our customer”? And it is developing a culture that is ready to embrace knowledge management. Using knowledge management techniques and technologies in higher education is as vital as it is in the corporate sector. If done effectively, it can lead to better decision making capabilities, reduced product development cycle time (for example, curriculum development and research), improved academic and administrative services and reduced costs.

It is important to bear in mind that Universities need to be consciously and explicitly managing the processes associated with the creation of their knowledge assets and to recognize the value of their intellectual capital to their continuing role in society and a wider global marketplace for higher education. The competitive environment is becoming complex and keen between the existing higher educational institutions and new providers who have fielded themselves with the prime motive of

profit. The influence of globalization process on higher education demonstrates the trends that this tug and pull is not only within national boundaries but has become a global phenomenon. Global networks and market place for academic researches has grown significantly. Efforts are being made internationally to converge and standardize undergraduate and graduate degree programmes. International collaborations with other academic institutions and business are now common place. Universities seek new avenues to fund and promote the commoditization of their knowledge production capabilities. Many higher educational institutions are recruiting relatively new pools of students outside national borders. In this quest, most are seeking to apply new instructional technologies to expand enrolments and to enhance the viability and profitability of international ventures.

WHY HRIS TO BE USED IN H.E.?

World of Higher education has been facing immense changes. As aptly observed by Jan Knight the world of higher education and the World in which higher education plays a significant role is changing for many reasons. Higher education is approaching a paradigm change. A new competitive environment has already taken place and is being dictated by various forces. These forces include not only institutional resistance to change, but also external politics and government initiatives cultural dynamics, economic wealth, labour needs and the maturity of existing higher educational institutions.

Today's higher education administrators face the tremendous task of substantially improving learning environments while reducing administrative overhead. They strive to deliver on student demand for flexible and innovative learning experiences. They're challenged to provide students, faculty, alumni, and community members the ability to share information and collaborate in security-enhanced and easily accessible environments.

Regulations, such as federal and state-mandated reporting, demand highly specific accounting transactions and financial reports. The ability to effectively budget for and manage several different types of employees, and to recruit and retain highly skilled staff requires full integration of human resource data and student information systems.

With so many demands, and so much riding on the bottom line, college administrators need powerful business solutions that will help them manage student and alumni information and financial data. These systems need to be cost effective, easy to use, and able to integrate with existing infrastructure. Tracking budgets, managing human resources and payroll, and automating financial reporting are key considerations for improving the "business" aspects of education.

"Improved reporting is necessitated by complex governmental requirements and that greater dependence on human resource functions for operational control and reporting purposes will occur. This moves us towards the establishment of an information base which supports the processes, practices and needs of human resource functions. Typically, such a scheme would be described as human resource information system. (HRIS) Application of such a system in H.E. institutions is to

provide the maximum updateability use of resources, speed, compatibility, updateability, accessibility, data integrity, privacy and security.

In the context of higher education – a service industry – the measures of quality go far beyond the excellent classroom practices. The totality in the sense of quality education encompasses:

- the relevance and currency of courses offered and the teaching which takes place. (educational foundation),
- the achievement of stated educational aims and objectives (learning outcomes),
- the caliber of the people involved (human resources”,
- the framework that guides and co-ordinates (management structure)

To gain and achieve these and other emerging objectives in the present day scenario of H.E. appropriate effective information base is essential. It is for the reason that human resource decisions about people could be made if one has information/data in appropriate formats.

INTEGRATED AND HOLISTIC APPROACH OF HRIS IN HIGHER EDUCATION

Staff used in regard to H.E. institutions includes administrative plus teaching faculty members. Accurate information/data about staff is needed for taking effective human resource decisions, as “getting the right person in the right place at the right time” is the motto of H.R.M. The establishment of HRIS looks towards the integration and support for three essential, cooperate processes:

- Strategic planning,
- Operational planning and
- Human resource planning (including career planning).

“To survive in the future, higher education institution will need to be capable of adapting to changing workforces and the dynamic demands of business and government clients policies and practices. In order to build effective institutions, create change strategies and achieve quality management teams will need timely human resource information”. The essential components of an HRIS are accuracy, combined with timeliness, to increase reporting capacity and controlling the whole system to achieve accuracy, confidentiality. “The efficiency and effectiveness – quality of an HRIS will enable an institution to format a profile of its staff – their strengths and weaknesses. In this way the institution will know what it has in the personnel sense. By knowing where it is going, through clear mission and goals, then the organisation will be able to structure appropriate development promotion training and recruitment. In this way right people will be in the right place at right time-quality human resource and personnel management.

HRIS, moves from isolation to integration and facilitates holistic approach of education.

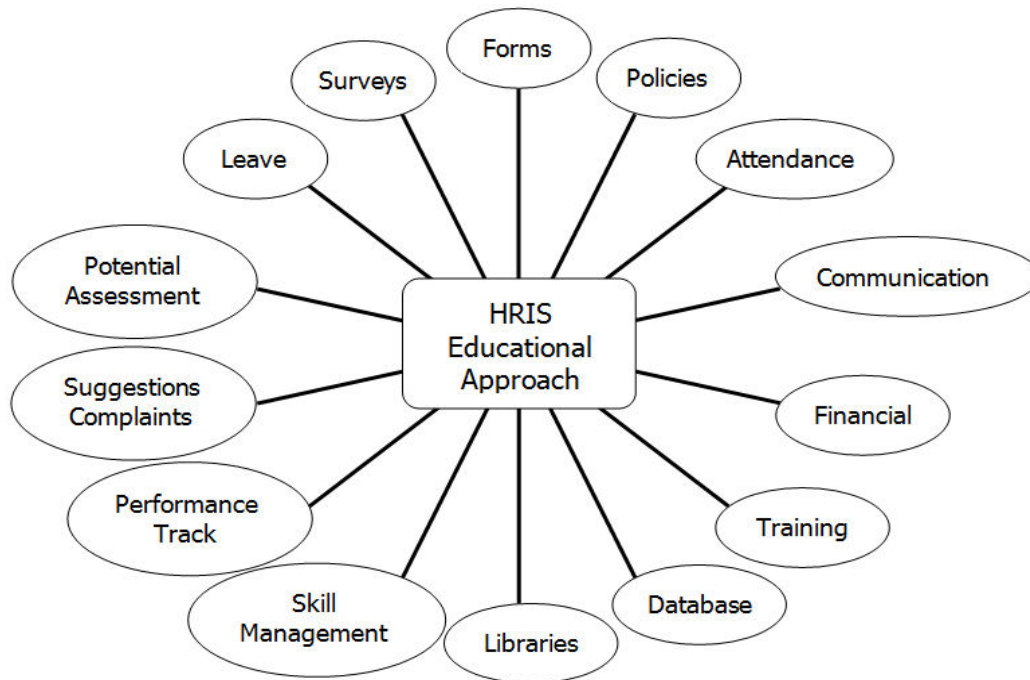


Figure 1: HRIS Service Delivery

Basic objectives of HRIS are many folds such as:

- Standardisation of activities, and processes,
- Reduced Paper Work,
- Information at fingertips,
- Improved service delivery,
- Enhanced efficiency at Work,
- Enables effective analysis,
- Student Self Service (SSS) / Open system,
- Web system / analysis,
- Web system /user's Id/passwords for users's perspective
- Student Records System
- Human Resources Payrolls

“It is crucial that any system can respond to changing directions, processes and practices in the field of human resource management. For example, future trends are likely to involve: decentralization of personnel information to line management (distributed processing and software will be needed); increased emphasis on analysis and interpretation of organization-wide trends in absenteeism and vacancy filling; and proactive personnel activities such as personnel appraisal. Whatever the final format and sophistication of the scheme, the bottom line is that personnel functions should be able to account for themselves in cost-benefit terms. This is without doubt the most important criterion for an HRIS”. Under competitive environment, it has become necessary to find and engage “right fit” in any organization. HRM today has become overtly cautious and is indulging in extensive background checks before deputing an employee.

DEVELOPING HUMAN RESOURCE INFORMATION SYSTEM (HRIS)

Information system encompasses all processes within an organization for creation and use of information for various related purposes. Improving information management is a key factor for any organization whether public or private. There are many systems to be integrated in a number of activities to meet complex organizational goals. In nutshell, HRIS basically encompasses the following components for its success. These are:

- People
- Process
- Technology
- Context

HRIS is much more than the use of technology. However, it is equally important that organizations processes and practices that underpin the exploration, creation and use of information are equally important. Simply deploying new technology would not mean and add to the success of HRIS. Most of the organizations are still struggling to deliver an integrated HRIS and provide information management culture and environment.

Therefore, involvement of above four basic components for any system including HRIS needs to be incorporated and integrated properly.

- To ensure HRIS activities are effective and successful in any organization, it is important:
- To recognize and manage complexities
- Deliver tangible and visible benefits
- Communicating to all staff purpose and benefits of the project
- Attempt to prioritize the information/projects.
- There is no single application or project that will address and resolve all human resource management problems
- Successful HRIS would need organizational cultural change, and this can only be achieved through strong leadership
- Management approaches are needed to avoid and mitigate risks
- Use multiple information systems in a human friendly way
- Information management system demands new approaches to be taken up by the passage of time in order to compete.

HIGHER EDUCATION INSTITUTIONAL INFORMATIVE REQUIREMENTS

Higher Education throughout the world demands solutions to assist in improving its existing problems regarding, funding, student enrolment, hiring and retaining quality staff, ensure budgetary controls, secure endowments, student services and their record management sharing data and information within and outside Campus etc. H.E. Educational administrators are in search of solutions to help and improve communication networks, reduce administrative overheads and arrive at better informed decision making facilities. It needs tools to budget, plan and integrate financial and operational data across various faculties and departments.

In terms of technology information management encompasses system such as:

- Web content management
- Record /document management
- Digital asset management
- Payroll management
- Learning content management system
- Collaboration agreement management
- Student Service management system
- Library/research information
- System support system training
- Student and alumni relation system
- Internal and external reporting system for efficiency

HRIS CONCEPTUAL SOLUTIONS FOR H.E.

Conceptual solutions between individual institutions would differ where common needs policies, regulations, procedures and system are at variance. However, the system integration using custom built point to point linkages have to be established for quick and efficient support for delivery of services.

Key areas where suitable solutions needed are:

- Faculty/Staff Quality - Attracting and retaining high quality employees (including teaching and administrative staff) is an important variable. Qualified and committed staff needs to deliver quality education and services thereof. HRIS assists for tracking and supporting performance approaches for continued development of staff professionally and academically.
- Spectrum of Staff Payrolls – Any payroll system for its staff should offer flexibility and functionality with updating of pay packets and allowances. *Integrated payroll system* will allow staff to spend less time for recording, reporting and calculations. HRIS assists to prepare in integrated form based on accumulated information such as pay scale, allowances, extra incentive, tax liability and deductions etc.
- Student Record Service System- Accurate data of current and past students with their enrolments, results, achievements, extra-curricular activities, recruitments, scholarships etc. needs to be tracked for extending services to them.
- Alumni relationships- Student alumni relations are important to help recruit students, and expand endowment opportunities by donating funds. Such needs to recorded and expanded for growth and development of Higher educational institutions. Students be given opportunities to share their experiences at industry, associations, meetings and conferences to expand learning experiences.
- Systems support training and development- Information of various training and development programs extended to staff be notified for gaining experiences of attaining such schemes which may be linked with promotions policies of Higher Educational Institutions. Updating faculty members skill and knowledge is always beneficial for enhancing efficiency at work.
- Leave Record System- Rules and agreements regarding various types of leaves accrual/availed by individual staff is also necessary. It is to be related to the payroll records of the employees.
- Library Service information to all its users- Detail information covering various elements of codification, helping desk, customer services, order entry, document management and development and research system to be engineered.

Thus human resource professional need complete, accurate and real time information in order to manage increasingly diverse global landscape of today's H.E. environment. Therefore, HRIS's

responsibilities include the identification , planning and implementation of changes and update information in order to meet the strategies of H.R.M.

CONCEPTUAL SOLUTIONS AS PROVIDED BY ORACLE TO UNIVERSITY OF CALIFORNIA

University of California's HRIS supports a wide range computing needs such administrative, academic, research and information portals.

The University of California system is undoubtedly the largest and most complex university system in the world. The University is also one of the fastest growing institutions in the world and operates in a highly complex and politically charged environment while facing tightening budget constraints. The University is also facing increasing complex regulatory requirement and accountability expectations.

It is in this situation that the University had the foresight to develop in July 2000 its vision for the future UC 2010 – A New Business Architecture for the University of California. The New Business Architecture put forward six general strategies that will allow the University to achieve these objectives:

- Develop campus business portals that will integrate components of the New Business Architecture,
- Apply new approaches to how the University recruits, retains and develops the very best people,
- Streamline UC's cumbersome policies and processes,
- Leverage new technology to contain costs and improve services to UC's constituents,
- Integrate campus financial systems and provide enhanced financial reporting through implementation of emerging technology standards, and
- Embed performance management systems in UC business processes and focus on the most important financial controls.

The UC system is challenged by legacy information technology architecture, declining external funding and system that need to be redesigned in order to improve efficient utilization of scarce resources. The University's current applications infrastructure is very diverse, with systems acquired from a variety of third-party vendors. These systems are integrated using custom-built point-to-point linkages. The maintenance of these integration points consumes a significant fraction of the UCOP and UC Campus resources, and represents a significant hurdle to the quick and efficient deployment and support of new products and services.

The UC Office of the President desires a flexible and scalable solution architecture that can accommodate the delivery of varying service levels to the individual institutions comprising the UC System. The architecture should be able to allow the UC System to capitalize on efficiencies that can be gained where common needs, policies and procedures exist across the system or between individual institutions. The architecture should also support services and solutions unique to an institution where appropriate. The architecture capabilities should provide:

- Support for variations in the software and applications utilized by each institution
- Institutions the option to subscribe to services and application solutions provided by other system institutions or the UC office of the President
- System wide identity management capabilities
- Security roles and capabilities to restrict views of data by institution and roles
- Intersystem data management and integration
- Scalability to meet the systems current, anticipated and unanticipated needs well into the future

Oracle's proposed solution meets these needs while promoting innovation and provides a standards-based business-computing infrastructure focused on achieving operational efficiency and effectiveness.

HRIS – KEY TO SUCCESS: TIPS

There are growing national and international trends that shed light on new means to develop and understand as to how one might better access the performance higher educational institutions. There is no doubt that colleges and universities, as institutions of public trust, are increasingly being held accountable for their performances. As a result there are steps being taken at various levels to enhance the use of HRIS to improve practices and policies that will ultimately contribute to improved performances of such institutions. It has been nicely observed that “an HRIS should:

- integrate with most human resource development function;
- be evaluated for ease of use;
- be affordable (this is relative)
- be compatible with present software and hardware, including payroll system and word processor packages, include all defined data items, have a growth path for software and hardware;
- be accurate and provide means of ensuring data integrity;
- be timely in execution (including implementation) have vendor support (including maintenance and training),
- be capable of being tailored: deal with soft data (people and culture) and
- be secure and maintain confidentiality: link to strategic objectives of organisations and satisfy bottom-link personnel functions.

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BURSA MALAYSIA REACTION TOWARDS THE EAST COAST ECONOMIC REGION (ECER) ANNOUNCEMENT: AN EMPIRICAL EVIDENCE

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ABSTRACT

Built upon the theoretical framework of finance, the purpose of this study is to investigate the market reaction towards the East Coast Economic Region (ECER) that was announced and launched by Prime Minister of Malaysia on 30th October 2007. The main objective of the ECER Master Plan is to accelerate sustainable economic growth in the East Coast region of Peninsular Malaysia, with equitable distribution of income and wealth through the introduction of key high-impact projects as well as spur development in the region. Since, this announcement tends to be good news to the public and market, the study employs the event study methodology to discover the market reaction towards the announcement made by the government. The study period covers from April to December 2007 including the estimation and test period. By using the event study methodology, the results reveal that average abnormal returns are negative on the announcement day but it is not statistically significant. Surprisingly, after the announcement period (+3 to +30), the OLS market model shows negative abnormal return around one to two percent and it is statistically significant at 10% level. Meanwhile, using the a five day event window (-2 to +2), the cumulative abnormal returns (CARs) show positive reactions but it is not statistically significant, thus failed to support the signaling hypothesis.

Keywords: ECER, event study, market reaction, market efficiency

INTRODUCTION

In the midst of aiming to become a developed nation by the year 2020, the Prime Minister of Malaysia, Datuk Seri Abdullah bin Haji Ahmad Badawi has introduced a regional development plan which constitutes the development of Iskandar Development Region (IDR), North Coast Economic Region (NCER), Sabah Development Corridor (SDC), Sarawak Corridor of Renewable Energy (SCORE) and East Coast Development Region (ECER). The vital objective of this regional development is to achieve a balanced development program by spreading economic development to embrace all states and regions. By looking at the announcement of ECER on October 30th 2007, almost RM6.0 billion has been allocated to various development projects in the East Coast region. This announcement and the substantive allocation for various projects may give an impact to the Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange (KLSE)). In relation to that matter, the objectives of this study are to determine the market reaction towards the ECER announcement as well as the price performance after the ECER announcement.

DATA

This study covers 100 public listed companies on Bursa Malaysia main board and focuses on all the selected sectors that are related to the ECER. This includes the consumer products, industrial products, construction, trading or services, finance, infrastructure, hotels, property, plantations, mining and technology. The estimation and test period covers from April 2007 to December 2007. All the data were collected on daily basis from DataStream, Universiti Teknologi MARA Terengganu, Malaysia.

METHODOLOGY

In order to measure the market reaction of the ECER announcement, the researchers use the event study methodology. Fama et al. (1969) were pioneered an event study methodology and has been chosen to determine the market price reaction on ECER announcement. The efficient markets hypothesis (Fama et al. 1969 and Fama 1970) predicts that in a well-performing capital market, security prices will provide the best available unbiased estimates of the value of a company's assets. This means that the firm's stock price fully reflects the present value of all future cash flow due to all tangible and intangible assets of the company. Therefore, market prices, in general, would adjust themselves to publicly available new information (Peterson;1989)

The abnormal return, also known as the "wealth effect", is a measure of abnormal gain or loss by shareholders caused by an event. The abnormal return for each company (i) and each time period (t) is the difference between the actual return and the expected return, as stated in equation (1).

$$AR_{it} = R_{it} - E[R_{it}] \quad (1)$$

The actual return is the observed return on the security (price changes) and the expected return is a measure of the 'normal' return on security that would be expected had no event taken place. The abnormal return can be predicted using the mean adjusted return, the market model, the market adjusted return, and the capital asset pricing model (CAPM). Zhang (2005) and Ikenberry and Vermaelen (1996) based their analysis on the market model while Ikenberry et al. (1995) used size adjusted and value weighted benchmarks in measuring the short term reaction around the announcement day.

Measuring Short Term Performance

The security and market returns are calculated on daily basis and the Bursa Malaysia Composite Index (BMCI) is used as a proxy for the market return in this study. The companies' share prices and the BMCI index values were obtained from Datastream. The return (R_{it}) on each company (i) and each time period (t) and the return on the market (R_{mt}) for each time period (t) are calculated using equations (2) and (3). Dividends are ignored in calculating the daily returns.

$$R_{it} = \frac{R_{it} - R_{it-1}}{R_{it-1}} \tag{2}$$

$$R_{mt} = \frac{R_{mt} - R_{mt-1}}{R_{mt-1}} \tag{3}$$

Event Study Period

The event study period can be broken down into the estimation period and the test period. In an event study, the estimation period is used to estimate the benchmark expected return and the test period is used to determine the abnormal returns for the associated event. The typical length of an estimation period for daily studies is between 100 to 300 days and the test period is between 21 to 121 days.⁵² This study uses standard event study methodology, including a five days event window which is two days before and two days after event (t^{-2} to t^{+2}). The event period is from 14th September 2007 to 12th December 2007 and a estimation period (a period between day -131 to day -31) that is from 17th April 2007 to 14th September 2007.

Figure 1 shows the estimation period and test period for the ECER announcement in Malaysia. The estimation period (100 days) starts from 131 days (t^{-131}) to 31 days (t^{-31}) before the event and the test period (61 days) is from 30 days before (t^{-30}) to 30 days (t^{+30}) after the announcement.

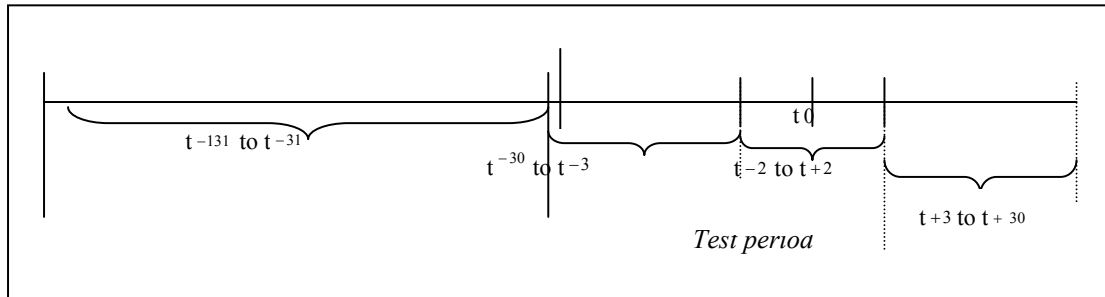


Figure 1: Estimation period and test period for ECER announcements in Malaysia. The estimation period is from 131 days to 30 days before the event and the test period is from 30 days before the event to 30 days after the event.

The cumulative abnormal return is calculated using three types of event windows. The first event window is from 30 days (t^{-30}) to 3 days (t^{-3}) before the announcement while a 5 days event window, two days before and two days after event (t^{-2} to t^{+2}), represents the second event window. The last event window is from 3 days until 30 days (t^{+3} to t^{+30}) after the announcement. The announcement day for ECER is denoted as t^0 . The announcement was made on 30th October 2007.

Benchmarks for Abnormal Return

⁵² Peterson (1989) (p.38).

The ordinary least square (OLS) model was used to measure abnormal returns for this study. As stated earlier, the abnormal return is calculated using equation (1) and it depends on the expected return (benchmark) used. The ordinary least square (OLS) market model⁵³ estimates the return on a security as stated in equation (4) where, α_i is the intercept (alpha), β_i is the slope coefficient (beta) and μ_{it} is the disturbance term. The expected return and the abnormal return are calculated using equations (5) and (6) respectively. Alpha (α) and beta (β) values are obtained from a regression between returns on the security (R_{it}) and returns on the market (R_{mt}) during the estimation period (from t^{-131} to t^{-31}).

$$R_{it} = \alpha_i + \beta_i R_{mt} + \mu_{it} \quad (4)$$

$$ER_{it} = (\alpha_i + \beta_i R_{mt}) \quad (5)$$

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad (6)$$

Measuring Average Abnormal Return

After calculating abnormal returns using four benchmarks, the average abnormal return is calculated by summing the daily abnormal return for each day in the test period, from t^{-30} to t^{+30} , divided by the total announcements that occurred during that period. The average abnormal return (AAR_t) is found using equation (7) where $\sum AAR_t$ is the sum of all announcements and N is the number of announcements.

$$AAR_t = \frac{1}{N} \sum_{N=1}^N AR_t \quad (7)$$

Measuring the Cumulative Abnormal Return

The cumulative abnormal return (CAR) is estimated using equation (8) where the AAR_t is the average abnormal return on day t during the test period, τ_1 is the beginning of each event window (t^{-30}, t^{-2}, t^{+3}) and τ_2 is the ending of each event window (t^{-3}, t^{+2}, t^{+30}). The CAR shows the average share price reaction, either positive or negative to ECER announcements.

$$CAR = \sum_{T=\tau_1}^{\tau_2} AAR_t \quad (8)$$

⁵³

Also known as Unadjusted Market Model.

Test of Significance

Both of the hypotheses are tested using T-test statistics as proposed by Brown and Warner (1985) in order to determine if the abnormal returns are significant. The calculation of the T-test statistics for daily average returns and cumulative abnormal returns are shown in equations (9) and (10) respectively.

The AAR_t is the average abnormal return, σAR^m is the standard deviation of abnormal return over the estimation period, CAR_{τ_1, τ_2} is the cumulative abnormal returns for three types of event windows during the test period and n is the number of days from τ_1 to τ_2 over which the CAR is estimated. Then, the computed T-test statistic is compared with the critical value⁵⁴ from the normal distribution to test the hypotheses.

$$T\text{-test} = \frac{AAR_t}{\sigma AR^m} \sim N(0, 1) \tag{9}$$

$$T\text{-test} = \frac{CAR_{\tau_1, \tau_2}}{\sigma AR^m \sqrt{n}} \sim N(0, 1) \tag{10}$$

RESULTS AND FINDINGS

Average Abnormal Return

Table 1 shows the result of the average abnormal return (AAR) on five days event windows, which means 2 days before announcement, on the date of announcement and 2 days after announcement. The test period on five days event windows was from -2 day to +2 day which is equivalent to 5 days. From the table, it can be seen that none of the AAR had a significant result. On the day 0 that is referring to announcement day, it shows the negative average abnormal return, -0.69%. However, two days after the announcement day, it was shown a positive abnormal return but it is not statistically significant different from zero.

Table 1: The Average Abnormal Return on a Five days Event Window

DAYS	AAR	T-TEST
-2	-0.13%	-0.1959
-1	0.29%	0.4492
0	-0.69%	-1.0681
1	0.42%	0.6491
2	0.14%	0.2208

⁵⁴ The critical value depends on the significance level (10%, 5%, and 1%) used for testing the hypotheses.

Table 2 shows the average abnormal return before the East Coast Economic Region (ECER) announcement. The test period before the announcement was from -30 days to -3 days which is equivalent to 28 days. Twelve days out of 28 days shows the negative AAR such as day -30 (AAR= -0.88%), day -28 (AAR= -0.97%), day -27 (AAR= -1.40%), day -25 (AAR= -0.25%), day -24 (AAR= -1.16%), day -20 (AAR= -0.46%), day -19 (AAR= -2.47%), day -14 (AAR= -0.05%), day -13 (AAR= -0.79%), day -10 (AAR= -0.06%), day -6 (AAR= -0.50%) and day -3 (AAR= -1.27). Besides that, it also shows that there are seven days from the 28 days that have significant result which is day -27, day -26, day -24, day -19, day -18, day -11 and day -3. Among this day, there are two days that are significantly at 0.01 levels which is day -19 and day -18 while the rest is significantly at 0.05 levels and 0.10 levels. The highest AAR is for the day -18(1.75%) and the lowest AAR is for the day -19 (-2.47%).

Table 3 shows the average abnormal return for 28 days after announcement. From the table, there are four days show the significant abnormal return such as day +6, day +11, day +22, and day +23 but all with the negative abnormal returns. From the four days that show the significant abnormal returns, only one day which is day +22 significant at 0.01 levels while others significant at 0.05 levels and 0.10 levels.

In addition, the highest value for the AAR after announcement is 0.71% (day +7) while the lowest is -2.40% (day +22). All the day after announcement show the negative reaction except for the day +3, day +5, day +7, day +8, day +9, day +12, day +14, day +16, day +21, day +24, day +25, day +28, and day +30. The movement of AAR is not consistent and thus indicates an inefficient market. This finding is consistent with Arif et al. (1998) where they found no significant movements in response to the announcement.

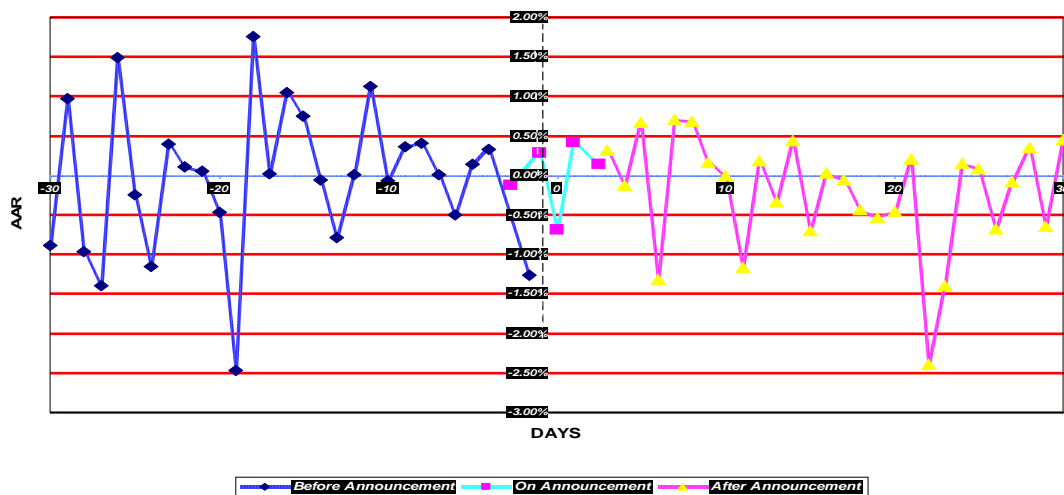


Figure 2: The Average Abnormal Return (AAR) reaction towards the East Coast Economic Region Announcement (ECER). The test period is covered from 30 days before announcement and 30 days after the announcement.

Table 2: The Average Abnormal Return before Announcement

DAYS	AAR	T-TEST
-30	-0.88%	-1.3725
-29	0.97%	1.5034
-28	-0.97%	-1.4995
-27	-1.40%	-2.1704**
-26	1.49%	2.3188**
-25	-0.25%	-0.3891
-24	-1.16%	-1.7967*
-23	0.39%	0.6112
-22	0.10%	0.1624
-21	0.06%	0.0862
-20	-0.46%	-0.7201
-19	-2.47%	-3.8272***
-18	1.75%	2.7185***
-17	0.02%	0.0311
-16	1.05%	1.6316
-15	0.75%	1.1655
-14	-0.05%	-0.0846
-13	-0.79%	-1.2229
-12	0.01%	0.0151
-11	1.12%	1.7416*
-10	-0.06%	-0.0990
-9	0.36%	0.5565
-8	0.41%	0.6297
-7	0.01%	0.0133
-6	-0.50%	-0.7801
-5	0.15%	0.2282
-4	0.32%	0.5031
-3	-1.27%	-1.9647*

*** Significant at 0.01 level

** Significant at 0.05 level

* Significant at 0.10 level

Table 3: The Average Abnormal Return after Announcement

DAYS	AAR	T-TEST
3	0.32%	0.4958
4	-0.12%	-0.1883
5	0.67%	1.0374
6	-1.32%	-2.0493**
7	0.71%	1.0957
8	0.69%	1.0644
9	0.16%	0.2547
10	-0.01%	-0.0120
11	-1.17%	-1.8140*
12	0.19%	0.2911
13	-0.34%	-0.5255
14	0.44%	0.6876
15	-0.70%	-1.0809
16	0.03%	0.0527
17	-0.06%	-0.0857
18	-0.44%	-0.6801
19	-0.54%	-0.8342
20	-0.46%	-0.7144
21	0.21%	0.3253
22	-2.40%	-3.7178***
23	-1.40%	-2.1741**
24	0.16%	0.2411
25	0.08%	0.1291
26	-0.68%	-1.0580
27	-0.08%	-0.1271
28	0.35%	0.5386
29	-0.65%	-1.0068
30	0.45%	0.6932

*** Significant at 0.01 level

** Significant at 0.05 level

* Significant at 0.10 level

On the 28 day before and on the day when the announcement was made show no significant price movements. It also indicates that the result after the announcement is worse than before the announcement of ECER.

Based on Figure 2, it shows the average abnormal return (AAR) movements 30 days before and 30 days after the announcement. From the graph, it can be seen that 30 days before the announcement show a positive abnormal returns, but it is not statistically significant. The movement moves up sharply from -2.47% to 1.75% on the days -18. After the day -18, the movement of the abnormal return moves down sharply to 0.02%(day -17) but starting day -16, the movement of the abnormal return later moves

up sharply to 1.05%. The graph also indicates that the movement after the announcement is smaller than before announcement. The highest value is at day +7 (AAR= 0.71%) and the lowest value is at day +22 (AAR= -2.40) for the 30 days after announcement. It shows that all the abnormal returns after announcement represent the value below 1.00% as compared to some of the abnormal returns before announcement.

Cumulative Abnormal Returns

As been showed in Table 4, the cumulative abnormal returns (CARs) for the test period is the sum of the average abnormal returns. The test period are classified to the three categories that are before announcement, five days event window and after announcement. From the table, CARs show positive reactions using the five days event window (-2 to +2) but it is not statistically significant. Surprisingly, after the announcement period (+3 to +30), there was negative abnormal returns around one to two percent using the OLS market model and statistically significant at the 10% levels.

Table 4: The Cumulative Average Abnormal Return for the Test period

	CAR -30,-3	CAR -2,+2	CAR +3,+30
	Before Announcement	Five Days Event Window	After Announcement
Market Model	-1.30%	0.04%	-5.90%
T-test	-0.3800	0.0246	-1.7314*

* Significant at 0.10 level

Based on Figure 3, it reveals the cumulative abnormal returns (CARs) movements towards announcement 30 days before announcement and 30 day after announcement. Figure 2 also illustrates at a glance that abnormal returns steadily decrease from thirty days before the announcement to thirty days following the announcement, and thus failed to support the signaling hypothesis.

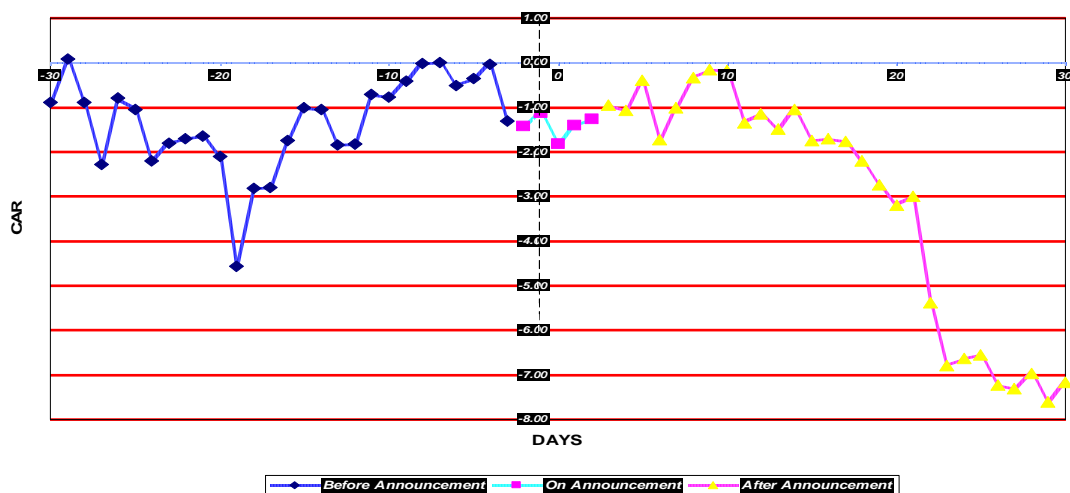


Figure 3: The Cumulative Abnormal Returns (CARs) following the East Coast Economic Region Announcement (ECER) announcement. The test period is covered from 30 days before announcement and 30 days after the announcement.

CONCLUSIONS

Based on the findings, it can be concluded that the average abnormal return and cumulative abnormal returns are not statistically significant on the announcement day. This study has been supported by the similar finding from Lian and Leng (1994). This indicates a weak efficient market since there is no statistically significant towards the announcement. The results also showed that before announcement and on announcement day are not statistically significant while the result after announcement is significant at 0.10 levels and thus lead to the conclusion that ECER announcement has no positive signal to market as well as stock price. The cumulative average abnormal returns for the five days event window are positive but the percentage is not reaching 1%, and thus failed to support the signaling hypothesis.

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BM(12)

ARE ISLAMIC INCOMES RELEVANT TO COMMERCIAL BANKS IN MALAYSIA?

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ABSTRACT

A significant price-to-earnings relation is evident in many research findings, which includes study on Malaysia Stock Markets, that the (a) strength, (b) consistency and (c) magnitude of the relation are not as large as those reported in institutionally more developed markets. However, the price adjustment is stronger if price reaction is measured over a long periods, which is consistent to speculative trading. Firm-specific variables - revenue, firm size, debt-equity and auditor choice – has no incremental information content beyond earnings implies that the market monitoring process in an emerging market focuses on earnings only during financial announcement. Therefore, this paper revisited the study on the relevant of accounting earnings by looking at Islamic Income for commercial banks in Malaysia using the earnings response coefficients, which is the earnings-to-share-return coefficients, that are estimated for sub earnings components by including Islamic banking incomes in the analysis. This paper discovered that though there is a positive effect, the earnings from Islamic banking operation are small. Thus, the total earnings as well as the sub-categories of earnings of banks appear to enter the pricing considerations of investors.

Keywords: *earnings response coefficients, islamic banking, information content, sub earnings variables, bursa malaysia*

INTRODUCTION

In 1980, the Bumiputra Economic Congress, Malaysia had proposed to the Government to set up an Islamic bank in the country. Following that, the National Steering Committee made recommendations on the operation of Islamic banks. After a detailed study, this led to the establishment of the first Islamic bank in Malaysia, Bank Islam Malaysia Berhad (BIMB) in July 1983, with an initial paid-up capital of RM 80 million.

That marked the beginning of the development of the Islamic financial system. BIMB carries out banking business similar to other commercial banks, but along the principles of Syari'ah. (Islamic Principles) The bank offers deposit-taking products such as current and savings deposit under the concept of Al-Wadiah Yad Dhamanah (guaranteed custody) and investment deposits under the concept of Al-Mudharabah (profit-sharing) and not on interest payments but profit shares. The bank grants financing facilities such as working capital financing under Al-Murabahah (cost-plus), house financing under Bai' Bithaman Ajil (deferred payment sale), leasing under Al-Ijarah (leasing) and project financing under Al-Musyarakah (profit and loss sharing).

After 10 years of operation, BIMB can do little as sole Islamic banking institution to promote the Islamic financial system. Therefore, in 1993, Bank Negara Malaysia introduced Skim Perbankan Islam (Islamic Banking Scheme) for three licensed commercial banks to operate as dual banking systems and subsequently extended this dual system in July 1993 to all commercial banks, finance companies and

merchant banks to operate the scheme. The total number of commercial banks that offered this form of financing has increased to 15 (of which 4 are foreign banks) now. This Islamic banking system forms the foundation of the Islamic financial system.

Today, Malaysia has succeeded in implementing a dual banking system, and has emerged as being included among the first nations to have a full-fledged Islamic system operating side-by side with the conventional banking system.⁵⁵ Throughout the years, the Islamic banking has gained its significance, and has been on a progressive upward trend. Since 2000, the Islamic banking industry has been growing at an average rate of 19 percent per annum in terms of assets. The total assets of Islamic banking in commercial bank amount to RM 54 billions (Bank Negara Malaysia, 2004) with the gross income of RM 1.9 billion in year 2004. Islamic income now account for over 5.4 percent of total income of commercial banking industry in year 2006.

This paper aims to study the relevant of the Islamic Income to the commercial banks in Malaysia after more than 15 years in operation. The research goes along the line of the usefulness of earnings studies in the seminal paper by Ball and Brown (1969)

The rest of the paper is divided into four sections. Section 2 contains a brief review of theory and evidence on the earnings-to-returns relation. The reasons for proposing a price effect to earnings disclosures are examined in this section. Section 3 explains the research design, hypotheses, data and variables: methodological issues including that relating to panel regression are also discussed to ensure that the results are robust to a degree. The findings are presented in Section 4 while the paper ends with conclusions and limitations presented in Section 5.

THEORY AND EVIDENCE

Lev (1989) defines a sufficient statistical criterion on the usefulness of accounting earnings numbers or earnings measurement process as the measure R-squared of straight forward regression of equity security returns on earnings realisation. Lev (1989) concludes that the correlation between earnings and stock returns is very low, sometimes negligible. In trying to improve the R-square measures, researchers have related the returns and earnings adjustment to attributes such as earnings yield variables (Strong and Walker 1993), and extraordinary earnings variables (Easton 1990; Ariff, Loh and Chew 1997).

Earlier studies in United States by Horwitz and Young (1974), Gonedes (1975), Eskew and Wright (1976), Bell (1978), and Pastena (1979) all found evidence that the announcement of unexpected extraordinary items affects equity prices, while Gonedes (1978) did not find supporting evidence.

Strong and Walker (1993) show that a considerable improvement in statistical performance can be achieved by working with a more general specification of returns-to-earnings relation. They suggest by

⁵⁵ The first country to implement the dual banking system is United Arab Emirates (UAE) where the Dubai Islamic Bank was established in 1973 with a paid up capital of US\$14 million (Metwally, 1997).

allowing for time series and cross-sectional variation in the regression parameter by including an earnings yield variable, and by partitioning all inclusive earnings into pre-exceptional, exceptional and extraordinary components. The results show that pre-exceptional earnings exhibit both permanent and transitory feature.

Castagna and Matolcsy (1989) provide some Australian evidence that, given the information content of accounting income numbers, the marginal information content of supplementary accounting numbers, like sales, extraordinary items, tax reconciliation and other income, appear to be zero. Easton (1990) uses cross-sectional regression analysis, and finds no evidence of an association between announcements of unexpected extraordinary items and abnormal returns to equity in a similar study for Australia.

Fairfield, Sweeney and Yohn (1996) show that the classification scheme prescribed by the accounting profession does increase the predictive content of reported earnings for US. They find forecasting improvements from earnings desegregation. These improvements go beyond separating extraordinary items and discontinued operations from the other components of earnings. Ariff, Loh and Chew (1997) assess the impact of unexpected extraordinary earnings from information in the accounting statements for Singapore market. The results show that given the operating profit (earnings after corporate tax less minority interest), the information contained in the extraordinary item contributes nothing further towards explaining risk-adjusted returns.

There are also research based on accounting earnings, which can be decomposed into sub-categories as permanent earnings and transitory earnings. Permanent accounting earnings can be thought of as the expected value of future accounting earnings. As time passes the expected or permanent earnings for a given year may change. Events such as strikes and catastrophic events that have impacts on current earnings may precipitate changes as transitory component of earnings. Ali and Zarowin's (1992a) studied the explanatory power of the earnings level variable to answer consistency of responses with the presence of transitory components in annual earnings. They use a sample selection technique through ranking the firm's earnings-to-price ratio, and then estimate separately as to which firm's previous period's earnings are likely to be either transitory or primarily permanent. They categorized the upper and lower rank as transitory in earning and the middle-ranking sample as primarily permanent in earning sample. They show that, with predominantly permanent earnings in the previous period, the incremental explanatory power increases are small compared to a regression model with only the earnings change as an explanatory variable. They also show that, for firms with predominantly transitory earnings in the previous period, the incremental explanatory power and increase in the size of the earning response coefficient are much larger. Ali and Zarowin (1992b) show that, in the presence of transitory components of earnings, the change in earnings may be a poor proxy for unexpected earnings, causing the earnings response ERC to be biased towards zero. This is a potential reason for the widely documented, empirically low ERC (Lev 1989).

All the above studies are on the components of the earnings variable. Earnings variables are decompose into various sub-earnings variables and study their effect on the return-to-earnings relation.

There is no study of this nature for banks. There are some studies on the non-interest income and financial performance at U.S commercial banks (DeYoung and Rice, 2004, Rose 1989). DeYoung and Rice (2004) results indicate that well-managed banks expand more slowly into noninterest activities, and that marginal increases in noninterest income are associated with poorer risk-return tradeoffs on average. Their findings suggest that noninterest income is coexisting with, rather than replacing, interest income from the intermediation activities that remain banks' core financial services function. The other theory is that diversification of banks into nonbank product lines may reduce the risk to banking returns or cash flows provided appropriate portfolio conditions are satisfied. Rose (1989) find evidence consistent with the proposition that individual banking firm risk may be reduced through selected product-line diversification, particularly in the insurance and data processing fields.

The commercial banks of Malaysia have an additional classification of Islamic income in their gross income. There were very few studies on Islamic banking in Malaysia. Previous study on the performance of Malaysian Islamic Bank by Arif (1989), Samad and Hassan (1989) evaluate the performance of Bank Islam Malaysia Bhd (BIMB), the sole Islamic bank in Malaysia in 1989/56. They found that BIMB is relatively more liquid and less risky compared to a group of commercial banks. There is no study on Islamic income for commercial banks of Malaysia. This paper studies the Islamic income components of the ten (10) commercial banks from period year 2000 to 2004 for the first time, that include the Islamic income effect on the return-to earnings relation.

RESEARCH DESIGN, HYPOTHESIS AND DATA

(i) Research Design

This research is designed to identify the stock price revaluation effect arising from earnings changes and earnings components occur in banks stocks in an emerging capital markets.

Analysis of Abnormal Returns: Sharpe's (1963) Market Model as a standard general equilibrium relationship for asset returns is used. Abnormal returns are:

$$AR_{it} = R_{it} - [\alpha_i + \beta_i R_{mt}] \quad (1)$$

With $R_{it} = \ln(P_{it}/P_{i,t-1})$ and $R_{mt} = \ln(I_t / I_{t-1})$. Where, in addition to terms already defined, \ln is natural logarithm and I refers to market's composite index. The market parameters α_i and β_i are estimated by ordinary least square regression over trading periods, -71 months to -11 months (estimation period) relative to the announcement month. The windows of analysis for the ARs are taken as 12 months. The windows of analysis are from the month of earnings announcements to 11 months prior to the announcements.

(ii) Analysis of Unexpected Annual Accounting Earnings

Unexpected annual earnings are computed using the naive expectation model, which assumes that the next period's expectation is simply the current period's annual earnings. This is also consistent with the design of the study to study the contemporaneous effect of price change at a point in time.

⁵⁶ There are 6 Islamic banks of Malaysia in 2005 with total assets of RM42 billion.

Unexpected annual earnings (UEs) are computed using the naive model:

$$UE_{it} = E_{it} - E_{i(t-1)} \quad (2)$$

The unit normal variables are estimated as follows:

$$SUE_{it} = UE_{it} / \sigma(UE_{it}) \quad (3)$$

$\sigma(UE_{it})$: standard deviation of UE

This transformation, which mitigates the effect of changing variance or heteroscedasticity on the variables, yields unexpected value of annual earnings variable adjusted for volatility differences, $\sigma(UE_{it})$.

Studies on returns-to-earnings relation also examine the coefficient in the regression analysis between the unexpected annual earnings as independent variables and abnormal return as the dependent variables. Typically, inferences regarding the information content of annual earnings are based on the significance of the slope coefficient (b) and the explanatory (R^2) of the following linear model estimated cross-sectionally

$$CAR_{it} = a + b * SUE_{it} + e_{it} \quad (4)$$

where, CAR_{it} : is some measure of risk-adjusted return for security i over 12 months period t,

SUE_{it} : is a measure of standardized unexpected annual earnings, and
 e_{it} : is a random disturbance term assumed to be normally distributed.

The slope coefficient of the regression, b, is called the earnings response coefficient (ERC).

The above model is then extended to many studies in the incremental information studies, where additional variables were added into equation (4) above. If any of the coefficients of the additional variables are significant, then the results are interpreted as the variables have incremental information beyond earnings.

(iii) Islamic Income for commercial banks companies

The available evidence indicates that interest income and financial performance are interrelated. Banks with large amounts of interest income have been shown to increase in risk-adjusted performance, while banks with high-quality management should be better at generating interest income. This paper proposes an econometric model that recognizes the return-to-earnings relation and the sub-earnings variables, i.e. Islamic incomes for commercial banks to compare with a prior study by Cheng, Ariff and Shamsheer(2001) on non-banks.

This study tests the relation between abnormal returns as dependent variable and standardized unexpected earnings, unexpected Islamic income and Islamic income as independent variables by using the following formula:

$$CAR_i = a_1 + a_2 SUE_i + a_3 UISI_i + a_4 ISI_i + \varepsilon_i \quad (5)$$

where,

- CAR_i : Abnormal returns over a 12 months window,
 SUE_i : Standardized Unexpected Annual Earnings,
 UISI : ISI₂ – ISI₁.
 ISI : Islamic income/Total Income in percentage.

(iv) Firm-specific variables for non-banking companies. (This section is abstracted from Cheng, Arif and Shamsheer (2001)).

Given that price of stock price is determined not solely by accounting earnings but also by other sources of information about future earnings, this study will also look at the relation between earnings and other information to control the effect of left-out variables in the returns-to-earnings association. Three variables are identified, which are growth in revenue (Swaminathan and Weintrop 1991), firm size (Freeman 1987, Chaney and Jeter 1993, Fama and French 1993), debt-equity ratio (Dhaliwal, Lee and Farger 1991, Ball Kothari and Watts 1993), (Extraordinary earnings are treated separately in the next section as the attribute in earnings)

This study tests the relation between cumulative abnormal returns, standardised unexpected earnings, revenue growth, firm size and debt-equity ratios by using the following formula:

$$CAR_i = a_1 + a_2 SUE_i + a_3 Rg_i + a_4 Size_i + a_5 DE_i + \varepsilon_i \quad (6)$$

where,

- CAR_i : Cumulative Abnormal returns over a specified window,
 SUE_i : Standardised Unexpected Earnings,
 Rg : growth in revenue, $\ln(R_t / R_{t-1})$,⁵⁷
 R_t : Revenue at time period t,
 Size_i : $[\ln(MV_i) - \ln(\min MV)] / [\ln(\max MV) - \ln(\min MV)]$,⁵⁸
 MVI : is the market value of firm i, and
 DE : Debt-equity ratios (Sum of short-term loans and long term's loans divided by shareholders' fund).

Extraordinary earnings. Using Easton (1990) and Ariff et al. (1997)'s method, the non-recurring extraordinary items, which are temporary components of earning are isolated from the permanent earnings variables. Pooled time series cross-sectional regression is done between the cumulated abnormal returns CAR and the unit normal unexpected extraordinary earnings (SUEX_i). The unit normal unexpected earnings, SUE, are defined as:

$$CAR_i = a_6 + a_7(SUE_i) + a_8(SUEX_i) + \varepsilon_i \quad (7)$$

where,
 CAR_i : is a measure of abnormal returns,
 SUE : is the unit normal measure of the unexpected earnings of the firm,
 SUEX_i : $UEX_i / \sigma(SUEX_i)$, and
 $\sigma(SUEX_i)$: standard deviation of UEX for firm i.

If unexpected extraordinary items possess marginal information content, additional to that of

⁵⁷ Log model is preferred because it produces better distribution. There is evidence that skewness is sensitive to log transformation (Singleton and Wingender, 1986)

⁵⁸ The log of market capitalisation is still a very large number, whereas other variables are very small number of decimal point. Therefore squeeze firm size into 0-1 scale. (Elsharkawy and Garrod 1996, Ball and Kothari 1991)

unexpected operating profit (SUE), then the estimated coefficient a_8 should be significantly different from zero.

(v) Hypothesis

The major hypothesis in this study is that a strong relationship exists between risk-adjusted abnormal returns, which represents adjusted share price changes, and unexpected annual earnings changes. The strategic hypothesis is:

Changes in stock prices are explained/determined by the sign and the magnitude of the unexpected annual earnings changes in banks.

The null will be accepted if there is no significant relation between stock price changes and unexpected annual earnings changes. i.e. the t-statistic for a_2 is insignificant.

The subsequent secondary null hypothesis for banks suggests that the cross-sectional Islamic income of the returns-to-earnings correlation do not effect the returns-to-earnings relation.

Islamic income does not effect returns-to-earnings relation.

The null will be accepted if the t-statistics for a_3 , and a_4 are not significant.

The subsequent hypothesis for non-banks suggests that the cross-sectional determinants of the returns-to-earnings correlation do not effect the returns-to-earnings relation. The growth in revenue, firm size and debt-equity ratio also do not effect returns-to-earnings relation. Lastly, changes in the stock prices are explained less by extraordinary (transitory) earnings and more by permanent earnings.

(vi) Data

The data set was mainly accessed from the monthly closing prices, annual earnings and balance sheets information in the following sources: Bloomberg financial data in the Kuala Lumpur Stock Exchange (KLSE); the financial information from the Company Annual Reports and/or the KLSE Annual Company Handbooks; and the annual earnings announcements obtained from Investors Digest and KLSE Daily diary. For commercial banks data relate to the period 2000, after the merger of the financial institutions into 10 banks, to the year 2005. The sample consists of 10 listed and traded banks over the test period. These banks are Affin Holding Berhad, AMMB Berhad, Commerce Assets Berhad, EON Capital Berhad, Hong Leong Bank Berhad, Maybank Bank Berhad, M.Plant Berhad (Alliance Bank), Public Bank Berhad, RHB Capital Berhad and Southern Bank Berhad. The final sample consists of 45 firm-years for analysis.

Data relate to non-banks analysis in Cheng, Ariff and Shamsher (2001) are from the period 1988 to 1997, a period when the stock market experienced two peaks and two troughs. The sample consists of listed and traded non-banks companies over the test period. A total of 160 non-banks companies in KLSE main board were identified with records on earnings announcements. However, only 90

companies were finally selected for analysis. The final sample consisted of 381 firm-years observations for non-banks companies.

RESULTS

The Asian financial crisis of 1997-8 caused serious damage to the banking sectors of countries in the ASEAN region. Malaysia experienced negative growth for the first time in 13 years when it recorded a contraction of 7.5 per cent in Gross Domestic Products (GDP) in 1998. After the crisis, preventive measures introduced strengthened the financial system in order to avoid future risks as well as to ensure continued functioning of the banking sector to promote market confidence even when the economic situation continued to be weak. The measures taken were spread across all aspects of the banking system and included the merging of banking institutions. The financial reform resulted in 54 financial institutions being merged into 10 banking groups. The merger led to each banking group having a minimum shareholders fund of RM2 billion and an asset base of at least RM25 billion, which improved the capital ratio marginally. This bank reorganization is one the most extensive in the region. Therefore, in order to appraise the consequence of the financial reforms, it is meaningful to conduct an empirical study on the earnings components, and how these enter the return-to-earnings relation of banks, which has yet been studied in this economy.

Table 1, Columns 2, 3 and 4 describe the total income, total assets and shareholders' equity of the 10 anchor commercial banks of Malaysia in year 2004. The shareholders' equity of the 10 commercial banks vary from RM 1.8 billion in M.Plant Berhad (Alliance Bank) to RM 14.6 billions in Maybank Bhd. Except for M.Plant Berhad (Alliance Bank) all other commercial banks shareholders' equity are greater than RM 2 billions. In term of total assets, the values vary from RM 23 billions for M.Plant Berhad (Alliance bank) to RM 180 billion in Maybanks. Similarly, except for M.Plant Berhad (Alliance Bank), all the other 9 commercial banks have total assets of more than RM 25 billion. The total assets of all the 10 commercial banks worth RM 696 billion in year 2004. Out of these amount, the Islamic Banking assets worth RM 54 billion (8% of total assets in commercial banks). The total incomes of the commercial banks vary from 1.3 billion in M.Plant Berhad (Alliance Bank) to RM 9.5 billion in Maybank Bhd. The average total income of commercial banks of Malaysia is RM 4.1 billions over average assets of RM 69.6 billions. The average return of total income/total asset is 5.6%.

Table 1: Financial year-end, Total Income, Total Assets and Shareholder Equity (RM'000) of 10 Commercial Banks in year 2004.

Bank	Total Income	Total Assets	Shareholder Equity	Total Income (A)	Islamic Income (D)	D/A %
1 Affin	1,835,502	32,850,037	2,663,138	1,835,502	103,203	5.62
2 AMMB	4,298,955	60,478,610	4,107,473	4,298,955	337,155	7.84
3 Alliance	1,302,636	23,312,763	1,760,423	1,302,636	32,840	2.52
4 Commerce	6,750,468	111,970,661	8,787,739	6,750,468	15,740	0.23
5 EON	1,887,615	33,313,898	2,564,109	1,887,615	131,659	6.97
6 Hong Leong	2,412,044	49,060,405	4,425,498	2,412,044	109,364	4.53
7 Maybank	9,539,403	179,507,427	14,623,436	9,539,403	521,970	5.47
8 Public	4,919,770	92,087,394	8,570,735	4,919,770	380,384	7.73
9 RHB	5,597,444	82,128,422	4,217,134	5,597,444	197,068	3.52
10 Southern	2,051,094	31,466,099	3,472,310	2,051,094	98,574	4.81
Total	40,594,931	696,175,716	55,191,995	40,594,931	1,927,957	4.75
Average	4,059,493	69,617,571	5,519,199	4,059,493	192,795	

Table 1, Columns 5, 6 and 7 show the total income, Islamic income and the percentage of Islamic income/Total incomes for ten (10) commercial banks of Malaysia in year 2004. The table shows that AMMB Berhad has the highest percentage of Islamic income/total income ratio (7.84%) and CIMB has the lowest percentage of Islamic income/total income ratio (0.23%). Commerce Assets Berhad has the lowest Islamic income of 0.23%, because during the bank restructuring all Islamic banking assets and liabilities of Commerce Assets Berhad were transferred to another Islamic bank. AMMB Berhad has the highest Islamic income among all the ten Banks. The average Islamic income/total income ratio for commercial banks is 4.75%. AMMB Berhad, Public Bank Berhad, EON Cap Berhad, Affin Holding Berhad, Maybank Berhad and Southern Bank Berhad have the above average Islamic income. Commerce Assets Berhad, M.Plant Berhad (Alliance Bank), RHB Capital Berhad and Hong Leong Bank Berhad have below average Islamic income/total income ratio.

Table 2 shows the total income and Islamic income from year 1998 to 2007 for the ten (10) commercial banks. The Islamic incomes increase from 0.51% to 5.19 % from year 1998 to year 2007. The increase in the percentage of Islamic income to total income is more than 10 times. In the year 1998, the Islamic income was only RM 130 millions for the 10 commercial banks, however in year 2007, the Islamic income has increased to RM 3.06 billion.

Table 2: Accumulated Total Income and Islamic Income for 10 Commercial Banks (RM '000) From Year 1999 to 2007.

Yr-end	Total Income	Islamic Income	%
31/12/2007	58,929,769.00	3,058,950.00	5.19
31/12/2006	49,202,821.00	2,648,766.00	5.38
31/12/2005	42,959,161.00	2,268,372.00	5.28
31/12/2004	40,594,931.00	1,927,957.00	4.75
31/12/2003	36,497,917.00	1,387,594.00	3.80
31/12/2002	32,525,777.00	1,136,082.00	3.49
31/12/2001	31,008,218.00	863,748.00	2.79
31/12/2000	29,931,950.00	471,584.00	1.58
31/12/1999	30,062,750.00	257,486.00	0.86
31/12/1998	25,548,835.00	130,832.00	0.51
Total	377,262,129.00	14,151,371.00	3.8

Table 3 shows the regression results for the earnings-to-return relation for the commercial banks using Malaysian data from year 2000 to year 2005. Cumulative abnormal return is the dependent variable. Standardized unexpected annual earnings (SUE), unexpected Islamic income/total income ratio, and Islamic banking income/total income ratio are the dependent variables. Model 1 is the regression between the abnormal returns and the standardized unexpected earning (SUE). This is the traditional basic earning response coefficient regression. The models 2, and 3 show the regression results of regressing SUE with other independent variables one at a time. Model 4 is a final regression that includes all the independent variables.

The Unexpected Islamic banking income/total income ratio and Islamic banking income/total income ratio are added in models 2 and 3 regressions respectively as independent variables. The coefficients for SUE are again highly significant. However, the coefficients for other independent variables are not significant at all. This evidences show that the Unexpected Islamic/total income ratio, and Islamic banking income/total income ratio have no information content beyond unexpected earnings. In Model 2, the coefficient for Unexpected Islamic banking income/total income is positive 0.028, which means that the investors still respond in this market (as would also be the case with other markets trading Islamic banking products), positively to any amount of Islamic income. Similarly in Model 3, the coefficient for Islamic Income ratio is 0.005, the investors response positive to the amount of Islamic incomes in the total earnings reported. However, both the coefficients are not significant.

Table 3: Regression Results For Returns-to-Earnings Relation For Commercial Banks of Malaysia From Period 2000 to 2004.

Regression Model: $CAR_i = a_1 + a_2 SUE_i + a_3 UISI_i + a_4 ISI_i + \epsilon_i$. Dependent Variable: Cumulative Abnormal returns (CAR), n= 47.

Independent Variables	Model			
	1	2	3	4
Constant, a1	-0.015 (-0.46) (0.646)	-0.037 (0.614) (0.542)	-0.045 (-1.31) (0.196)	(0.369) (4.99) (0.000***)
SUE, a2	0.062 (9.02) (0.000***)	0.064 (7.53) (0.000***)	0.061 (8.92) (0.000***)	0.059 (4.89) (0.000***)
UISI, a3		0.028 (0.827) (0.413)		0.008 (0.560) (0.578)
ISI, a4			0.005 (0.362) (0.719)	0.002 (0.07) (0.944)
Adj-R-square	0.218	0.186	0.188	0.181
F-stat	12.28 (0.001**)	6.15 (0.004**)	4.47 (0.008**)	7.00 (0.000***)
VIF	1.000-1.000	1.060-1.060	1.001-1.001	1.334-1.693

The final results are from regressing all independent variables with abnormal returns as the dependent variable. The coefficient for SUE is again significant. The coefficients for unexpected Islamic/total income ratio, and Islamic banking income/total income ratio are not significant. The coefficients for Islamic banking income/total income ratio are positive. This positive coefficient means, in terms of the directional effect, that investors view the Islamic banking income in this economy positively in revaluing the share prices and that this effect in this market is in addition to the effect from unexpected changes in total earnings. That is, the sub-category of income from Islamic banking is viewed as weakly important as that of mainstream earning. This new finding is important for commercial banks to plan their future business strategies for growth in the Islamic finance. Malaysia has become a global hub for Islamic banking and finance. That perhaps reflects the emerging importance of this new source of income for the conventional banks as being important for future growth. The growth in the Islamic income in commercial banks will contribute to the growth in the Islamic capital market. The adjusted R-squared value in this Model 2, 3 and 4 ranged between 0.18 and 0.186 which is lower than 0.212 in Model 1, as would be expected with refinements in the methods used. The F-statistics for all the models are significant.

Regression results for Non-banks companies controlling for Firm-specific variables and extraordinary earnings.⁵⁹

⁵⁹ This section of the results are abstracted from Cheng, Arif and Shamsheer (2001) for the purpose of comparison of findings

Table 4 shows the results of multiple regressions aimed at explaining the behavior of stock returns in response to reported earnings of non-banks. In regression (1), (2), (3), (4), (5) and (6) only the SUE variable is significant at 0.001 significance level. None of the other three variables is significant. The result support the subsidiary null hypothesis that there is no information content in revenue growth, firm size, and debt-equity ratio beyond standardised unexpected earnings.

The R-squared values for the regression (2), (3), (4) and (5) have not improved compare with regression (1). Therefore, this shows that the three additional independent variables have no incremental information content beyond the unexpected earnings. The above results are different than those reported for the developed markets, where researcher found that revenues have no incremental information content. However, firm size, leverage/debt-equity ratios and auditor choice have been found to affect the returns-to-earnings relation. Once again this implies that, due to the highly speculative nature of emerging market, investor may react to unexpected earnings only and do so aggressively during announcement.

A final regression was run by adding all the independent variable into a single regression. The coefficients for unexpected earnings, revenues, firm size, and debt-equity variable are 0.0411, 0.0035, -0.0043, and 0.0062 with corresponding t-statistics of 6.652, 0.239, -0.155, and 0.457. The results indicate that only the coefficients for unexpected earnings are significantly different from zero at 0.001 significance level. This confirms the findings from earlier regressions where the variables are regressed one at a time. Further support is provided by the adjusted R-squared value of 0.0921 in regression (6). This is lower than the R-squared 0.1016 equation (1). The conclusion is that the revenue, firm size, and debt-equity variables have no incremental information content in share revaluation in response to reported earnings for non-banks.

Table 4: Results of Returns-to-Earnings Response Model Regression for SUE, Growth in Revenue, Firm Size and Debt-Equity Ratio : n=416

$$CAR_{it} = a_1 + a_2 SUE_{it} + a_3 \ln(R_t/R_{t-1}) + a_4 \text{Size}_{it} + a_5 \text{Debt/Equity}_{it} + e_{it}$$

Independent Variable		Regression Coefficients				
		1	2	3	4	6
Constant	a	-0.0080	-0.0084	-0.0067	-0.0097	-0.0065
	b	(-1.447)	(-1.438)	(-0.511)	(-1.354)	(-0.450)
	c	(0.149)	(0.151)	(0.610)	(0.177)	(0.653)
SUE		0.0410 (6.841***) (0.000)	0.0408 (6.690***) (0.000)	0.0411 (6.811***) (0.000)	0.0412 (6.844***) (0.000)	0.0411 (6.652***) (0.000)
Revenue			0.0034 (0.233) (0.816)			0.0035 (0.239) (0.811)
Size				-0.0030 (-0.107) (0.915)		-0.0043 (-0.155) (0.877)
Debt-equity					0.0051 (0.382) (0.703)	0.0062 (0.457) (0.648)
Adj. R-sq.		0.1016	0.0973	0.0972	0.0975	0.0921
F-statistic		23.68***)	15.77***)	15.75***)	15.80***)	7.94***)
B-P-G		0.265	0.734	2.782	0.776	4.938

SUE = Standardised unexpected earnings
 B-P-G is Bruesh, Pagen and Goldfreed test
 a = coefficients, b = t-statistics, c = p-values, significant at 0.001 (***) level.

The results of the above OLS regression lead to the acceptance of the null hypothesis. The correlation amongst variables used in the regression is estimated. All of the independent variables have low correlation with each other. The highest correlation is between standardised unexpected earnings (SUE) and revenues with a coefficient of 0.2411 and a t-statistic of 4.822 significantly at 0.001 level. However, this value is very small. It is not high enough to indicate the presence of multicollinearity. As a further test for multicollinearity, the condition index, variance inflation factor showed that the result supported there is no multicollinearity.⁹

Regression Results On Extraordinary Earnings. Table 5 shows the regression result. It should be noted that the coefficient a_9 in the regression is of primary interest for the present study. The coefficients for unexpected extraordinary earnings is -0.0065 and with t-statistic of -1.411 respectively. The coefficient for short window is significantly different from zero at 0.05 significance level. The sign of the association is negative. Therefore, the reported unexpected extraordinary

⁹Correlation matrix, condition index and variance inflation factor is available upon request.

earnings has a negative effect on the abnormal returns. This is due to the investor perceptions that the unexpected extraordinary earnings are unfavorable.

Table 5: The Impact of Unexpected Extraordinary Earnings on the Abnormal Returns

Regression Equation: $CAR_{it} = a_7 + a_8 SUE_{it} + a_9 SUEX_{it} + \varepsilon_{it}$							
CAR Variable	A7	A8	A9	F-stat	R-sq. adj.	B-P-G χ^2	AIC
CAR	-0.0051 (-0.936) (0.350)	0.0381 (6.732***) (0.000)	-0.0065 (-1.411) (0.255)	15.8***	0.0952	0.318 df=2	0.0110

Note: Figure in bracket is t-statistics, (***)Significant at 0.001 level), (**Significant at 0.01 level) and (*Significant at 0.05 level)

The R-squared value for the regression is 0.0982 may be compared with 0.1016 in the direct regression between CAR and SUE in Table 4. Therefore, including the SUEX variable in the regression does not improve the explanatory power of this study. However, the R-squared value for the short window is 0.0666 compared to 0.0564 in the regression (1).

Comparing regression results for banks and non-banks companies. Now, by comparing the regression results in Table 3, 4 and 5. The regressions for banks and non-banks. The evidences show that reported earning in banks and non-banks explained most significantly the share price valuation of their stocks. The main results can be derived is that the regression for banks is more significant than non-banks. The R-square from Table 3, Model 1 is 0.212 as compare to R-square from Table 4, Model 1 is only 0.109. Therefore investors revalue banks share more significantly than non-banks. This finding is reasonable, as banks are in an regulated industry with stringent control. Therefore their reported incomes are been judged more significantly, whereas reported earnings of non-banks will have a lot of other factors determining their pricing effects..

The other sub earnings or information in the reported balance sheets or annual reports do not affect the share price valuation. However, the sign of the respective coefficients in the regressions do indicate some directional affects. The coefficients for Islamic income are positive indicate that investors do value the banks share positively on the increase and the amount of Islamic Income reported. In the case of non-banks, the revenue and debt-equity ratios have positive coefficients, which means that the investors viewed the amount of revenue and debt as positive in share revaluation. This logical and consistent with prior study that revenue and debt help to improve profits of non-banks companies. The negative coefficients for size has been documented for many years in many studies. The negative coefficient from extraordinary income is also consistent with many priors studies.

There is no econometric problem in this study. The data used are pooled data, therefore these data do not have auto-correlation problem. Tables 3, 4 and 5 show that the values of Variance Inflation Factors (VIF) lie between 1.000-1.693, which are below the tolerable level, meaning that our research process is mitigated of multicollinearity problem.

CONCLUSIONS

Some pertinent highlights of this study are identified. This study is about contemporaneous accounting earnings effect on share prices in an emerging market with institutional characteristics quite widely documented as being different to those of the more institutionally developed capital markets in the developed economies. As this is a first study of such a market, we designed this research simply on the basis whether the quite robust generally accepted findings about the price-to-earnings documented in several more developed capital markets can be extended to this one emerging market. There are altogether 67 emerging capital markets accounting in 1998 for 19 percent of world capitalisation according to World Bank statistics. The KLSE is probably an example of a market among the more experienced, and institutionally (disclosure standards, investor protection, accounting standards, etc.) experienced emerging market than, for example, China's two markets or Jakarta's or Slovakia's stock exchanges. It is highly unlikely that the findings to be summarised for one market may be generalised to all emerging markets till further research of more markets are attempted. However, some tentative conclusions are warranted.

The findings presented in this paper suggest that accounting earnings is a price relevant variable, and earnings has a contemporaneous impact on share prices in an emerging market. That stock prices change ordinarily in a statistically significant manner in response to earnings increases and decreases is quite evident, as is the case of existing findings. Consistent with the higher riskiness of returns in this market, the size of the price change is much higher than the price changes in the developed market. It should be noted that this large return is not adjusted for higher risk.

Firm specific variables, (revenue growth, firm size, and debt equity) were investigated as to whether any incremental information effect is possible beyond unexpected earnings. The results support no evidence that the firm specific variables have incremental value beyond the value from the unexpected earnings. This indicates the price effect from accounting earnings is much more direct in the emerging market, which is also more speculative and less constrained by differences in firm-related variables. Investors react to unexpected earnings only.

Commercial banks all over the world have embarked on expending into other non-traditional, non-core sources for generating income for businesses. This paper reports the findings of a study applying for the first time the concept of earnings response to commercial banks in Malaysia. Also this study examines the unique Islamic banking income (which is profit-share based earnings) effect on the price-to-earnings relationship. This sources of income for banks contributed 5.19 percent to the total income for commercial banks in Malaysia in 2007.

The contribution of the Islamic banking income has increased tenfold although it is still less than 10 percent of the total income of commercial banks in Malaysia. The results in this study show that the coefficients of the Islamic banking income are positive. This suggests that investors do factor in the increasing share of this source of earnings as positive news, and thus adjust share prices upwards when this information is included in the financial statements. These results are consistent with the general

perception of investors in valuing the intermediation functions of banks as the managers of risks and liquidity providers in the financial system.. That is consistent with DeYoung and Rice (2004) that marginal increases in fee income are associated with poorer risk-return trade off. The investors view the interest income as the permanent incomes and thus at this stage of the market, fee income is valued as negative information in pricing the stocks. This is in line with studies of permanent and transitory income theory of Ali and Zarowin (1992a,b) and Cheng et al. (1996) where transitory earnings have a smaller marginal impact on security returns.

Endnotes

[1] Islamic banking refers to a system of banking or banking activity that is consistent with [Islamic law](#) (Sharia) principles and guided by [Islamic economics](#). In particular, Islamic law prohibits [usury](#), the collection and payment of [interest](#), also commonly called [riba](#) in Islamic discourse. In addition, Islamic law prohibits investing in businesses that are considered unlawful, or [haram](#) (such as businesses that sell alcohol or pork, or businesses that produce media such as gossip columns or pornography, which are contrary to Islamic values). Amongst the common Islamic concepts used in Islamic banking are profit sharing (Mudharabah), safekeeping (Wadiah), joint venture (Musharakah), cost plus (Murabahah), and leasing (Ijarah).

[2] Banks in major Islamic countries and major financial centers (in London, Switzerland, Chicago and Singapore) have adopted Islamic banking principles and the market has grown worldwide in some 76 countries with assets valued at three trillion dollars. Commercial banks of Malaysia operate Islamic banking alongside conventional banking. Thus, the dual banking system is peculiar in this industry, and brings to the banks another fast-growing source of earnings. The total assets of Islamic banking in commercial bank of Malaysia amount to RM 54 billions (or US\$ 15 billion) with the gross income of RM 1.8 billion in year 2004.

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FACTORS INFLUENCING PUBLIC ACCEPTANCE OF GOLD DINAR INVESTMENT IN KELANTAN

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ABSTRACT

Kelantan is the only state in Malaysia that first introduced investment in Gold Dinar. However, the acceptance level among the Kelantanese itself is still scanty. This research therefore, was conducted in objective to identify the factors that might influence public acceptance towards gold Dinar Investment in Kelantan. It concerned on whether their acceptance were related to either social, political, economic or other factors. For this purpose, the researcher used primary data, which is a structured questionnaire and has focused to the respondents' residence in Kelantan. The data were analyzed using SPSS through the descriptive analysis of frequencies, factor analysis, reliability, and descriptive statistic. Thus, the finding from this study shows that economic factors followed by investment reasons, political and social factors influence public acceptance of the public towards gold Dinar in Kelantan.

Keywords: *gold dinar, fiat money, Investment*

INTRODUCTION

Professor Omar Ibrahim Vadillo, a founder of the Morabeteen International Organization in South Africa, first introduced gold Dinar investment in 1983. It's main purpose is for the unification of the economy among the Islamic country (Meera, 2006). In Malaysia, it's former Prime Minister Dr. Mahathir Mohamad was first expressed interest in universal currency (gold dinar) after Malaysia and other Asian countries were attack by the speculators, which leads to financial crisis in 1997 (Mohd Dali, Muhammad, Azizan 2004). He suggested that universal currency (gold Dinar) could be used to help unite Muslim countries due to the fact that, since beginning of Islam, the value of the Islamic bimetallic currency has remained surprisingly stable in relation to basic consumable goods (mahathir, 2001).

Gold is an ideal value keeper. It can be kept for future use and will not be obsolete like fiat money. It is uncreatable and indestructible and does not cause inflation. It is also un-susceptible to exchange rate (Dinar Dirham Research Group 2003). The collapse of Bretton Woods in 1971, lead the world monetary system in inflationary and high volatility. Thus, gold in international trade is seen as a strategic move to protect the interest of nations as far as monetary stability, independence and justice are concerned. It has a stable unit of account. In many peoples mind, an international payment system based on gold, addresses both the issues of monetary stability and justice (Mohamad 2002). In addition, it also assists welfare and sustained economic growth, free from deception, exploitation and oppression (Hifzur 2002).

The need to revisit the gold Dinar as a monetary stability has been voiced out by many scholars and ulama's since 1970s in order to avoid riba and to provide alternative for the Muslim. Even though the gold Dinar could provide justice and stable monetary system, the implementation is not as easy as being said. The developing and less developing countries could not easily transform their system to the gold standard because developed countries would definitely oppose to the system which will make their paper money worthless. In order to avoid disruption in the economic order, the implementation of gold Dinar must be done part by part to ensure success especially in overcoming obstacles, such as the small amount of gold holding among Islamic countries and the minimum level of awareness regarding the usage of gold Dinar for trading transaction (Mohd Dali, Muhammad, Azizan 2004).

Kelantan became the first state in Malaysia to launch its gold dinar coins. Kelantan gold Dinar investment was launched on 20th September 2006. Kelantan gold dinar is similar to the original Islamic Dinar in weight and purity of gold used by previous legend. According to Islamic law, the Islamic Dinar is a specific weight of 22k gold (91.7 percent) equivalent to 4.25 grams while the Islamic Dirham is a specific weight of pure silver equivalent to 3.0 grams. People who bought Kelantan's Gold Dinar is aim to treat it as their new investment tool since the price of gold in Malaysia has increased from time to time which reflected by the international gold price. The fluctuation price of gold is very small and it gives more safety return as compare to the stock market and currency exchange investment. In addition, nowadays, more investors are shifted to gold investment rather than other investment tools since world economic most probably does not prone to the stock market exchange.

It has been almost two years after the launched of gold Dinar Kelantan. Yet, the response from people in Kelantan towards gold Dinar was dreary (*sources: Customer Sales Statistic-January 2007 until March 2008, Kelantan Gold Dinar Distribution Centre, Kota Bharu, Kelantan*). Thus, this study intends to discover factors influencing awareness of gold diner investment among the Kelantanese. Among the factors under study is social, political, and return on investment.

LITERATURE REVIEW

In Islam perspective, an exchange must be made with strict guidelines to ensure stability of prices in the market. These is in view of the fact that any instability or turmoil in the value of currencies will definitely cause trouble in the marketplace and create difficulties for people to carry out transactions and economic activities (Zainal Azam 2005). The idea of revisiting the currency of gold Dinar is an interesting idea in the development of the Islamic countries and its trading bloc.

This present study employed theory of reasoned action (TRA) (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 2000) to seek for the behavioral reasons of an individual towards their decision in gold dinar investment. TRA in this present study is composed of social factors, political factors, economic factors and the degree of perceived investment return from the investment.

Social factor refers to people who go to work or socialize and; folk unities either in local and international level while political factor refers to political believes and support towards government efforts. For investment factor, it includes the stability of international gold price and comparison with other investment vehicles. Others factor refers to response from public and the features of gold Dinar.

METHODOLOGY

220 questionnaires were distributed to the respondents all over Kelantan but only 100 were received and usable. To identify the respondents, simple random sampling method was used which were based on the list in the Yellow pagers. The variables were operationalized using self-constructed questionnaires. The dependent variables and the independent variables were measured using five-point Likert type scale anchored from (1) “strongly agree” to (5) “strongly disagree”.

RESULT AND FINDINGS

Respondent Profile

Out of 100 respondents selected via random sampling, it comprises of 53 percent male and 47 percent female and are all Malays. This might be relatively due to composition of population ethnic in Kelantan where the biggest ethnic is Malay. In terms of age level, most respondents are fall between the age of 21 – 30 years old (44 %) followed by 31 – 40 years old (35 %), 41 – 50 years old, (12 %) and 8 percent and 1 percent for 51 years old and above, and 20 years old and below respectively. The result shows that most of the respondents are young people. In terms of marital status, most of the respondents are married which represents 66 percent and un-married respondents are 33 percent and widower is 1 percent. Most of the respondents are Federal government servant (47 %) and state government servant (13%). Others (business owner and private) are comprises of 40 percent. Surprisingly most of the respondents are holding STPM/Diploma (39%). Bachelor degree holder hold 34 percent and the rest were hold others. Thefore, their income level are mostly within RM1,000 to RM3,000 (77%) and most of them were located in Kota Bharu area .

GOODNESS OF MEASURE

Validity and Reliability test

Factor analysis attempts to identify underlying variables, or factors that explain the pattern of correlations within a set of observed variables. At the same time factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables (Huctheson and Sofroniou, 1999).

From the results of factor analysis, it statistically shows that public acceptance on investment in gold dinar was due to four factors, namely economic factors, investment factors, social factors and political factors. Table 1 presents the results of varimax factor rotation of all variables for public acceptance of gold dinar. Eleven items from Economic factors, was loaded in factor 1 with a variance of 25.6 percent, five items from investment factors loaded on factor 2 with 18.97 percent, two items

from political factor loaded on factor 3 with a variance of 12.09 percent and two items from social factors loaded on factor 4 with a variance of 9.97 percent. The total variance achieved is 66.95 percent.

Reliability test shows that all items are reliable with conbach alpha above 0.8, which means that means that all items has internal consistencies.

Table 1: Factor analysis of factors influencing public awareness of Gold Dinar Investment

Items	Factor Loading			
	1	2	3	4
Q1			.791	
Q2			.796	
Q3	.651			
Q4	.652			
Q5	.594			
Q6	.551			
Q7	.559			
Q8	.678			
Q9				.772
Q10	.665			
Q11		.626		
Q12		.802		
Q13		.719		
Q14		.707		
Q15		.651		
Q16	.501			
Q17	.749			
Q18	.627			
Q19	.741			
Q20				.786
Crombach Alpha	0.853	0.784	0.873	0.842
Eigenvalues	5.115	3.794	2.417	1.994
Percentage of Variance	25.574	18.969	12.087	9.969
Cumulative Percentage	25.574	44.543	56.630	66.599

Descriptive analysis

The main objective of this study is to have a broad overview of what factors influence acceptance of the public towards Gold Dinar. There are various factors that might influence the public in accepting the investment, however, based on the data collected from the questionnaire survey, descriptive statistics are computed as below:

Table 2: Descriptive Statistics for Dependent and Independent Variable

	N	Minimum	Maximum	Mean	Std. Deviation
Economic	100	1.33	5.00	4.1067	.63719
Political	100	1.80	5.00	3.7940	.63783
Investment	100	1.67	5.00	3.9933	.70747
Social	100	1.33	5.00	3.7733	.70254

Descriptive statistics computed include the means, standard deviations, and rank orders of the responses. It involved economic factors, political factors, investment factors and social factors of the public acceptance towards Gold Dinar investment. Descriptive statistics for the final list of variables of the study are shown in Table 2. The measurement scale used is a five-point likert like scale. For ease of interpretation, the range of the 5 point likert scale was categorized into 3 groups. Scores of less than 2.33 ($4/3 +$ lowest value (1)) are considered low acceptance level; and 3.67 (highest value 5 – $4/3$) and above are considered high acceptance level.

In order to answer the research question of, “What are the factors influencing the public acceptance toward Gold Dinar?” Table 2 shows the mean and standard deviation related to those factors. It can be seen that the mean values of all variables fall between 3.7 to 4.0 points. The mean levels of all factors are above 3.67 indicating a high influence towards acceptance of gold dinar. Furthermore, factors related to political and social do not differ by much; indicating that their influence is equally important to the public in accepting gold dinar. Investment factors shows higher influencing factors with mean of 3.99 and economic factors are the most influential in determining the public acceptance towards gold dinar.

Overall, based on the descriptive analysis, it can be concluded that economic factors is the most influencing factors in public acceptance towards gold dinar, followed by investment, political and social factors.

DISCUSSION

This study intends to investigate factors that determine public acceptance towards Gold dinar investment. Rational or irrational behavior were measured based on whether they analyze their investment before deciding to invest or relying on their emotions and frame of references respectively. The direct positive relationship of economic analysis and frame of references was found significant to investment decision making style of Malaysian decision maker. This indicates that the investors neither were relying on their emotions or intuition in making their investment nor exhaustively analyzes their investment before making their decision. Therefore, previous study conducted by researchers like; Elsayed & Martin (1980), Katz (1998), Lamm-Tennant (1994), Meir Statman (1988) was not in line with the current study.

In the current study we found that investors are partially rational in making their investment especially in considering the economic condition. However, references from friends, family and professionals were also taken into their consideration. This argument is consistent with the study done by Hackett and Dominguez (1994). According to Hackett and Dominguez, investors do not make decisions in a vacuum. They may make better decisions by trying to understand the behavioral factors that can influence their judgment for example herd mentality (i.e. following the behavior of others). Herd Mentality on investment decisions has the potential to provide investors with many psychological benefits. Herding reduces the time needed to properly analyze an investment decision. It can also help reduce feelings of regret if the investment choice was a bad one. Investors can find comfort knowing

that they were not alone in their decision. Herding can also be a powerful tool in influencing market movements. It is supported by the argument of Hoffmann and Wander Jager (2003) who identified that, the needs, social interactions and (social) networks effect are keys to understanding micro level investor behavior and macro level stock market dynamics

In addition, the findings of the current study also found that Malaysian investors only relying and analyzing economic condition in making their investment decision. Company's performance, government policy or political conditions locally and internationally was not of their interest. This findings is consistent with the assumption of Friedman, that most of the investors consider economic condition and price movement as the most significant contribution to their gain and losses in investing. Others, such as company's performance, political condition and government policy is considering giving major effect only on the long run.

This empirical study has several limitations. Firstly, the scope of investigation was done only at Kelang Valey. Therefore, in terms of external validity in generalizing the behavior for all Malaysian is still questionable. Secondly, the findings of this study depend largely on the respondent's honesty and integrity. However, if the respondent's answers were bias towards more socially desirable answers, the findings will also indicate biasness. It is known that individuals would agree more on socially desirable answers and disagree more towards socially undesirable answers rather than fully and truly express their feelings and the opinions.

CONCLUSION

The main objective of this study is to identify the factors that are involved in influencing investment decision-making style. From the findings it has been identified that economic condition and frame of references influence investors decision-making style. Results from this study has shed some light on which constructs in the behaviorism model can be better used to answer the real behavior of Malaysian decision maker when making investment decision of either rational or irrational. As the current study found that investors are partially rational in making their investment decision, the insights provided by this study could be used by investors, organization and the government as a foundation to formulate strategies to control and monitor the economic condition and at the same time having more professionals advisor in advising small investors in making their investment decision.

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THE EFFECT OF CURRENCY RISK ON MANUFACTURING INDUSTRIES PERFORMANCES IN MALAYSIA

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ABSTRACT

The study is undertaken with the objective to observe the effect of currency risk on the performances of manufacturing companies in Malaysia. Specifically, the study employs time series Econometrics via Cointegration test and Vector Auto Regression (VAR). The currency risk is proxied by Malaysian Ringgit against American Dollar (RM/USD) while the manufacturing industry performance is represented by Industrial Production Index (IPI). The secondary data were obtained from Bursa Malaysia publications and Department of Statistics of Malaysia. The empirical result shows a significant relationship between exchange rate and industrial performances. To put it differently, as RM depreciates, the performances of the manufacturing firms decline. The test results suggest no long run relation between exchange rate and IPI, but there is a substantial short-run dynamic interaction between them. The study also reveals a significant response of IPI to exchange rate shock irrespective of the sample periods. As such, it is evident that exchange rate plays an important role in influencing the production performances of manufacturing firms in Malaysia.

Keywords: *currency risk, exchange rate, manufacturing industries, industrial production index malaysia*

INTRODUCTION

Previous studies have shown that there were strong relationships between exchange rate and growth in manufacturing industries around the world. This indicates that fluctuations in the exchange rate (currency risk) can leave some detrimental impacts on the performance of manufacturing industries particularly when a country depends upon imported capital goods. Currency risk can be defined as a risk that arises from the fluctuations in price of one currency against other currencies (Hill, 2005).

Okposin and Cheng (2000) investigated theoretical relationship between inflation and a country's economic growth. They also did not rule out exchange rate as one of the key suspects in affecting a country's economic performance. Phan (1999) attributed Malaysia's economic crisis 1997 – 1998 to government's failure in regulating the economic activities. He believes that the crisis resulted from self infliction rather than the work of currency speculators.

Taylor (2000) pointed out that exchange rate movement does have important implications for a wide range of economic variables. Bodnar, Dumas, and Marston (2002) extended this understanding by examining the impact of exchange rate movements on real economy, particularly on prices and profitability. Their findings are consistent with Taylor's conclusions. Claessens *et al.* (2000) advocated that external shocks like sudden drops in foreign exchange rates and aggregate demand can contribute towards private sector's poor performance.

Statistics from Perbadanan Usahawan Nasional Berhad (PUNB) showed that the Asian Debt Crisis had resulted in 45% business failures among its participants. This adverse effect could have been mitigated had manufacturing companies recognized the importance of risk management in protecting their business viability. Chu (2005) attributed the economic downturn in South East Asia during the crisis to the instability of foreign exchange rates.

Based on the findings and facts stated above, it is important for us to pursue a further investigation into explaining the link between exchange rates and performance of manufacturing companies in Malaysia. It is hoped that the findings will help Malaysian manufacturers be more prepared in dealing with financial challenges in the future.

The study is streamlined towards a number of pertinent issues within the framework of Malaysian economy and the following research questions have been developed:

- a) Does foreign exchange affect the performance of manufacturing industries in Malaysia in both long-run and short-run?
- b) Is there a causality relationship between exchange rate and the performance of manufacturing industries in Malaysia?
- c) What type of lead-lag relationship can be established between exchange rate and manufacturing performance?

This study attempts to find out any possible relationship between exchange rates and performances of manufacturing companies in Malaysia. If there is any correlation between the two variables, it is important to see the strength and the direction of the relationship.

Zubair Hassan (1999), pointed out that Malaysia had financial meltdown towards the end of July 1997 and the major fall in the stock prices occurring sometime in the first week of the following month. The Kuala Lumpur Stock Exchange lost its value by 68.58 % during the crisis and the Dollar-Ringgit rate plunged by over 37 % for about a year. He also discovered that the exchange rate was essentially affected by the flight of foreign funds.

Katrina (2002) examined the effects of the exchange rate movements on firm value. They discovered that significant proportion of firms have incorporated currency risk management as a tool in their decision making. They also acknowledged the importance of currency risk management for companies which are involved in international transactions. Maurer and Valiani (2007) also shared the same view over the matter.

Chu (2005) examined pure contagion effects between stocks and foreign exchange markets for each Asian country during the 1997 Asian crisis. As for the contagion effects, strong positive impact of return shocks originating from domestic stock markets to its foreign exchange market during the crisis is found. The relationship between stock market and foreign exchange market is consistent with the Integrated International Capital Asset Pricing Model (ICAPM).

Chaudhry (1998) investigated the long-run stochastic relationship between foreign currency and various assets. The research findings showed evidence of non-stationary. He applied cointegration test and the results provided important implications between currencies and other assets.

Nguyen (2006) studied macroeconomic factors in Japanese industry and discovered that industry risk increased during periods of economics downturn. The value of Yen relative to other currencies was also found to be a significant determinant in industry risk. The foreign exchange exposure is positively correlated with the industry export ratio and negatively correlated with the industry import ratio.

William and Aline (2007) examined the impact of increased exchange rate variability on the stock return volatility of US multinational companies. Their findings showed that the stock return variability of US multinationals increased significantly after the Asian Debt Crisis and service-oriented industries appear to be particularly sensitive to the changing exchange rate conditions.

DATA AND METHODOLOGY

The study applies econometrics time series analysis to measure the impact of exchange rates on manufacturing performances from Jan 1996 through Dec 2005. The Malaysia exchange rate is proxied by Ringgit/Dollar (RM/USD), while the Industrial Production Index (IPI) represents the manufacturing performances in Malaysia.

Econometric analysis is used in this empirical research because the study involves time series data. Engle and Granger (1987) suggested that if the system of variables is cointegrated, then economic forces interact to bind these variables together in a long-run equilibrium relationship. They suggested that an error correction model (ECM) can represent the cointegrated variables⁶⁰.

Evangelia (2001) used a multivariate vector-autoregression (VAR) approach as one of the methods included in her study. She used the VAR technique to capture the dynamic relationship among oil price, real stock prices, interest rates, real economics activity and employment in Greece. Similarly, Juncal and Fernand (2003) used VAR to analyze theoretical relationship between oil price and macroeconomic variables via Augmented Dickey Fuller and Philips and Perron (1988) unit root tests.

Engle and Granger (1987), suggested that if the system of variables is cointegrated, then economies forces interact to bind these variables together in long-run equilibrium relationship. Their empirical studies suggested that an error correction model (ECM) can represent the cointegrated variables. In general, the ECM showed the dependence of the period's price change on the last period's price change thus providing a measures of how far the system is out of long-run equilibrium.

⁶⁰ The ECM has become quite popular and use of such models becoming more frequent. The basic idea behind the ECM is straightforward. Disequilibrium in one period is corrected in the next. For example, in two-variable system a typical error correction model would relate the changes in one variable to past equilibrium errors, as well as to past changes in both variables (Engle and Granger, 1987).

Before testing for cointegration, they apply the conventional unit roots tests such as stationary test for individual time series and integration/segmentation test for currencies and other asset classes.

The research methods used in this study involve unit root test, co-integration test, ARIMA, error correction model (ECM), vector auto-regression model (VAR), and causality test to investigate the relationship between exchange rate (RM/USD) and Industrial Product Index (IPI). The movements of these two variables against the time line are described in Chart 1 while the research framework is summarized in Figure 1.

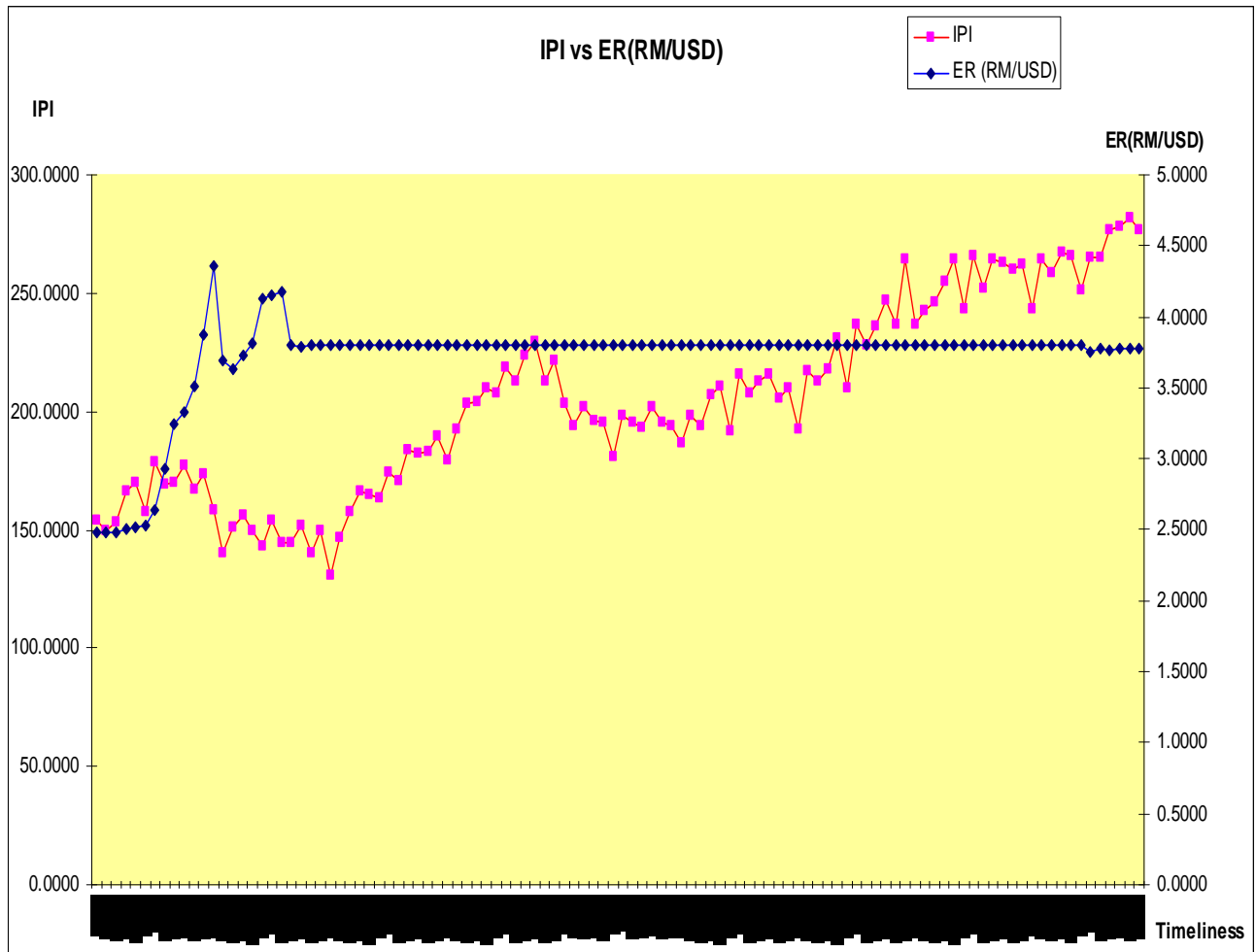


Chart 1: Movement of IPI vs ER (RM/USD)

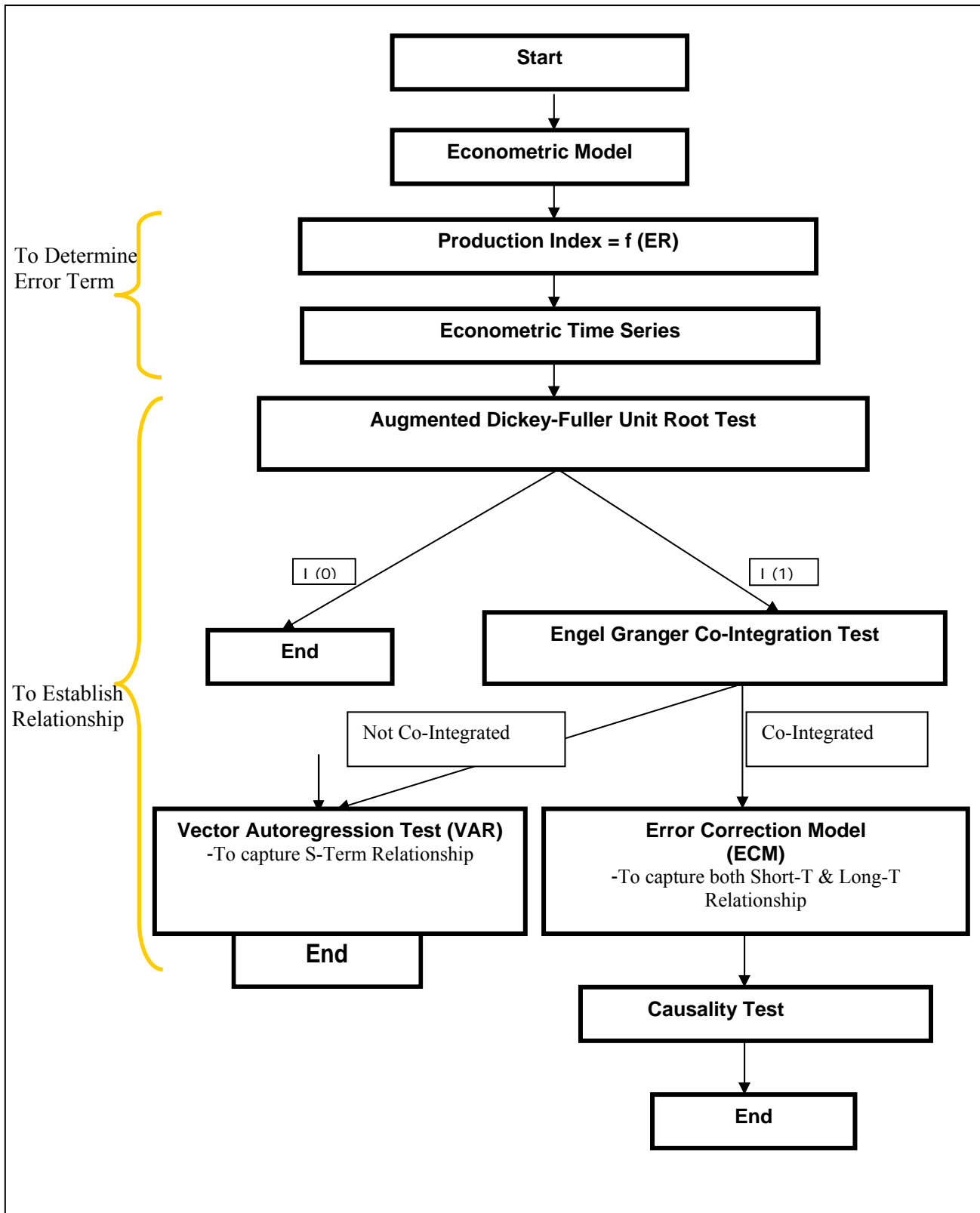


Figure 1: Research Flow on IPI-Performance

This research is quantitative in nature because it is relying mainly on secondary data. Data used in this study is collected from secondary sources, namely Bloomberg Database (Exchange Rates) and Department of Statistics Malaysia (Industrial Product Index).

In developing the model, exchange rate is set as an independent variable whilst Industrial Product index (IPI) is assigned as a dependent variable. The time series analysis involves a linear function and it can be expressed as follows:

$$Y = a + bx + \varepsilon_t \quad (1)$$

where $Y = \text{Industrial Product index}$
 $X = \text{RM/USD}$
 $\varepsilon = \text{Error Term}$

RESEARCH FINDINGS

The empirical research uses SAS 9.1 statistical software to test the econometric modeling. To show the effect of changes in exchange rate (ER) on the performance of Industrial Production Index (IPI), the procedures in time series econometric modeling were deployed. Specifically, the study employs Engle-Granger Co-integration Test and Vector Auto-regression (VAR). As for estimation, the study employs Ordinary Least Squares (OLS).

Firstly, Augmented Dickey-Fuller (ADF) unit root test is mobilized to examine time series data stationarity. A hypothesis testing is carried out to determine the significance level of stationary test, while the P-values are considered to indicate the level of significance. In order to detect the stationary of the data, statistical results from the trend-type analysis in Table 1 is presented. The results clearly show that the Industrial Production Index (IPI) is non-stationary at all lags.

Table 1: Stationary Test for IPI via ADF

Type	H ₀ : IPI has a unit root (non-stationary) H ₁ : IPI has no unit root (stationary)		
	Lags	p-value	Tau
ZERO MEAN	1	0.9845	1.86
	2	0.9916	2.11
	3	0.9714	1.58
	4	0.9885	1.99
	5	0.9613	1.43
SINGLE MEAN	1	0.9214	-0.29
	2	0.9459	-0.10
	3	0.9346	-0.19
	4	0.9746	0.25
	5	0.9222	-0.29
TREND	1	0.4732	-2.22
	2	0.6278	-1.94
	3	0.3280	-2.50
	4	0.5092	-2.16
	5	0.2355	-2.71

Similarly, the same procedure is repeated for Exchange Rates (ER) and the statistical results (as in Table 2) also show exchange rate (ER) is non-stationary at all lags.

Table 2: Stationary Test for ER via ADF

Type	H ₀ : ER has a unit root (non-stationary) H ₁ : ER has no unit root (stationary)		
	Lags	p-value	Tau
ZERO MEAN	1	0.8582	0.67
	2	0.8734	0.74
	3	0.8757	0.76
	4	0.8647	0.70
	5	0.8463	0.61
SINGLE MEAN	1	0.0017	-4.07
	2	0.0005	-4.46
	3	0.0002	-4.48
	4	<.0001	-5.55
	5	<.0001	-6.62
TREND	1	0.0297	-3.66
	2	0.0119	-3.99
	3	0.0038	-4.36
	4	0.0003	-5.12
	5	<.0001	-6.26

The next process involves conducting stationarity tests on both data series at first-differenced. Since it is a requirement in both Error Correction Model (ECM) and Vector Auto-Regression (VAR) for data series to be integrated at first-differenced, another round of stationarity tests need to be conducted on IPI and ER. It is important to note that this process is in compliance with the Engle-Granger Cointegration Procedure. The test results presented in Table 3 and Table 4 indicate that both IPI and ER series are stationary at first differenced. At this point, we can say that both IPI and ER are integrated at first-differenced or I(1). At this point, the study can proceed to Engle-Granger Cointegration test in order to find out whether or not the data series are cointegrated.

Table 3: Stationary Test for First-Differenced IPI via ADF

Type	H ₀ : IPI has a unit root (non-stationary) H ₁ : IPI has no unit root (stationary)		
	Lags	p-value	Tau
ZERO MEAN	1	<.0001	-9.81
	2	<.0001	-5.71
	3	<.0001	-6.18
	4	0.0004	-3.64
	5	<.0001	-4.04
SINGLE MEAN	1	<.0001	-10.22
	2	<.0001	-5.98
	3	<.0001	-6.56
	4	0.0023	-3.96
	5	0.0006	-4.37
TREND	1	<.0001	-10.21
	2	<.0001	-6.02
	3	<.0001	-6.66
	4	0.0111	-4.01
	5	0.0026	-4.48

Table 4: Stationary Test for First-Differenced ER via ADF

Type	H ₀ : ER has a unit root (non-stationary) H ₁ : ER has no unit root (stationary)		
	Lags	p-value	Tau
ZERO MEAN	1	<.0001	-7.24
	2	<.0001	-6.02
	3	<.0001	-4.84
	4	0.0001	-3.98
	5	0.0003	-3.74
SINGLE MEAN	1	<.0001	-7.32
	2	<.0001	-6.12
	3	0.0001	-4.95
	4	0.0016	-4.09
	5	0.0036	-3.83
TREND	1	<.0001	-7.63
	2	<.0001	-6.50
	3	0.0001	-5.38
	4	0.0022	-4.53
	5	0.0055	-4.25

The result presented in Table 5 shows a rejection of null hypothesis (H₀), suggesting that there is a significant relationship between IPI and ER.

Table 5: Test for IPI and ER Relationship

Variable	H ₀ : There is no long-term relationship between IPI and ER. H ₁ : There is a long-term relationship between IPI and ER.		
	Parameter Estimate	Standard Error	t-Value
Intercept	93.26275	40.38924	2.31
ER	30.00656	10.84770	2.77

The results from Dickey Fuller (DF) test and Augmented Dickey Fuller (ADF) test presented in Table 6 show the long-term residuals (τ) suffer from unit roots at all lags. In other words, the residuals are considered to be non stationary and this result leads to two important implications. First, our study cannot proceed with ECM and instead we shall deploy VAR. Secondly, given the residuals are non-stationary; we can say that IPI and ER do not have a long-term relationship. Having this information, further analysis of the study requires the use of VAR and its applications.

Table 6: Stationary Test for Residuals (r)

H₀: Residual have a unit root (non-stationary)
H₁: Residual have no unit root (stationary)

Type	Lags	p-value	Tau
ZERO MEAN	0	0.2279*	-1.15
	1	0.6521*	-0.09
	2	0.6638*	-0.05
	3	0.5572*	-0.35
	4	0.7184*	0.12
	5	0.4523*	-0.61
SINGLE MEAN	0	0.7013*	-1.13
	1	0.9509*	-0.05
	2	0.9565*	0.01
	3	0.9221*	-0.29
	4	0.9719*	0.21
	5	0.8808*	-0.53
TREND	0	0.0565*	-3.40
	1	0.4459*	-2.27
	2	0.4272*	-2.30
	3	0.1505*	-2.95
	4	0.1314*	-3.02
	5	0.0567*	-3.40

Note: 1. Table 6 represent test result for residual (r).

2. * indicates the acceptance of null hypothesis of non stationary at 5% significance level.

Vector Auto Regression Model (VAR)

In the absence of co-integrated relation between IPI and ER, the Vector Auto Regression Model is employed to investigate the short-term dynamics between the two variables. VAR is also a stationary time series modeling and it comes in when the residuals from the regression are found to be non-stationary. In other word, we employ VAR when the data series (IPI and ER) are not cointegrated but they must be stationary at first differenced or I (1) (Abdul Razak, 2007).

In most econometrics modeling, some variables are treated as endogenous and some as exogenous. However, in VAR all variables are treated on an equal footing and that there is no distinction between endogenous and exogenous variables. It is in this spirit that Christopher Sims (1980) developed his VAR model. The term autoregressive is due to the appearance of the lagged value of the dependent variables on the RHS of the equation, while the term vector is due to the fact we are dealing with a vector of the two or more variables.

To explain how VAR model is estimated, we use ER and IPI model. For simplicity, we assume each equation contains two lag values of ER and two lag values of IPI as exogenous variables. We estimate each equation using OLS. Thus, the actual model that we estimate is described as follows:

$$\Delta IPI_t = \alpha + \beta_1 \Delta IPI_{t-1} + \beta_2 \Delta IPI_{t-2} + \beta_3 \Delta ER_{t-1} + \beta_4 \Delta ER_{t-2} + \mu_1 t \tag{2}$$

$$\Delta ER_t = \alpha_1 + \beta_1 \Delta IPI_{t-1} + \beta_2 \Delta IPI_{t-2} + \beta_3 \Delta ER_{t-1} + \beta_4 \Delta ER_{t-2} + \mu_2 t \tag{3}$$

where: μ_1 are called impulse

To forecast, practitioners of VAR deploys Impulse Response Function (IRF). The IRF traces out the response of the dependent variable in the VAR to shock in the error term. Assume μ_{1t} in the ΔIPI_t equation increases by the value of one standard deviation. Such a shock will change ΔIPI_t value in the current period as well as in the future period. Since ΔIPI_t also appears in the ΔER_t equations, the change in μ_{1t} will have impact on ΔER_t as well.

The result presented in Table 7 and Table 8 shows the result from vector auto regression (VAR) test at lag 1 and 2 on Industrial Production Index (IPI). Akaike Information Criterion (AIC), P-values and t-values were considered to indicate the level of significance. In order to detect the significance of the data, statistical results from the lower value of AIC is better. The result clearly shows at Table 8 that the Industrial Product Index (IPI) is dependent variable and Exchange Rate is independent variable.

Table 7: Vector Auto Regression Model at Lag 1

Dependent Variables: dIPI AIC = 784.472618				
Variables	Parameter	Standard Error	t-Value	P-Value
Intercept	2.0605	0.9483	2.17	0.0321
1dER	-16.5422	8.5089	-1.94	0.0546
1dIPI	-0.5522	0.0806	-6.85	<.0001

Table 8: Vector Auto Regression Model at Lag 2

Dependent Variables: dIPI AIC = 777.127065				
Variables	Parameter	Standard Error	t-Value	P-Value
Intercept	2.5070	0.9682	2.59	0.0111
1dER	-12.8983	8.6079	-1.50	0.1372
12dER	-16.2839	8.6663	-1.88	0.0632
1dIPI	-0.6519	0.0984	-6.62	<.0001
12dIPI	-0.1338	0.0977	-1.37	0.1738

Table 9 shows the results that there are have short term relationship between Industrial Product Index (IPI) and Exchange Rate (ER) because F-value is considered to indicate the level of significance.

Table 9: Short-term Relationship Between IPI and ER

Source	DF	Mean Square	F-Value	Pr>F
Numerator	2	304.653558	3.33*	0.0399
Denominator	100	91.549988		
*significant at 5% level				

Similarly, the same procedure was repeated for Exchange Rate (ER) and statistical results (as in Table 10 and Table 11) also show exchange rate (ER) is not significant data to become dependent variable and there are no short term relationship between Exchange Rate (ER) and Industrial Product Index (IPI) (see at Table 12).

Table 10: Vector Auto Regression Model at Lag 1

Dependent Variables: dER				
AIC = -163.67658				
Variables	Parameter	Standard Error	t-Value	P-Value
Intercept	0.009499	0.0108	0.88	0.3825
1dER	0.1140	0.0972	1.17	0.2433
1dIPI	0.001129	0.000921	1.23	0.2231

Table 11: Vector Auto Regression Model at Lag 2

Dependent Variables: dER				
AIC = -157.58675				
Variables	Parameter	Standard Error	t-Value	P-Value
Intercept	0.0107	0.0113	0.95	0.3439
1dER	0.1242	0.1004	1.24	0.2190
12dER	-0.0697	0.1011	-0.69	0.4921
1dIPI	-0.000165	0.001140	-0.14	0.8851
12dIPI	0.000927	0.001148	0.81	0.4216

Table 12: Short-term Relationship Between ER and IPI

Source	DF	Mean Square	F-Value	Pr>F
Numerator	2	0.007387	0.59*	0.5547
Denominator	100	0.012461		
*significant at 5% level				

To forecast, practitioners of VAR deploys Impulse Response Function (IRF). The IRF traces out the response of the dependent variable in the VAR to shock in the error term. The IRF is an ex-post forecasting technique, which is used to provide some degree of robustness in the VAR analysis. The results in Tables 13 and 14 indicate that with one standard deviation shock in ER, the IPI responded by changing its value by 20.90 units. This finding implies the IPI is sensitive towards changes in the value of ER. From the Econometrics sense, we can postulate that ER is an independent variable while the IPI is a dependent variable. Once again, it is evident that the changes in Exchange Rate (ER) will have some impact on Industrial Production Index (IPI) in future period.

Table 13: Simple Impulse Response by Variable

Variable	Lag	IPI = X	ER = X
IPI = Y	1	0.44137	-20.90886
	2	0.73358	-12.85150
	3	0.57792	-18.32146

4	0.65965	-16.33381
5	0.61584	-18.15375
6	0.63855	-17.84887
7	0.62612	-18.57570
8	0.63235	-18.67666
9	0.62876	-19.04038
10	0.63040	-19.20617
11	0.62931	-19.42617
12	0.62970	-19.57407
13	0.62933	-19.72284
14	0.62939	-19.83912
15	0.62924	-19.94508
16	0.62921	-20.03287
17	0.62914	-20.10999
18	0.62910	-20.17532
19	0.62905	-20.23191
20	0.62902	-20.28027

Table 14: Simple Impulse Response by Variable

Variable	Lag	IPI = X	ER = X
ER = Y	1	0.00093	0.98057
	2	0.00038	0.83835
	3	0.00054	0.72812
	4	0.00034	0.62210
	5	0.00035	0.53657
	6	0.00026	0.46013
	7	0.00023	0.39605
	8	0.00018	0.34017
	9	0.00015	0.29262
	10	0.00012	0.25155
	11	0.00009	0.21639
	12	0.00007	0.18612
	13	0.00005	0.16016
	14	0.00004	0.13785
	15	0.00002	0.11869
	16	0.00001	0.10223
	17	0.00000	0.08809
	18	-0.00001	0.07595
	19	-0.00002	0.06552
	20	-0.00002	0.05656

Diagnostic Tests on Residuals

LaGranger Multiplier (LM) Test on Heteroscedasticity

To see whether the error terms have constant variance (heteroscedasticity), LaGranger Multiplier test was performed. The test results are shown in Table 15. From the test statistic in the table above, the study fails to accept Ho at 5% significant level. The error terms have constant variance and this indicates that the residuals are homoscedastic.

Table 15: LaGranger Multiplier (LM) Test

Ho : Residuals are homoscedastic

H₁ : Residuals are heteroscedastic

	LM	Pr>LM
1	0.0015	0.9691
2	1.3094	0.5196
3	4.236	0.2371
4	4.5094	0.3414
5	4.5911	0.4678
6	5.3528	0.4994
7	6.0565	0.5332
8	6.7259	0.5665
9	9.5282	0.3900
10	11.1224	0.3481
11	13.1512	0.2836
12	13.5702	0.3290

Test for Normality

Before any statistical conclusion can be made, the error terms distribution must be checked for normality. The test statistics for normality are based on the empirical distribution function, which involves Kolmogorov-Smirnov, Cramer-von Mises, and Anderson-Darling statistics.

Table 16: Test for Normality

Ho: Residuals are normally distributed

H₁: Residuals are not normally distributed

Variable: r			
Test		Statistic	P-Value
Shapiro-Wilk	W	0.973479	0.0333
Kolmogorov-Smirnov	D	0.072547	>0.1500
Cramer-von Mises	W-Sq	0.132164	0.0423
Anderson-Darling	A-Sq	0.881597	0.0236

The results from Kolmogrov-Smivov (p-Value) in Table 16 indicate the acceptance of null hypothesis at 5% significant level. This means that the error terms are normally distributed.

Autocorrelation Test

Autocorrelation Test was performed in order to examine whether the residual are independent of one another. The test result is presented in Table 17. The empirical findings Durbin-Watson D indicate the acceptance of null hypothesis at 5% significant level.

Table 17: Autocorrelation Test

Ho: Residuals are not correlated to one another
H1: Residuals are correlated to one another

Dependent Variable : dIPI	
Durbin-Watson D	1.9401
Pr > DW	0.5992
Pr < DW	0.4008
Rule of thumb: 1.90 - 2.00 (no serial correlation or autocorrelation)	

Variance Inflation Test (VI)

To examine whether the independent variable are not related to one another, Variance Inflation test (IV) was carried out and the result is as shown in Table 18.

Table 18: Variance Inflation Test

Dependent Variable: dIPI						
Parameter Estimates						
Variable	DF	Parameter Estimates	Standard Error	t-Value	Pr>t	Variance Inflation
Intercept	1	2.50696	0.96820	2.59	0.0111	0
1dER	1	-12.89832	8.60788	-1.50	0.1372	1.04189
12dER	1	-16.28395	8.66634	-1.88	0.0632	1.05623
1dIPI	1	-0.65192	0.09843	-6.62	<.0001	1.51435
12dIPI	1	-0.13385	0.09772	-1.37	0.1738	1.49513
Rule of Tumb : VI < 10 (no multicollinearity)						

The test output shows that all independent variables are free from multicollinearity problem as their variance inflation values are below 10. From the results of the unit-roots test, the IPI and ER are found to be non-stationary. However, after performing ARIMA procedure, residuals from the assumed model (r) are found to be stationary at lag 2.

Cusum Test

Cusum test was performed to examine the structural stability of error terms. The test results from the test indicate a presence of structural break in which this suggests a need to conduct segmentation of

the study period into pre and post crisis time frames. At this juncture, we do not intend to proceed with the period segmentation and we shall leave this task to the future researcher to ponder upon.

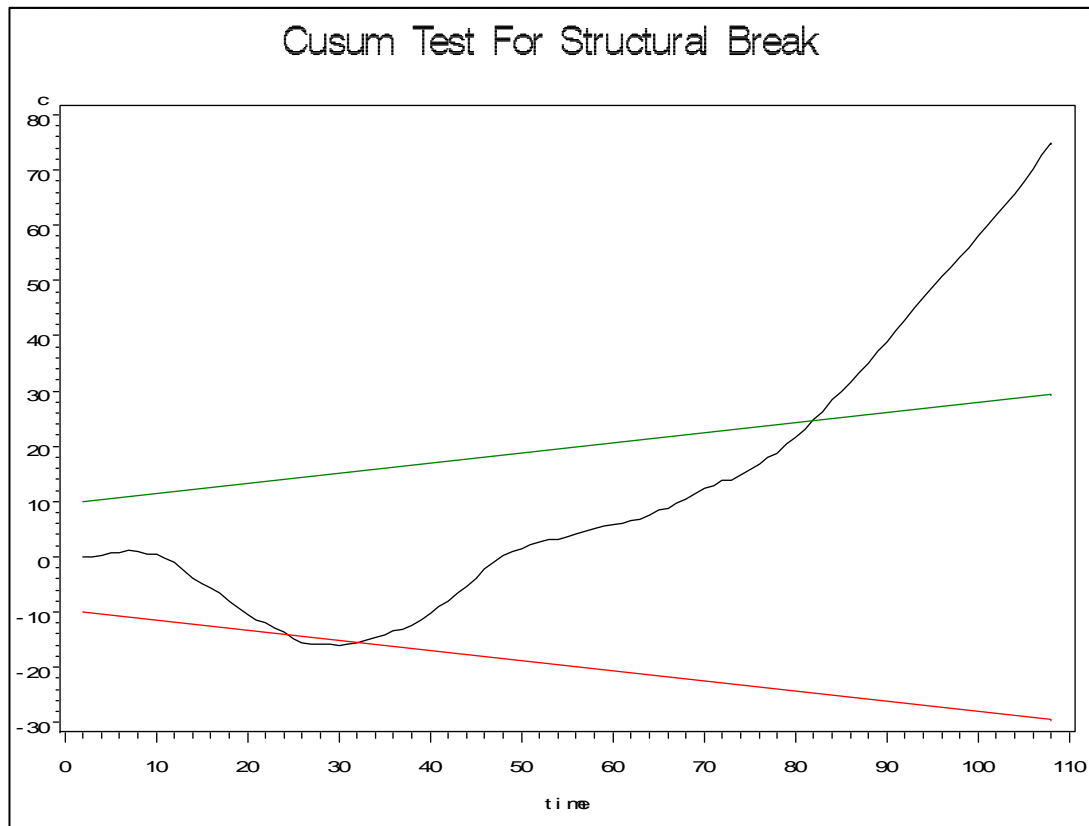


Figure 2: Cusum Test for Structural Break

CONCLUSION

In this empirical research, the study has analyzed the relationship between exchange rate and production output in manufacturing sector in Malaysia over the period from January 1997 to December 2005. From the analysis, the study discovers an absence of long-term relationship between the tested variables, but it reveals a statistically significant short term relationship between Exchange Rate (ER) and Industrial Production Index (IPI).

From the findings of the Simultaneous Wald F-test and Impulse Response Function test, our forecasting model suggests that exchange rate (RM/USD) does influence Industrial Product Index (IPI) in the short-run. Therefore, the idea that Industrial Product Index (IPI) may influence exchange rate (RM/USD) can be nullified.

RECOMMENDATION FOR FUTURE STUDY

Future studies should consider incorporating on vector auto regression (VAR) test. There is no doubt that this study still needs some improvements in order to obtain better results. By adding more variables to it the future study should be able to discover more interesting findings. There is a structural break in the CUSUM test and therefore future researcher should carry out segmentation procedure where only pre-crisis and post-crisis periods are considered.

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AN ANALYSIS OF THE MUSLIM CONSUMERS' ATTITUDES TOWARDS 'HALAL' FOOD PRODUCTS IN KELANTAN

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ABSTRACT

Halal food is becoming a main issue talked about by most of the consumers nowadays since Malaysia plans to be a global hub for Islamic halal food by 2010. The extent and factors determining and influencing the attitude of Muslim consumers in Kelantan is the primary focus of this study. The independent variables examined in this study which ingredients, processing, certified halal logo, ownership and marketing-related factors. The data was collected from 727 Muslim consumers in Kelantan. Regression analysis indicated that four out the five factors (ingredients, certified halal logo, ownership, and marketing-related factors) were found to have significant relationship with consumers' attitude towards halal food product in Kelantan. Specifically, ingredients, ownership and marketing-related factors had a positive effect on halal food product whereas certified halal logo had a negative effect on Muslim consumers' attitudes. This is due to a situation in Kelantan as the state is always considered to be the Corridor of Mecca (Serambi Mekah). Thus, halal logo seems to be a non-issue in their perception. The finding also showed that processing factor did not have an impact on Muslim consumers' attitudes towards halal food product. As such, the food manufacturers should concern with the four factors in order to generate strategies and improve the halal food production.

Keywords: *attitude, ingredients, processing, certified halal logo, ownership.*

INTRODUCTION

Halal is an Arabic term meaning 'permissible'. In the English language, it most frequently refers to food that is permissible according to Islamic law. In the Quran, the holy book and guide for all Muslims, there are exist verses that call for Muslims to seek provisions that are 'halalan toyibban'. The English equivalent for this phrase would mean lawful and wholesome. Therefore, halal is actually about everything from the food we consume to the businesses transactions that are performed in our daily lives. It is the responsibility of a Muslim to ensure that what he practices and consumes is clean, hygienic and not detrimental to either his health or his well-being. Halal is an all encompassing concept which encourages a Muslim to seek and use products, ventures and services that promote cleanliness in all aspects of a person's life. Thus, halal food means that a product or service is safe for consumption, produced in a clean environment and health as well as the next benchmark for quality.

As a progressive, moderate and dynamic Islamic country, Malaysia has become an example to Muslims around the world. Malaysia has taken the lead in many endeavors that have been instrumental in advancing the economic status of the Muslim ummah. Malaysia efforts in promoting Islamic banking, takaful or Islamic insurance, the gold dinar as an international means of exchange, the Islamic bond market, are all significant measures and now effort to promote and lead the way towards a global halal food industry, is yet another manifestation of Malaysia's commitment to a strong and resilient economic system based on Islamic principles. The Government's objective is to make Malaysia a halal

hub for the region and now Malaysia has been globally recognized as the world's halal food hub, despite its cosmopolitan, multi-religious nature. Foreign Muslims are attracted to Malaysia not only by the beautiful scenery and the prevailing peace, but also by the halal culinary delights commonplace in the country.

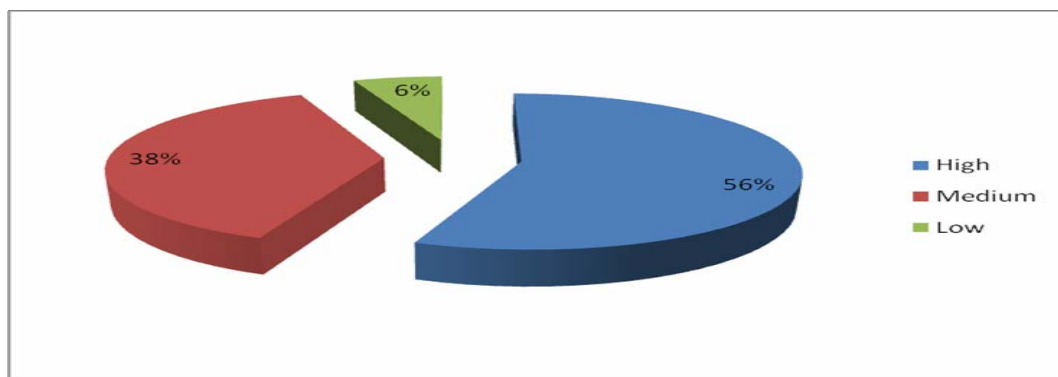
According to Ministry of International Trade and Industry (MITI), quoting sources from the International Market Bureau Canada, the total world Muslim population is estimated to be 1.8 billion, and based on the estimated expenditure per capita for food of US\$0.85 (RM3.23) a day, it is estimated that the market for halal products is US\$560 billion (RM2.12 trillion) a year. This is a huge market for food industry players. In Malaysia, 16 million or 60% of the population are Muslims and if one were to estimate the per capita expenditure for food as RM1 a day, then the demand for halal products is more than RM5 billion a year. Malaysia's trade expanded 2.3 times to reaching RM716.6 billion, with exports increasing 2.6 times to RM 398.9 billion and imports doubling to RM317.7 billion. Malaysia's processed food is exported to 80 countries, with an annual export value of more than RM5 billion (USD 1.3 billion). Malaysia also continues to be a net importer of food products with annual imports of more than RM12 billion (USD 3.2 billion). Companies producing halal food are given Investment Tax Allowance (ITA) of 100% of qualifying capital expenditure incurred within a period of 5 years. The allowance can be off-set against 100% of statutory income in each year of assessment. Being traders for generations, most Malaysian Halal producers have excelled in regional and international markets. All these factors make Malaysia an attractive venue for foreign investors seeking joint-venture partners from the halal sector.

Respected as a modern, peaceful and prosperous Islamic country especially among OIC member countries, Malaysia has the added advantage of championing the halal cause. Malaysia's central position in Asia makes it an ideal trading platform to draw the world's halal players in facilitating the sourcing and selling of global quality halal products through The Malaysia International Halal Showcase (MIHAS). As an international trade fair focused on halal, MIHAS attracts a following of loyal visitors and exhibitors. MIHAS 2007 saw the active participation of 514 exhibitors from 26 countries and attracted a total of 36,792 visitors from 64 countries. Over 55% of these visitors are trade buyers and the who's who in the food and beverage industry from the ASEAN countries. Every year, MIHAS hosts over 400 buyers and matches them with participants of MIHAS from Malaysia. Last year, this programmed resulted in immediate sales of over RM200 million with over RM400 million in the midst of sales negotiation.

Therefore, the focus of this paper is to analyze the attitude of the Muslim consumers toward halal food products in the state of Kelantan, Malaysia. This paper presents the background of the study, issue and objectives of the paper, methodology of the study, review of the relevant literatures, discussion on the results and the conclusion.

PROBLEM STATEMENT AND OBJECTIVES

In our ever progressive world, it has become increasingly challenging for Muslims to determine whether the food or drinks they consume are religiously acceptable or halal. This halal and non-halal problem is not only limited to food and beverage but also to other products and services. The concept of halal is a key consumption for all the majority of the Muslim in Malaysia's and halal certification issued by the Malaysia's Department Islamic Development (JAKIM) are the main sources of references regarding the halal status. This certification granted the companies the use of halal logo for printing on their products' packaging or for the display at the company's premises. However, according to Halal Industry Development Corporation (HDC) which is responsible toward the integration and implementation of halal hub development revealed that the level of understanding Muslim consumers toward halal concept.



Source: Merdeka Centre Domestic Halal Market Study 2005

Figure 1. Illustration of The Halal Concept: The level of understanding among Muslim consumers

The above table indicates that, out of the 732 respondents' only 56% Muslims are really understand the concept of halal where as the rest revealed about 38% at the medium level and 6% are still low in the respect of understanding the halal concept. It becomes a crucial for the country with most population consisted of Muslim and Malaysia was committed to become a global hub for Islamic halal food in 2010. In daily life, Muslim consumers have to face with a broad selection of products and services especially food product producers which sometimes could lead to questionable issue regarding the halal status. Thus, the study intends to determine the Muslim consumers' attitudes towards halal food products. Having said the above, the objectives of this paper are to determine the following:

- The factors that influence consumers' attitudes towards halal food products in the market
- The most factor that influencing consumers' attitudes towards halal food products in the market

LITERATURE REVIEW

The Nature of Consumer Attitude in Food Consumption

Most researchers agree that attitudes refer to that mental state of the individual which represents his positive, negative or neutral feelings toward an object, concept or idea. Attitudes have become an important area of study in psychology largely because of a widely held belief that they precede the

individual's behavior toward the object or concept, and hence can be used as important predictors of behavior. Whether or not attitudes precede behavior is a moot question. The more recent definition of attitude given by Fishbein and Ajzen (2000) is the degree of an individual's positive and negative feeling towards the particular object or towards the intention of performing the particular behavior. In a consumer behavior context, an attitude is a learned predisposition to behave in a consistently favorable or unfavorable way with respect to a given object. Attitudes occur within a situation and that the situation can, and will, influence the relationship between attitude and behavior. A consumer can have different attitudes towards the same product depending on the situation (Shiffman and Kanuk, 2006).

Many different models have been proposed to explain consumer behaviour towards food in general (Sparks & Shepherd, 1992; Thompson, Haziris & Alekos., 1996; Conner & Sparks, 1996; Grunert, Larsen, Madsen & Baadsgaard., 1996). However, no study has ever focused specifically on investigating the determinants of halal meat consumption. In food context, including organic food products and genetically modified food, the theories which were most frequently applied are theory of reasoned action and the theory of planned behaviour (Radman, 2005; Corner & Norman, 2002; Norman & Conner, 2006; Olsen, 2007). The model of buying behavior of food products (Acebron, Mangin, & Dopico, 2000), behavioural perspective model (Leek, Maddock & Foxall 2000), and classical attitude behavior model (Trondsen, Braaten, Lund & Egen 2004). In general, these applications all showed that choice and motivation toward food consumption are driven by attitude toward the product, social pressure and expectation, and perceived behavioral controls over barriers and difficulties for the consumption.

Consumer Attitude Towards Halal Food and Its Consumption

In determining customer attitude, the value brought from the product is the main factor in getting a high level of acceptance. Then it can be followed by the services given and the other value-added to the product. But in halal issue, customer gave more attention from the basic which consumers determined the raw materials of the food products and what it is made from. The product should consist of halal sources which followed the Syariah Law. The Halal foodstuffs should not containing ingredients "Haram", illicit, like gelatine, alcohol, pig, animal greases like certain products such as prepared candies, yoghurts, cakes, biscuits, and dishes. As cited by (Regenstein, Chaudry & Regenstein 2003), in many food products, gelatin is probably the most controversial of all modern kosher and halal ingredients. According to Abdullah A. Saleh (1999), U.S Embassy, Malaysia is an open market for food ingredients which meet with local purchasing criteria. The ability to supply halal ingredients is very important. Most Malaysian businesses produce halal food and beverages so they can maximize on the opportunities that are available in the whole of Malaysia's population.

Halal food market exists wherever there are Muslim consumers whose taste and preferences are governed by halal rules on food specification. Halal food may apparently be the same as other food, but its nature, techniques of its processing involving ingredients, handling, use various methods from the beginning to the end. According to Mohamed El-Mouelhy (2001) in keeping the customer loyalty, the halal nature of the product is must beyond doubt in order to create continuously customer's trust

respectively to the entire halal food product. The needs, behaviour and attitudes of the people are another factor towards consuming of halal food. Research conducted by (Guntalee, Rvenrom & Sawika 2005), in the United Arab Emirates, towards Thai halal package food reveal that, to sell the Thai food product in muslim countries, the producers must do everything in the production process in order to meet the halal specifications and to build customers trust towards the product produce. Thus, the elements of trust are involving how the product has been processed which can be the factors to stimulate someone to response.

As cited by (Aitelmaalem, Breland & Reynold 2005) that the main factor influencing Canadian Muslim's meat purchasing decisions is having confidence and trust that the product is halal since consumption of halal meat is an integral part of the Canadian Muslims' religion and culture.

Food packaging labels are meant to be more than just attractive artwork to catch the eye of the consumer. One source of consumer information is the product label and information displayed on the product package (Dimara & Skuras, 2005). Halal food certification refers to the examination of food processes in its preparation, slaughtering, cleaning, processing, handling, disinfecting, storing, transportation and management practices. According to (Guntalee, et al., 2005), the producers must have the halal symbol or halal certification to show the products are religiously lawful according to the holy Quran. In addition, the people in Muslim countries have gradually changed their attitudes, and sensitive towards the quality, in ensuring all must be complied with the characteristic of halal food. In Canadian halal meat market study, the establishment halal certification is important to ensure all the the halal product should be processed in conditions that are free from contamination from haram (illegal) products such as blood, blood related products, pork and non-halal products. The successful market entry also will depend on adherence to the religious laws of Islam and it's essential and fundamental to implement the halal label (Aitelmaalem, et al., 2005). In general, consumer attitude and behaviour towards food are determined by individual and environmental factors, such as marketing, information, situation and food specific properties. As cited by (Bonne, Vermeir, Blacklair & Verbake 2006) indicates that, consumers express doubts about the halal status since of quality label for halal meat does not yet exist in Belgian. Therefore, consumers only get the information about the halal status from Islamic butcher which respect to freshness, taste and slaughter method.

It is concerned with consumers' perception towards organization or ownership of businesses which are producers in produces the product or services. The ownership is important because it can reflect the image of the organization. The image depends on technical and functional quality, price, external communication, physical location, appearances of the site, competencies and behaviors of services firm's employee. According to (Shiffman & Kanuk, 1994), company image is important to the manufacturers because favorable image generally find that their products are accepted more readily than those manufacturers who have a less favorable or a 'neutral' (i.e. ordinary) image .The researcher believed that the ownership will make the added value for customer to purchase a halal product and convinced it's clean and sacred. This has been strengthened by the awards given to several companies which has complied all the halal procedure from the starting point of making a product (input) to

output. For example, Al Islamic foods, the foremost provider of quality 'Halal' products in the Middle East, received the award for 'Most Creative Marketing Campaign' at the recently held 'Halal Journal Awards, 2006. The award, which further proves the success of Al Islami's unique and dynamic marketing strategy, also brings new challenges for the company in the form of higher expectations from its customers. Therefore, while the image of company is in a good position, the customer expectation becomes higher.

According to Shiffman and Kanuk (2006) price perception is about how customers see a product's price, as high, low or fair. They also stated that perception of price unfairness affect consumers' perceptions of value and ultimately their willingness to buy a product. Furthermore, past research suggests that contexts in which product information is evaluated can influence whether price information will be used to determine the product's quality more than the monetary sacrifice or vice versa (Monroe, 1990; Peterson and Wilson, 1985; Zeithaml, 1988; Suri and Monroe, 1999). In other words, product quality, as a variable relating marketer's action to consumer's response (Bolton and Drew, 1991; Lichtenstein and Burton, 1989), has been applied to a variety of marketing decisions, including product-price mix (e.g. Boulding, Kalra, Staelin & Zeithaml 1993); Hauser and Simmie, 1981; Lambert, 1980; Shugan, 1985), competitive positioning (e.g. Phillips, Chan & Buzzellg 1983) ; Rao and Monroe, (1988); Tellis and Gaeth, (1990), and new product planning (e.g. Gale & Klavans, 1983; Moorthy & Png, 1992). Beside that, promotion is used by organizations to communicate with customers with respect to their product offerings (Rowley, 1998). In this sense, promotion is one side of the communication process with customers and one of the key 4Ps in the marketing mix (Dibb, Simkin, Pride & Ferrelet 1994) as well as a key role to play in market success. A well-chosen brand name can produce a number of specific advantages including suggesting product benefits and contributing to brand identity, simplifying shopping, implying quality (McNeal & Zerren, 1981), evoking feelings of trust, confidence, security, strength, durability, speed, status and exclusivity (Shimp, 1993) Once customers have made a decision about a brand and its associations, they are often loyal to that brand, continue to buy it in the future, recommend it to friends, and choose the product over others, even those with better features or lower prices (Assael, 1991). Positive image towards a particular brand is to be influencing customer in their choice of food product. From a consumer perspective, brands are important quality cues and make it easier to infer quality (Grunert & Valli, 2001)).

HYPOTHESIS TESTING

- H1: There is a significant and positive relationship between product ingredients and consumers' attitudes towards halal food products.
- H2: There is a significant and positive relationship between processing of product and consumers' attitudes towards halal food products.
- H3: There is a significant and positive relationship between certified halal logo and consumers' attitudes towards halal food products.
- H4: There is a significant and positive relationship between ownership and consumers' attitudes towards halal food products.
- H5: There is a significant and positive relationship between marketing-related factors and consumers' attitudes towards halal food products.

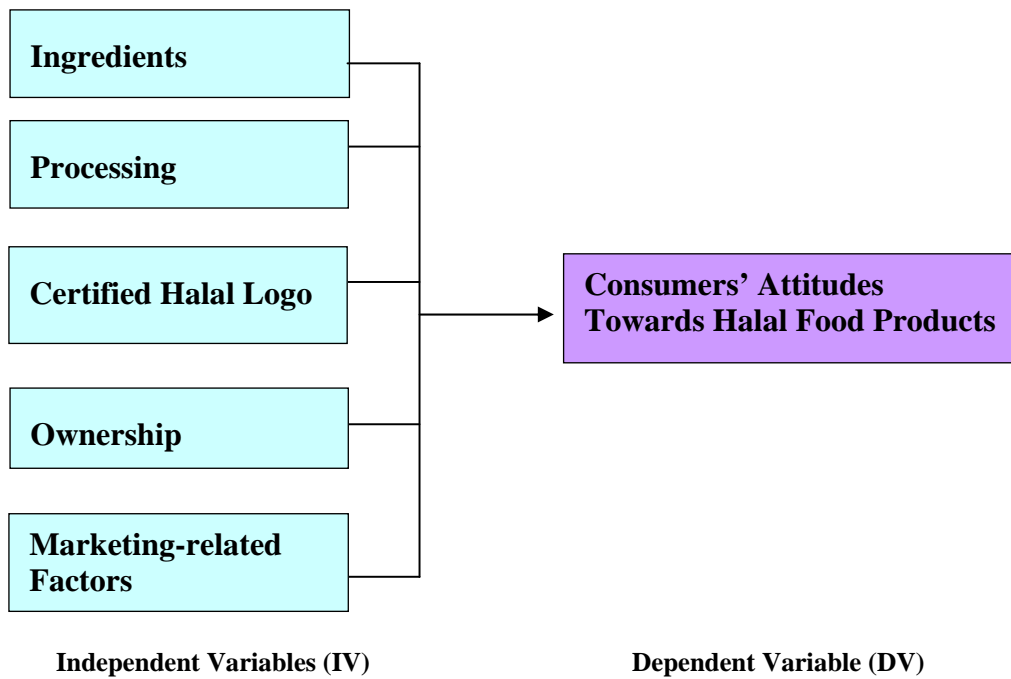


Figure 2. Theoretical Framework Model Relating Ingredients, Processing, Certified Halal Logo, Ownership and Marketing-related factors to Muslim Consumers' Attitudes towards Halal Food Products

METHODOLOGY

Research Design

A descriptive research was carried out to measure several variables of interest such as ingredients, processing, certified 'halal' logo, ownership and marketing-related factors with the use of a well designed questionnaire. The questionnaire was divided into 7 sections; Section A (demographic), Section B (types of product), Section C (ingredients), Section D (processing), Section E (certified 'halal' logo), Section F (ownership) and Section G (marketing-related factors). Responses to the items were made on a 5-point Likert scale (1=Strongly Agree to 5= Strongly Disagree. The attitudes of the Muslim consumers were measured by looking at the factors influencing customers' perception of the 'halal' food products. Frequency Distribution, Coefficient Correlation and Multiple Regression were used to analyze the data collected. As in the following table, Reliability Coefficients was used to test reliable or relevant of the questions asked in questionnaires according to the variables. The Cronbach alpha for all items including the independent and dependent variables exceeded Nunnally's (1978) minimum requirement of 0.70. This result indicates that the measurements used in this study are statistically reliable.

Table 1: Reliability Coefficients of All Items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.799	.755	71

A questionnaire was used to gather the information required for the study using a non-probability sampling technique because of non-availability of a sampling frame. A total of 800 questionnaires were distributed to the general public at some locations in state of Kelantan, Malaysia. In all, a total of 727

questionnaires were returned, representing a response rate of 90.9%; the high response due to the fact that researchers were involved in the distribution and collection of questionnaires.

The hypotheses were tested to show significant relationship between sample of respondents and the extent of variance in dependent variable as explained by the independent variables.

RESULTS AND DISCUSSION

Profile of Respondents

This section presents the demographic profile of the general public who participated in this survey.

Table 2: Summary of Profile of Respondents

Demographic Variables	Categories	Frequency	(%)
Gender	Male	312	42.9
	Female	415	57.1
Age	20 and below	74	10.2
	21 – 30	294	40.4
	31 – 40	178	24.5
	41 – 50	134	18.4
	51 and above	47	6.5
Marital Status	Single	273	37.6
	Married	428	58.9
	Divorced/Widowed	26	3.6
Secondary School	National Secondary School	592	81.4
	National Religious Secondary School	128	17.6
	Never been in Secondary School	7	1
Highest Academic Qualification	SPM and below	229	31.5
	STPM or Diploma	261	35.9
	Degree	206	28.3
	Master or PhD	21	2.9
	Others	10	1.4
Working Sector	Self-employed	96	13.2
	Private Sector	153	21
	Government Sector	319	43.9
	Unemployed	159	21.9
Monthly Gross Income	RM1000 and below	293	40.3
	RM1001 – RM3000	295	40.6
	RM3001 – RM5000	116	16
	RM5001 and above	23	3.2
Total		727	

As presented in Table 1, 415 (57.1%) were female respondents. As it has been expected, the number of female respondents is higher than male respondents since the respondents of this study were among general public. Most of the respondents ages between 21 to 30 years old. More than 50% of the respondents are married and have a family. Out of 727, only 17.6% or 128 of the respondents came from national religious secondary school background and majority of others came from national secondary school background which represents about 81.4%. Majority of the respondents who involved in this study possess the academic qualification level from STPM/Diploma (35.9%), SPM and below (31.5%), and Bachelor Degree (28.3%). The rest of the respondents possess Master/PhD and others with 2.9% and 1.4% respectively. It is shows that only a small number of respondents who involved in this study holding a Master or PhD. 43.9% of the respondents were government servant and most of

them or 295 (40.6%) were receiving the gross income about RM1001 till RM3000 thousand a month and only 23 (3.2%) that monthly gross income more than RM5001 thousand.

Means and Standard Deviations of Variables Measured.

Table 3: Means and Standard Deviations of the Study Variables

Variables	Mean	Standard Deviation
Ingredients	3.06	0.39
Processing	2.90	0.46
Certified Halal Logo	2.57	0.44
Ownership	3.97	0.67
Marketing-related factors	3.36	0.36
Attitude Towards Halal Food Product	3.18	0.34

The mean value for the independent variables varies from as low as 2.57 to as high as 3.97 with standard deviation varying from 0.34 to 0.67. Since ownership factor has the highest mean of 3.97, it shows that majority of the respondents agree on this factor and have a positive attitude towards the factor. In terms of attitude towards halal food products, the mean score was 3.18 with a standard deviation of 0.34.

Analysis of Relationship between Variables.

Table 4: Pearson Correlation between Dependent and Independent Variables

		Dependent Variable	Independent Variable				
		Attitude	Ingredients	Processing	Halal Logo	Ownership	Marketing related factors
Attitude	Pearson Correlation	1					
	Sig. (2-tailed)						
Ingredients	Pearson Correlation	.123(**)	1				
	Sig. (2-tailed)	.001					
Processing	Pearson Correlation	.039	-.030	1			
	Sig. (2-tailed)	.296	.417				
Certified Halal Logo	Pearson Correlation	-.249(**)	.021	-.273(**)	1		
	Sig. (2-tailed)	.000	.566	.000			
Ownership	Pearson Correlation	.444(**)	.068	-.133(**)	-.210(**)	1	
	Sig. (2-tailed)	.000	.067	.000	.000		
Marketing-related factors	Pearson Correlation	.231(**)	-.002	.178(**)	-.219(**)	.184(**)	1
	Sig. (2-tailed)	.000	.966	.000	.000	.000	

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

The above analysis shows that 4 variables are significantly correlated except for variable 'processing'. It indicates that ingredients, certified halal logo, ownership and marketing-related factors have shown significant correlation to Muslim consumers' attitudes towards halal food products. However, certified halal logo seems to have an inverse relationship with attitude, indicating a situation that is quite familiar in Kelantan as the state is always considered to be the Corridor of Mecca (Serambi

Mekah). Thus, the halal logo seems to be a non-issue in their perception. For consumer in Kelantan, food products are generally halal and manufactured accordingly.

Table 5: Multiple Regressions Analysis
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.547(a)	.300	.295	.39416	1.839

a Predictors: (Constant), marketing-related factors, Ingredient, Processing, Ownership, Halal Logo
b Dependent Variable: Attitude

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.932	5	9.586	61.702	.000(a)
	Residual	112.019	721	.155		
	Total	159.950	726			

a Predictors: (Constant), marketing-related factors, Ingredient, Processing, Ownership, Halal Logo
b Dependent Variable: Attitude

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.017	.258		7.820	.000
	Ingredients	.129	.037	.109	3.482	.001
	Processing	.015	.035	.014	.431	.667
	Halal Logo	-.169	.036	-.158	-4.654	.000
	Ownership	.288	.023	.413	12.466	.000
	Marketing-related factors	.203	.043	.156	4.779	.000

a Dependent Variable: Attitude

An examination of the above table revealed that, four variables namely ingredients (T=3.482, p<0.05), certified halal logo (T=-4.654, p<0.05), ownership (T=12.466, p<0.05), marketing-related factors (T=4.779, p<0.05) were found to have a significant effect on attitude of Muslim consumers' towards halal food products. It can be concluded that ownership is the most important factor while processing factor was not considered important. Besides that, factor of certified halal logo have shown a negative relationship on Muslim consumers' attitudes due to the areas and respondents where the research was takes place which is in State of Kelantan. In all, 30.0% (R-square=0.300) of the variance in attitude towards halal food products were explained by the independent variable. Even though the R-Square of 30% is a bit low, however it is fairly sufficient to suggest feasibility of the model.

CONCLUSION

The purpose of the study was to investigate the factors influencing Muslim consumers' attitudes towards consuming halal food products in the State of Kelantan. The results obtained showed that ingredients, certified halal logo, ownership and marketing-related factors are important drivers in influencing a consumer's attitude towards halal food products. The data obtained from this current

study also revealed that there is a direct and positive effect of ingredients, ownership and marketing-related factors on consumers' attitudes when it comes to accepting and adopting the halal food products. This finding seems to indicate that Muslim consumers in Kelantan are likely to adopt positive attitude towards halal food product if the factors of ingredients, ownership and marketing-related factors are taken seriously by the marketer when manufacturing the halal food products. One very interesting findings of the study is that the factor of certified halal logo tends to have a negative attitude towards halal food products. This can be attributed to the fact certified halal logo is a non-issue in Kelantan. Apparently, it is due to all food products sell in Kelantan which also known as 'Serambi Mekah' are perceived to be halal by majority of the consumers. Therefore, consumers tend to ignore the halal logo while adopting and consuming the food products.

From marketing perspective, the findings obtained from this research seems to suggest that managements of halal food products need to understand the significant factors mentioned above (ingredients, certified halal logo, ownership and marketing-related factors) and take this into consideration when strategize their food business in order to maximize returns.

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PERCEPTION OF KNOWLEDGE MANAGEMENT AMONG SELECTED FEDERAL GOVERNMENT DEPARTMENTS IN KELANTAN

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ABSTRACT

Knowledge management is a growing field that has attracted the organizations all over the world. Organizations are now considering knowledge as the most important intangible asset that need to be fully managed and utilized. In the new millennium, the concern of Government of Malaysia in developing the nation through knowledge economy has become apparent. Nevertheless, the implementation of knowledge management especially in the public sector organizations is inevitably challenging nowadays. Strong demands and expectations from the public for efficient public services delivery coupled with global challenges in the knowledge economy era are driving organizations to consider knowledge management as the strategy to cope with these dynamic factors. However, knowledge management as a discipline is still in the earlier stage of implementation in Malaysia. To achieve an in-depth study, federal government departments in Kelantan are chosen as the targeted population. Data is collected through questionnaires survey with the middle and senior management government officers. Responses from the survey will determine to what extent their perceptions about the knowledge management. Thus, this study also attempted to improve the level of understanding on the topic among these departments to assist them in formulating a well-defined knowledge management strategy.

Keywords: *knowledge management, government of malaysia, knowledge economy, federal government departments, and kelantan.*

BACKGROUND OF THE STUDY

Most countries are now moving steadily from an information age to a knowledge age where knowledge has been recognized as the essential aspect in human life. In the business environment, knowledge is one of the most important intellectual assets in the organizations. Individuals and organizations started to understand and appreciate the value of knowledge in the emerging competitive environment. Without properly managing knowledge, the organizations could face difficulties to compete between each others and also to improve their products and services. Knowledge management field had started in the mid-1990s and since then many organizations around the world have initiated knowledge management.

The impact of knowledge management on the organizations could not be denied but they are mostly applicable in the private sector as compared to the public sector. However, key thinkers of knowledge management like David Skyrme and Karl Wiig mutually supported that knowledge management is applicable in the public sector. Skyrme (2003) highlighted the important role of knowledge management in improving efficiency in decision making and service delivery in public administration. Wiig (2002) suggested that knowledge management could be considered in several areas in public administration such as enhancing decision making within public services, aiding the

public to participate effectively in public decision making, building competitive societal capabilities and developing a knowledge competitive work force.

Quin, Mohammad Yusoff and Abdul Razak (2006) explained that since most public sector agencies are not structured for the application of knowledge management concept, the application of knowledge management concept in the public sector agencies is inevitably challenging. Past literature found that challenges pertaining to the application of knowledge management concept revolved around the following factors in which are practices, approaches, people and technology. It is hypothesized that the application of knowledge management concept in public sector agencies in Malaysia also faced the same challenges. Based on reading of the related research and literature, it could be regarded that there are lack of previous studies on the perception of knowledge management in Malaysian public sector organizations as many studies are more concerned on examining the level of knowledge management implementation in these organizations.

The examples of related studies are included Benchmarking knowledge management in a public organization in Malaysia and Knowledge management in a public organization: A study on the relationship between organizational elements and the performance of knowledge transfer by Syed Omar Sharifuddin and Rowland (2004), Knowledge management initiatives: Exploratory study in Malaysia by Badruddin Rahman (2004), Preliminary study of knowledge management in a library: A case study of the National Library of Malaysia by Suraya Hamid and Jamaliah Mohammad Nayan (2005), Implication of knowledge management in higher learning institution by Maizatul Akmar Ismail and Yang (2005), Fostering K-Force through knowledge management innovation in the Malaysian Armed Forces by Ismail Manuri and Raja Abdullah Yaacob (2005), KM in the Local Authorities - A suitable platform for E-Government? by Kalsom Salleh and Syed Noh Syed Ahmad (2006), Knowledge management readiness in organization: A case of public sector in Malaysia by Tan Yit Quin, Mohammad Yusoff and Abdul Razak Hamdan (2006), Knowledge management implementation in Malaysian public institution of higher education by Sirajuddin Suhaimee, Ahmad Zaki Abu Bakar and Rose Alinda Alias and A survey on knowledge management at Mufti's Departments in Malaysia by Nurdiana Azizan and Najwa Hayaati Alwi.

As there is a need for further study on the field for the purpose of adding value to the existing knowledge, therefore, this research attempted to study about the perception of knowledge management with the selection of federal government departments in Kelantan as the sample of population due to time and resources constraints faced by the researchers. In specifically, the research aimed is to examine their perceptions about understanding of knowledge management, key personnel, technology and critical issues to manage knowledge.

STATEMENT OF THE PROBLEMS

According to Kalsom and Syed Noh (2006), knowledge management sought to align knowledge processes with organizational objectives because improved decision making is an end goal of knowledge management. Therefore, technology, process, people and the organization structure and

culture are the key enablers of the knowledge management process. Apart from having effective knowledge management strategies and adequate ICT infrastructure, the major difficulty faced by organizations operated both in the private and public sector, today, is finding a way to overcome those softer cultural and behavioral obstacles that lied in the way of successful implementation of knowledge management. It is concluded by Ruggles (1998) and Taylor and Wright (2004) that the main barriers to implement knowledge management are all people related issues such as poor understanding of what knowledge management involved, a lack of top management leadership and a culture that inhibited knowledge sharing.

From their research, Kalsom and Syed Noh (2006) also have stressed that research of knowledge management in Local Authorities should include all Local Authorities in Malaysia as this would add additional dimensions and perspectives in dealing with the issues of knowledge management and E-Government in public sector organizations. They also suggested that the perceived importance of knowledge management as a suitable platform for E-Government in Local Authorities should also be obtained from the other important groups of people who are working directly at the forefront of government service delivery such as Ministries, Federal and State government agencies.

Syed Omar Sharifuddin and Rowland (2004) mentioned that although knowledge management has been widely discussed by many academicians and practitioners, there is little literature and information on knowledge as found in the public sector. Most literature and practical application studies concentrated on private sector organizations, as the achievement of implementing a knowledge management programme could be easily identified and measured there. Conversely, in the public sector, studies on knowledge management are rarely found. This is due to the fact that knowledge management is implemented in public sector organizations more for providing services to the public rather than towards gaining financial profit.

RESEARCH OBJECTIVES

The objectives of this study are:

1. To determine the perception of the government officers pertaining to their level of understanding about knowledge management.
2. To find out the government officers' perception on the key personnel who is responsible in managing the knowledge.
3. To identify the perception of the government officers regarding the technology used to manage the knowledge created.
4. To highlight the government officers' perception on the issues that could create obstacles to the successful implementation of knowledge management in their departments.

LITERATURE REVIEW

Definitions of knowledge management

There are various terminologies of knowledge management derived in the literature. Knowledge management is an interdisciplinary field drawn on a variety of business activities and academic specializations. As its name suggested, knowledge management is concerned with systematic, effective management and utilization of an organization's knowledge resources. It encompassed the creation,

storage, arrangement, retrieval and distribution of an organization's knowledge (Saffady, 2000). Prytherch (2000) further stated that knowledge management as the process of collecting, organizing, storing and exploiting the information and data that is held within an organization particularly information known to individuals (tacit knowledge) as well as the general store of known information and data (explicit knowledge). Davenport and Prusak (2000) defined knowledge management is a process that effectively creates, captures, shares and uses organization-wide knowledge to improve the organization's performance and to gain competitive advantage. Then, Wiig (1997) also proposed that knowledge management is the systematic and explicit management of knowledge-related activities, practices, programs and policies within the enterprise. Another definition by Sveiby (1997) posited that knowledge management is the art of creating value to the organizations by leveraging its intangible assets.

Personnel involved in managing knowledge

According to Syed Omar Sharifuddin & Rowland (2004), when the respondents were asked who is responsible for managing knowledge in the Ministry of Entrepreneur Development of Malaysia, only 48.3% of them felt that the responsibility to manage knowledge in the Ministry should be everyone's job. This is quite surprising as many respondents still felt that the head of the Ministry (27.5%) or the heads of the division/unit (16.1%) are the personnel who responsible for managing knowledge in the Ministry. It was found that 32.2% of respondents who have work experience more than ten years argued that knowledge not their own responsibility. In contrast, only 24.8% of them who have work experience more than ten years believed that knowledge should be managed by everyone in the organization. It also revealed that 17.5% of the respondents who have more than 20 years' work experience argued that knowledge should be managed by someone else in the organization.

Syed Omar Sharifuddin and Rowland's taught agreed by Badruddin (2004) in which from their research findings, it is observed that individual department head (60 respondents) is the most common personnel in steering the knowledge management initiatives in organizations surveyed followed by named position from IT/ system (42 respondents), CIO (24), named position from human resource (23), CKO (16), Director of Business Improvement (16), named position from finance (14) and Board of Director (10). Raja Suzana Raja Kasim (2006) also had the same opinion with Syed Omar Sharifuddin, Rowland and Badruddin that based on her study to discover the core responsibility and authority of the individual or department that managed the knowledge management activities, the respondents were asked to identify who leads such activities. A total 22% of the respondents stated that Chief Executive Officer and core management personnel are the main drivers for the knowledge management practices in their organizations.

Technology utilization in managing knowledge

Syed Omar Sharifuddin and Rowland (2004) also found that when the respondents were asked whether technology is the most important element in developing and gaining knowledge, 83.6% of them agreed with the statement. E-mail is said to be the most important of technologies in developing and gaining knowledge and 73.4% of respondents cited it as either "very important" or "most

important". Another important technology that used in developing and gaining knowledge is online information sources which 72.1% of respondents cited as either "very important" or "most important". The Internet is believed to be either "very important" or "most important" in developing and gaining knowledge in the Ministry and a total of 72.1% of respondents agreed with this statement. The least important technologies that used in developing and gaining knowledge are video conferencing (27.2%) and CD-ROMs (41.6%).

Suraya and Jamaliah (2005) agreed with Syed Omar Sharifuddin and Rowland in which from their preliminary study of knowledge management in National Library of Malaysia especially when the respondents were asked whether IT is the best information storage utility for knowledge acquisition and sharing, 96.7% of them agreed with the statement. This is considered normal as most people thought that technology is the answer to manage knowledge in most organizations. Internet is said to be the most popular used channel for acquiring knowledge in which most of the respondents cited that they are frequently used Internet in their daily works followed by OPAC, E-mail, Reading Promotions, Intranet, Mylib Web Portal and Statistics.

Issues in implementing knowledge management

Badruddin (2004) highlighted based on his study that among the barriers faced by the organizations in implementing knowledge management initiatives are the most difficulty is motivating employees followed by difficulty in identifying knowledge management roles and responsibilities of employees, level of technology within company, ability of existing IT systems, data obsolete and information overload. Nevertheless, Sirajuddin, Ahmad Zaki and Rose Alinda (2005) had different opinions that lack of expertise is the main problems faced by Malaysian public institution of higher education in formulating knowledge management strategic planning followed by financial constraints. On the other hand, Wei, Choy and Yeow (2006) found that since many of Malaysian telecommunication organizations implemented knowledge management, they are not aware of the whole spectrum of knowledge management implementation. Due to lack of understanding of knowledge management, the telecommunication organizations faced many difficulties in the implementation process.

CONCEPTUAL FRAMEWORK

Below there is the conceptual framework designed for this study:

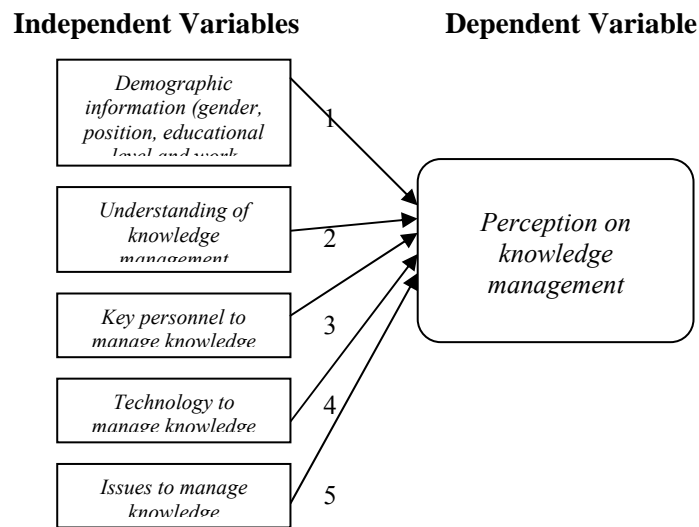


Figure 1: Conceptual framework

In formulation of a theoretical perspective for studying the research topic, the conceptual framework developed as illustrated in Figure 1. This framework indicated the variables of the study. Explaining the framework, there are five independent variables influenced a single dependent variable. The dependent variable is perception on knowledge management in which the independent variables are government personnel demographic information in terms of their gender, position, educational level and work experience followed by understanding of knowledge management, key personnel, technology and issues to manage knowledge. These independent variables could affect and influence a dependent variable either in positive or negative way.

RESEARCH METHODOLOGY

A total of 100 questionnaires were developed and sent to the middle and senior management government officers particularly who worked in federal government departments in Wisma Persekutuan and few departments at Kota Bharu, Kelantan based on convenience sampling method. Therefore, the questionnaires distributed by the researchers based on their availability and able to answer these questionnaires.

RESULTS AND FINDINGS

Response rate

From a total of 100 questionnaires distributed, only 65 questionnaires received which represented of approximately 65% as indicated in Table 1. It is because many of the government officers are working outside their departments for few days during the distribution of the questionnaires. However, this survey research has more than 50% response rate and therefore the level of response and confidence are satisfactory to increase validity and reliability of the findings.

Table 1. Total number of returned questionnaires

No	Department	Returned Questionnaire
1	Jabatan Pelajaran	9
2	Jabatan Kesihatan	4
3	Jabatan Penerangan	5
4	Jabatan Perhilitan	2
5	Jabatan Penilaian dan Perkhidmatan Harta	4
6	Suruhanjaya Koperasi Malaysia	2
7	Jabatan Perikanan	2
8	Jabatan Bomba dan Penyelamat	9
9	Jabatan Imigresen	8
10	Pejabat Pilihan Raya	3
11	Jabatan Kemajuan Masyarakat	2
12	Jabatan Tenaga Kerja	3
13	Badan Pencegah Rasuah	2
14	Jabatan Perangkaan	3
15	Jabatan Ukur dan Pemetaan	4
16	Jabatan Keselamatan dan Kesihatan Pekerjaan	3
	Total	65

Perception on the level of understanding about KM: KM as systematic management of tacit and explicit knowledge

The respondents were asked whether knowledge management is the systematic management of tacit and explicit knowledge of the organization to provide services to the public and to improve the effectiveness. As illustrated in Table 2, the results for further analysis in cross tabulation shown that 60.3% of respondents who are officers followed by 36.5% of them who are directors and assistant directors committed their statements on "true" and "very true." Knowledge management as stated by Nonaka and Takeuchi (1995) is the management of tacit and explicit knowledge of the organization. The examples of tacit knowledge included idea, skill, experience, best practice, judgment, intuition which are valuable and difficult to be identified and measured. The related example of explicit knowledge is recorded information that physically available either in printed, non-printed or electronic format which easy to be identified and measured. Therefore, based on the findings, it could be evaluated that there is low level of understanding among senior management government officers especially directors and assistant directors about knowledge management.

Table 2: Perceived level of understanding about KM:
KM as systematic management of tacit and explicit knowledge

		Perceived level of understanding about KM: KM as systematic management of tacit and explicit knowledge			Total
		Neither true nor not true	True	Very true	
Demographic information: Current position	Director	0	1	2	3
	Assistant Director	1	11	9	21
	Officer	1	22	16	39
Total		2	34	27	63

Perception on the level of understanding about KM: KM as process of managing knowledge through technology utilization

Then, the respondents were asked whether knowledge management is the process of managing the knowledge created by the organization through technology utilization. The results for further analysis in cross tabulation as shown in Table 3 revealed that 30.6% of respondents who are directors, deputy directors and assistant directors as well as 48.4% of them (officers) said "true" and "very true." Only 6.5% (deputy directors) and 1.6% (officer) said "not true" for this statement. In fact, technology infrastructure is merely an enabling tool to support knowledge management (Quin, Mohammad Yusoff & Abdul Razak, 2006). Hence, this is further proven that there is low level of understanding about knowledge management among middle and senior management government officers in which they did not know anything on knowledge management especially in term of its definition, element, process, tool and technology.

Table 3: Perceived level of understanding about KM: KM as process of managing knowledge through technology utilization

		Perceived level of understanding about KM: KM as process of managing knowledge through technology utilization				Total
		Not true	Neither true nor not true	True	Very true	
Demographic information: Current position	Director	0	0	3	0	3
	Deputy Director	0	0	0	1	1
	Assistant Director	4	2	13	2	21
	Officer	1	6	24	6	37
Total		5	8	40	9	62

Perception on the key personnel to manage knowledge

When asked who is responsible for managing knowledge in the department, the highest responses indicated that 52.5% of the respondents strongly agreed that it should be director job followed by 36.7% of them strongly agreed that it should be everybody's job. When these data are further analyzed using cross-tabulation, it was found that 24.6% of respondents who have work experience less than 6 years strongly agreed that the director is responsible for managing knowledge in the department as shown in Table 4. Then, 23.3% of them who have work experience less than 6 years also strongly agreed that the responsibility to manage the knowledge should be everybody's job (see Table 5). In contrast, it was found that 1.6% of the respondents who have more than 10 years work experience strongly disagreed as well as 3.3% of them who have work experience more than 20 years disagreed that knowledge should be managed by everybody in the department. This is definitely not a good situation for a federal government department since the personnel who have more than 10 and 20 years work experience still depending on the others to manage the knowledge available in their departments. In order to implement effective knowledge management strategy, all tacit and explicit knowledge should be managed by every personnel in the department.

Table 4: Perceived key personnel to manage knowledge: Director

		Perceived key personnel to manage knowledge: Director				Total
		Disagree	Neither agree nor disagree	Agree	Strongly Agree	
Demographic information: Work experience (Number of years)	Less than 6 years	0	1	13	15	29
	6-10 years	1	0	2	8	11
	11-15 years	0	0	5	1	6
	16-20 years	0	0	1	1	2
	More than 20 years	0	0	6	7	13
Total		1	1	27	32	61

Table 5: Perceived key personnel to manage knowledge: It is everybody's job

		Perceived key personnel to manage knowledge: It is everybody's job					Total
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	
Demographic information: Work experience (Number of years)	Less than 6 years	1	0	0	15	14	30
	6-10 years	0	1	1	7	1	10
	11-15 years	1	0	0	4	1	6
	16-20 years	0	0	0	0	2	2
	More than 20 years	0	2	0	6	4	12
Total		2	3	1	32	22	60

Perception on the importance of technology to manage knowledge created

Respondents were asked how important current technologies to manage knowledge created in their departments. As illustrated in Table 6, computer hardware is said to be the most important of technologies for managing knowledge in which 56.9% of the respondents cited it as “very important.” Another important technology that used in managing knowledge is information systems in which 54.7% of the respondents cited it as “very important” (see Table 7). File/document/records management systems are also believed to be “very important” in managing knowledge in the department and a total of 52.5% of the respondents agreed with this statement as shown in Table 8. Further analysis was shown that there is not much difference in the responses between groups of different years of work experience. The highest score is from respondents with work experience less than 6 years where 31.3% of them cited information systems as “very important.” This is followed by respondents who also have work experience less than 6 years where 30.8% of them cited computer hardware as “very important”. The least important technologies that used in managing knowledge are video conferencing (12.5%) and intranet (4.8%). Cross-reference between the number of years of work experience and these technologies indicated that the respondents of most groups believed that video conferencing and intranet are "not important" compared to other technologies.

Table 6: Perceived importance of technology to manage knowledge created:
Computer hardware

		Perceived importance of technology to manage knowledge created: Computer hardware				Total
		Not important	Neither important nor not important	Important	Very important	
Demographic information: Work experience (Number of years)	Less than 6 years	1	0	9	20	30
	6-10 years	0	0	5	6	11
	11-15 years	1	1	3	3	8
	16-20 years	0	0	1	1	2
	More than 20 years	0	1	6	7	14
Total		2	2	24	37	65

Table 7: Perceived importance of technology to manage knowledge created:
Information systems

		Perceived importance of technology to manage knowledge created: Information systems		Total
		Important	Very important	
Demographic information: Work experience (Number of years)	Less than 6 years	10	20	30
	6-10 years	7	4	11
	11-15 years	5	3	8
	16-20 years	0	2	2
	More than 20 years	7	6	13
Total		29	35	64

Table 8: Perceived importance of technology to manage knowledge created:
File/document/records management systems

		Perceived importance of technology to manage knowledge created: File/document/records management systems			Total
		Neither important nor not important	Important	Very important	
Demographic information: Work experience (Number of years)	Less than 6 years	0	10	19	29
	6-10 years	1	6	3	10
	11-15 years	0	3	4	7
	16-20 years	0	1	1	2
	More than 20 years	0	8	5	13
Total		1	28	32	61

Perception on the issues that could create obstacles to the successful implementation of knowledge management

Respondents were asked about the issues that could create obstacles to the successful implementation of knowledge management in their departments. In the survey, 31.7% of the respondents commented that difficulties of changing employees' behaviour are the main obstacles in the departments followed by lack of well trained staff and expertise on KM (25.4%) and lack of knowledge sharing culture and trust among officers (22.2%). The results of further analysis using cross-tabulation was shown that many of the respondents with work experience less than 6 years felt that difficulties of changing employees' behaviour could create obstacles to successful KM implementation in their departments. As illustrated in Table 9, the highest score is from those who have work experience less than 6 years (20.6%). This is followed by the respondents with work experience 6-10 years (7.9%). In contrast, respondents with work experience less than 6 years (6.3%) and more than 20 years (3.2%) responded to "disagree" for this statement. For the second issues in which are lack of well trained staff and expertise on KM, Table 10 shown that 14.3% of the respondents with work experience less than 6 years said that they "strongly agree" with the statement followed by 6-10 years (4.8%) and 11-15 years (3.2%) claimed that these issues could create obstacles to the successful implementation of knowledge management in the departments. On the other hand, 1.6% of them with work experience less than 6 years said "strongly disagree" with the statement. Pertaining to the lack of knowledge sharing culture and trust among officers issues, Table 11 indicated that the highest responses are still from the group who have work experience less than 6 years where 12.7% of the respondents said that they "strongly agree" with this statement followed by 11-15 years (4.8%) and 6-10 years (3.2%). However, only 1.6% of them with less than 6 years work experience said "strongly disagree" with the statement.

Table 9: Perceived obstacles to successful KM implementation:
Difficulties of changing employees' behaviour

		Perceived obstacles to successful KM implementation: Difficulties of changing employees' behaviour				Total
		Disagree	Neither agree nor disagree	Agree	Strongly Agree	
Demographic information: Work experience (Number of years)	Less than 6 years	4	0	13	13	30
	6-10 years	1	0	5	5	11
	11-15 years	1	1	5	1	8
	16-20 years	0	0	2	0	2
	More than 20 years	2	2	7	1	12
Total		8	3	32	20	63

Table 10: Perceived obstacles to successful KM implementation:
Lack of well trained staff and expertise on KM

		Perceived obstacles to successful KM implementation: Lack of well trained staff and expertise on KM					Total
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	
Demographic information: Work experience (Number of years)	Less than 6 years	1	2	2	16	9	30
	6-10 years	0	1	1	5	3	10
	11-15 years	0	0	0	6	2	8
	16-20 years	0	0	0	1	1	2
	More than 20 years	0	2	2	8	1	13
Total		1	5	5	36	16	63

Table 11: Perceived obstacles to successful KM implementation:
Lack of knowledge sharing culture and trust among officers

		Perceived obstacles to successful KM implementation: Lack of knowledge sharing culture and trust among officers					Total
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	
Demographic information: Work experience (Number of years)	Less than 6 years	1	3	2	16	8	30
	6-10 years	0	0	1	7	2	10
	11-15 years	0	1	1	3	3	8
	16-20 years	0	0	0	2	0	2
	More than 20 years	0	3	1	8	1	13
Total		1	7	5	36	14	63

CONCLUSION

In conclusion, the study could verify that most of middle and senior management government officers who worked in the federal government departments at Kelantan did not know and clearly understood the concepts and principles of knowledge management due to lacking of knowledge and skills on that field. Indeed, they should aware that competency and efficiency of the management of a federal government department could be determined from the proper management of knowledge. Knowledge management implementation that followed the specific strategies and supported by well-developed technology infrastructure is vital to ensure the successful of any knowledge management programs. Therefore, they needed to realize that knowledge management must be taken as a shared responsibility. It is advised that top management and personnel to give the full cooperation and support in order to achieve the successful implementation of knowledge management in their departments and also to address the related issues more carefully and systematically through effective knowledge management strategy for improving the public services delivery particularly with the government's commitment in moving towards knowledge economy in Malaysia. Strong or lack of top management support and leadership would make the difference between success and failure in implementing

knowledge management. When the government officers take seriously planning and implementing of knowledge management in their departments particularly with the excellent support from top management and all personnel, the implementation is usually succeeded. In addition, it is recommended that future research on the topic should include a wide range of sample size/respondents in various federal government departments at other states for the purpose of results generalization.

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CHALLENGES FACED BY BUMIPUTERA ENTREPRENEURS: A STUDY IN SHOPPING COMPLEXES AND BIG SUPERMARKETS IN MALACCA.

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ABSTRACT

In Malaysia, it is widely documented that the Bumiputeras have been far behind in terms of their socio-economic fortunes and their participation in business, trade and commercial activities compared to non-Bumiputeras. This study attempts to identify the challenges faced by the Bumiputera entrepreneurs who have business dealing with shopping complexes and big supermarkets. This study sampled 100 Bumiputera entrepreneurs who own and rent business lots in Malacca shopping complexes and big supermarkets by using self-administered questionnaires. The methods of analysis used in this study were analysis of variance (ANOVA), regression analysis and factor analysis. This study found that the level of challenges and a number of factors contribute to the challenges such as location, types of shopping complex, age, business sector, location of business lots, factors dealing with business location, rental fees and total number of workers is significantly different. However, the level of challenges is not significant for education level, duration of business, sources of capital, capital amount and business type at $\alpha = 0.05$. Four predictor variables are marketing strategy, bureaucracy problem, financial and rental fees were selected to test on the level of challenges. The results indicate that there is a significant linear relationship between bureaucracy problem and financial with level of challenges. On the other hand, there is no significant relationship between marketing strategy and rental fees with level of challenges. The study revealed that the level of challenges and bureaucracy problem have the highest positive correlation. The findings of the study provide important implications to the state government in their planning to improve the entrepreneurial quality and skills among our Bumiputeras. With the provision of equal access through the implementation of entrepreneur programmes, more opportunities and decrease in bureaucracy will enable the Bumiputeras to increase their participation and involvement in business ventures.

Keywords: *challenges, bumiputera entrepreneurs, bureaucracy*

INTRODUCTION

In Malaysia, it is widely documented that the Bumiputeras (sons of the soil) which refers to the indigenous people of Malaysia and include mainly Malays, Kadazans, Ibans and few others) have been far behind in terms of their socio-economic fortunes and their participation in the business, trade and commercial activities as compared to Chinese and Indians. The New Economic Policy (NEP) adopted in 1971 and covering the period of 1971-1990 has served as a cornerstone of Government development policy. Its main objectives are to achieve national unity, eradicate and to reduce ethnic and regional imbalances in terms of incomes, employment and the ownership of productive assets. The main thrust of the societal restructuring policies under the NEP has been to uplift the economic status of the Bumiputera Malaysians by ensuring their greater access to education, employment and business opportunities. Although some adjustments and liberalizations have been introduced in the New National Development Plan (NNDP) which covers the period of 1991-2010, the original aim is still to

raise the Bumiputera participation and ownership of the corporate sector at least 30 percent (by 1990, but it had not been achieved, and therefore this aim has been carried on during the NNDP) as well as greater participation in commercial activities. This aim has very much translated in the government policy support programmes for the development of Bumiputera entrepreneurs in the country.

More importantly, there have been claimed that the Chinese entrepreneurs generally run business activity far better than other ethnic-groups such as Malays and Indians because of their family succession, and their traditionally predominant involvement in the business and commercial sectors of the country (see for instance in Popenoe 1970, Charlesworth 1974, Lim, Cheok and Othman 1978 and Aziz 1980). In this relation, Malay entrepreneurs are less capable to survive and grow as they tend to be inexperienced, late in joining business world with less business exposure, less innovativeness and creativeness generally as compared to the Chinese entrepreneurs, (Popenoe 1970: 344-346). The Malay entrepreneurs are also noted to be low on individualism, activism, trust and risk-taking and high on conservatism. Therefore the Malay entrepreneurs are also seen to be less effective at delegating functions, affecting their overall performance as compared to the Chinese entrepreneurs, (Charlesworth 1974:17). New economic policy have helped to improve participation of bumiputera in business. Its purpose is to minimize the difference gap amongst races in this country at business field and the commercial activities. Research that is done by Hamzah and Monroe(2005) have summarize that it is necessity for Malaysia to apply entrepreneurs culture stressfully in 5 years coming soon to make sure this country will continuously prosperous.

PROBLEM STATEMENT

The low performance of bumiputera entrepreneurs in Malaysia as compared to non-bumiputera entrepreneurs has always been an issue. In Melaka the ownership and hiring the varies shop-lots in shopping complexes are very limited amongst the Melaka bumiputera comparing to other races. As an example in Mahkota Parade, from total of 166 lots which have been allotted only 6 are hired by bumiputera (2005 data) and at TESCO from 57 lots, only 9 are hired by bumiputera traders (2006 data). Furthermore, the food courts which is rightly empowered by bumiputera also have been dominated by non-bumiputera. This indicates that how less bumiputera entrepreneurs carry on business in shopping complex and big supermarkets. So as a responsibility Majlis Tindakan Ekonomi Dan Sosial Bumiputera Negeri Melaka (MTESB) have taken an action and conduct a research to find challengers faced by bumiputera entrepreneurs who deal with their business in all shopping complex and big supermarkets in this state. Lastly based on this study we can identify the major problems faced by bumiputera entrepreneurs in dealing their business and also caused less participation of them in business ventures in shopping complex and big supermarkets in state of Melaka.

LITERATURE REVIEW

Sieh Lee Mei Ling (1988) based on Marketing Issues of Small and Medium Businesses in Malaysia stated that the most serious problem faced by SMI (Small Medium Industries) entrepreneurs

in Malaysia concerns finance, followed by difficulties of marketing and then issues concerning production such as labour, land and building, regulations and raw materials.

The main reason for SMI entrepreneurs shortage of capital is the high degree of reliance they place on their own capital as their initial source of finance. Other sources of capital such as family, commercial banks, relatives and friends though important, are of secondary importance. SMI entrepreneurs also encounter difficulties in trying to borrow money after starting their operations, thus the problem of inadequate working capital due to at least three main reasons that are problems in obtaining loans and other types of credit facilities from commercial banks and other financial institutions, pressure to extend credit to customers and the problem of collecting trade debts; and the shortage of internal funds due to a low level of profit. SMI entrepreneurs who have not attempted to borrow from a bank probably do not do so because they think that they would not be successful, or they do not know how to apply for a bank loan, or they think that they need to know certain people in order to get a bank loan. However, those who have tried but failed reported that their failure was due to their inability to provide required collateral, guarantors or a background paper. Despite the higher cost of non bank sources of finance, such as finance companies, pawn shops, moneylenders, supplier credit and tontine, Malaysian SMIs resort to these as faster and easier alternatives

The large number of SMI competitors striving to sell rather similar products to a large number of buyers result in very small margins. Although product quality in terms of customers' acceptability is a serious problem, great difficulties are also encountered in price determination and in anticipating competitive reaction. Economic factors are regarded as the most threatening external forces that affect the marketing functions of SMI entrepreneurs in Malaysia. Financial support is recognized as important for marketing activities as financial resources are closely related to credit extension, billing and collection practices. Also, problems of updating production technology are important for ensuring that product quality is acceptable by the market. Political, legal and government administrative factors do not appear to cause any hindrances to SMIs' marketing activities, whilst external factors of religious social and cultural associations are least inhibiting.

SMI entrepreneurs are more disturbed by external problems rather than by internal technical or management problems. High and rising costs, impact of government regulation and uncertain customer demand are factors from outside the firm that are causing great challenges faced by SMI entrepreneurs.

Mahmood Nazar Mohamed (2000) based on an empirical study of 60 entrepreneurs, is "An Exploration of the Personality Profile of Small Scale Business Bumiputera and Non-Bumiputera Entrepreneurs" in which the characteristics of 30 bumiputera entrepreneurs are compared with those of 30 non-bumiputera entrepreneurs. Mahmood's conclusion is that the non-bumiputera entrepreneurs have a more outgoing, spontaneous, unconventional and less sentimental profile as compared to bumiputera entrepreneurs. The suggestion is that perhaps personality factors can be addressed in improving the performance of bumiputera entrepreneurs.

Ahmad Kamil Mohamed (2001) said overall the Malay entrepreneur involvements towards entrepreneurship are not in reality towards opportunity given because they are not yet prepared to deal with their business. Actually they need to see the opportunity given as a process to boost their economy development independently by setting up their own business, how to manage, organize leads, implement and boost their business market in industrial sector professionally. Among the capability criterions are knowledge, skills, interest, financial sources, energy, technology and instruments needed. The main challenge is actually to identify the opportunity awarded. The opportunity given must be in parallel with oneself capability towards effective running and long-lasting business. The second challenge faced by the local native entrepreneurs is the fact that no backing entrepreneurs to guarantee the productivity development in the industrial sector. The third challenge faced is the inconsistency bureaucracy problems derived from government administrations who are supposed to run the policy and to ensure the national economic growth. Having these inconvenient bureaucracies done by some ineffective government servants in terms of slow and late processing, decision making, slow payment processing. In addition to that, some government agents are having bribery and envious satisfactory feeling. Another challenge is that the selling of products to limitation market and company's services. Almost the Malay companies depend on market from government sectors which are inconsistency and unfixed. Although the government urge the Malay entrepreneurs to attach with open and free foreign market, they still unable to challenge the competitive markets not only among the Malays but to other races.

Greg Welch (2007) said that the biggest challenge for a young entrepreneur, someone 30 and under is going to be lack of experience and personal liquidity. Financing is often the most difficult part of starting a business for a person of any age. That problem is compounded for entrepreneurs in their 20s, who might have a short credit history and few assets.

Moha. Asri (1999) said that the role of the government is very important in fostering private sector entrepreneurship in Malaysia. Nevertheless, although there are many programs and financial support systems for entrepreneurs, they have not been as effective as they should be. A common critique is the extent of the bureaucracy or "red tape" with which entrepreneurs must contend, causing delays of several months just to get approval for applications. This difficulty, only one example among many, is due to the fact that most of the programs for entrepreneurs are organized and offered by government agencies. As Mohd. Rosli (2000) posits the earnestness with which the government promoted entrepreneurship and its SMI development programs in the early days led to the involvement of a large number of ministries as well as government and non-government agencies. He cites Chee (1990) who estimated that there were about 13 ministries and more than 30 government and non-government agencies involved in a variety of programs for the development of SMIs in 1990. Add to this number, the banks and financial institutions that were also involved in providing the financial support, and one gets an idea of the complexity of the situation. The large number of ministries and agencies involved inevitably caused overlapping of functions and responsibilities, leading to inefficiencies and ineffectiveness of the programs being run. This eventually curtailed the level of participation among genuine entrepreneurs, who ended up feeling very frustrated with the system.

RESEARCH OBJECTIVE

The objectives of this study are:

1. To summarize demographic profile of entrepreneurs in shopping complexes.
2. To identify the factors that affect level of challengers.
3. To find whether there is a relationship between level of challengers and demographic factors.
4. To determine whether there are any association between level of challengers and marketing strategy, bureaucracy problem, financial and rent.
5. To compare the mean level of challengers score between demographic factor and other factors.

METHODOLOGY

1) Data

The survey was done in twelve shopping complexes in Melaka state. The shopping complexes were Mahkota Parade, Jaya Jusco, Tesco, Dataran Pahlawan, Melaka Mall, Melaka Sentral, Fajar, Plaza Melaka Raya, Plaza Hang Tuah, Pasaraya Bintang, Giant and Soon Seng Plaza. They were group into 5 subgroup which are Hypermart, Malls, Wet Market, Plaza and Others. Stratified sampling was chosen as sampling method for this study since the population is heterogeneous and contains several different groups. The primary data collection gathered using the structured questionnaire and interviews.

2) Method of Data Analysis

Factor Analysis

Factor Analysis is a statistical data reduction technique used to explain variability among observed random variables in terms of fewer unobserved random variables called factors. The observed variables are modeled as linear combinations of the factors, plus “error” terms. For this study, factor analysis is used to identifying dimensions or factors, which explain the correlation among a set of variables.

THE KEIZER-MEIYER OKLIN (KMO)

The Keizer-Meiyer Oklin (KMO) measure of sampling adequacy tests whether the partial correlations among variables are small. KMO values range from 0 to 1, values closer to 1 indicating strong partial correlations.

Bartlett’s Test of Sphericity

Bartlett's test of sphericity is used to test the null hypothesis that the variables in the population correlation matrix are uncorrelated.

Comparison Means

It is assumed that these populations are normally distributed. Independent sample t- test is to compare the means of a variable between two independent groups and Analysis of Variance (ANOVA) is to compare the means of three or more groups.

Regression Analysis

Regression analysis is a technique which examines the relation of a dependent variable to specified independent variables. Regression analysis can be used as a descriptive method of data analysis without relying on any assumptions about underlying processes generating the data.

a) Correlation Analysis

In probability theory and statistics, correlation, also called correlation coefficient, indicates the strength and direction of a linear relationship between two random variables. In general statistical usage, correlation refers to the departure of two variables from independence. In this broad sense there are several coefficients, measuring the degree of correlation, adapted to the nature of data.

b) Multicollinearity

A statistical term for the existence of a high degree of linear correlation among two or more explanatory variables in a multiple regression model. In the presence of multicollinearity, it will be difficult to assess the effect of the independent variables on the dependent variable.

c) Regression Model

A multiple regression is to predict one quantitative dependent variable from several independent variables. Multiple regressions serve two functions. First, this technique yields an equation that predicts the dependent variable from the various independent or predictor variables. Second, this technique identifies those independent variables that relate to the dependent variable, after controlling the other variables.

Regression Model is to determine the model appropriate to level of challengers. For this project, dependent variable is level of challengers and the independent variables are marketing strategy, bureaucracy problems, financial and rent.

The data are simply shown below:

Y	Level of Challengers
X ₁	Marketing strategy (mean)
X ₂	Bureaucracy problems (mean)
X ₃	Financial (mean)
X ₄	Rent (mean)

Linear Regression Model

$$\hat{Y}_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \varepsilon_i$$

Where: Y_i – value of the response variable in the i th trial
 $\beta_0, \beta_1 X_{i1}, \beta_2 X_{i2}, \beta_3 X_{i3}, \beta_4 X_{i4}$, - regression parameter
 $X_{i1}, X_{i2}, X_{i3}, X_{i4}$ - a known constant (the value of the independent variable in the i th trial)
 ε_i - random error with mean $E(\varepsilon_i) = 0$ and variance $V(\varepsilon_i) = \sigma^2$.

Sample size, $n = 100$

RESULT AND DISCUSSION

Factor Analysis

Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction, by identifying a small number of factors which explain most of the variance observed in a much larger number of manifest variables.

KMO and Bartlett's Test

Table 1: Keizer-Meiyer Oklin (KMO) Statistics

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.655
Bartlett's Test of Sphericity	Approx. Chi-Square	354.591
	df	66
	Sig.	.000

From the table 1, we can see that the KMO value is 0.655. Since the KMO value larger than 0.6, it is moderate and indicating strong partial correlations. The large values for the KMO measure indicate that a factor analysis of the variables is a good idea. From Bartlett’s test, the observed significance level is 0.000. It is small enough to reject the hypothesis. It is concluded that the strength of the relationship among variables is strong. It is a good idea to proceed a factor analysis for the data.

Total Variance Explained

Table 2: Extraction Method: Principal Component Analysis.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	%of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.311	27.595	27.595	3.311	27.595	27.595	2.753	22.946	22.946
2	2.089	17.408	45.003	2.089	17.408	45.003	1.871	15.588	38.534
3	1.381	11.510	56.514	1.381	11.510	56.514	1.831	15.255	53.789
4	1.085	9.040	65.554	1.085	9.040	65.554	1.412	11.765	65.554
5	0.889	7.407	72.961						
6	0.750	6.253	79.214						
7	0.732	6.099	85.312						
8	0.494	4.117	89.430						
9	0.415	3.458	92.888						
10	0.335	2.793	95.681						
11	0.283	2.356	98.037						
12	0.236	1.963	100.000						

Table 2: Extraction Method: Principal Component Analysis.

Table 2 lists the eigenvalues associated with linear component (factor) before extraction, after extraction and after rotation. Before extraction, SPSS has identified 12 linear component within the data set (we know that there should be as many eigenvectors as there are variables and so there will be as many factors as variables). Four factors were extracted by Principle Component Method with eigenvalues > 1. The fourth factors explain 27.595%, 17.408%, 11.510% and 9.040% respectively. All the fourth factors combined explain 65.554% of the variation. This is more than 60%.

Table 3 : Rotated Component Matrix
Rotated Component Matrix(a)

Items	Component (Independent)			
	1	2	3	4
Get guidance	0.659			
Have a lot of experience	0.663			
Stable financial		0.643		
Does not need any financial source		0.818		
Loan application is too long			0.400	
Application for starting business is quite difficult			0.468	
Business location suitable and strategic	0.779			
Product suitable to sell	0.828			
There is a lot of competitors			0.651	
Many customers in that location	0.817			
Suitable rent				0.741
Can pay workers salaries	0.784			

Table 3 shows the rotated component matrix (also called the rotated factor matrix in factor analysis) which is a matrix of the factor loadings for each variables onto each factor. The questions that load highly on factor 1 seems to all relate to strategy of marketing. Therefore we might label this factor as MARKETING STRATEGY. The questions that load highly on factor 2 all seems to relate to problems of financial that were faced by bumiputera entrepreneurs in dealing their business. Therefore we might label this factor as FINANCIAL. The two questions that load highly on factor 3 all seem to relate to problems on bureaucracy. Therefore we might label this factor as BUREAUCRACY PROBLEMS. Finally, a question that load highly on factor 4 contain component of hiring problems by respondents. So we might label this factor as RENT. This analysis seems to reveal that the initial questionnaire, in reality, is composed of four subscales: Marketing strategy, Bureaucracy Problems, Financial and Rent.

Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) is used to compare the means of three or more groups of independent variable.

Table 4: Location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	106.769	4	26.692	9.497	.000
Within Groups	267.021	95	2.811		
Total	373.790	99			

Table 5 : Types of Shopping Complex

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	150.925	9	16.769	6.772	.000
Within Groups	222.865	90	2.476		
Total	373.790	99			

Table 6: Age

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	35.330	3	11.777	3.340	.022
Within Groups	338.460	96	3.526		
Total	373.790	99			

Table 7 : Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	16.425	4	4.106	1.092	.365
Within Groups	357.365	95	3.762		
Total	373.790	99			

Table 8 : Business Sector

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	39.325	3	13.108	3.762	.013
Within Groups	334.465	96	3.484		
Total	373.790	99			

Table 9 : Duration of Business

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.154	2	.577	.150	.861
Within Groups	372.636	97	3.842		
Total	373.790	99			

Table 10 : Background of Business

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.967	2	1.984	.520	.596
Within Groups	369.823	97	3.813		
Total	373.790	99			

Table 11 : Sources of Capital

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.210	3	1.070	.277	.842
Within Groups	370.580	96	3.860		
Total	373.790	99			

Table 12 : Capital

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	23.992	4	5.998	1.629	.173
Within Groups	349.798	95	3.682		
Total	373.790	99			

Table 13 : Location of Business Lots

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	25.606	2	12.803	3.567	.032
Within Groups	348.184	97	3.590		
Total	373.790	99			

Table 14 : Business Types

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.240	2	.120	.031	.969
Within Groups	373.550	97	3.851		
Total	373.790	99			

Table 15 : Business Factor in That Location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	105.075	4	26.269	9.287	.000
Within Groups	268.715	95	2.829		
Total	373.790	99			

Table 16 : Rent

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	35.531	3	11.844	3.361	.022
Within Groups	338.259	96	3.524		
Total	373.790	99			

Table 17: Total Number of Workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	41.072	3	13.691	3.950	.011
Within Groups	332.718	96	3.466		
Total	373.790	99			

Table above shows that there is an evidence to conclude that the level of challengers is different for factors towards challengers (location, types of shopping complex, age, business sector, location of

business lots, business factors in that location, rent and total number of workers) as compares to 5% level of significance ($p\text{-value} < 0.05$). Besides that, there is no evidence to conclude at 5% level of significance ($p\text{-value} > 0.05$) that level of challengers different for education level, duration of business, background of business, sources of capital, capital and business types.

REGRESSION ANALYSIS

Correlation Analysis

Correlation Analysis is to measure of the degree to which two variables are linearly associated. It measured by Pearson’s Coefficient of Correlation.

Table 18 : Correlation analysis

VARIABLE	PEARSON CORRELATION	p-value
r level of challengers *mean of marketing strategy	-0.243	0.007
r level of challengers * mean of bureaucracy problems	0.626	0.000
r level of challengers * mean of financial	-0.346	0.000
r level of challengers * mean of rent	0.109	0.140

Table 18 shows that there is a strong negative significant relationship between level of challengers and mean of marketing strategy ($r = -0.243, p < 0.05$). There is also a strong negative significant relationship between level of challengers and mean of financial ($r = -0.346, p < 0.05$). Meanwhile there is a strong positive significant relationship between level of challengers and bureaucracy problem ($r = 0.626, p < 0.05$) and there is no significant relationship exist between level of challengers and mean of rent ($r = 0.109, p > 0.05$)

Test of Multicollinearity

Table 19 : Test of Multicollinearity

Variable	Variance Inflation Factor (VIF)	Tolerance (TOL)
Marketing strategy	1.140	0.877
Bureaucracy problems	1.159	0.863
Financial	1.252	0.799
Rent	1.057	0.946

From table 19 above, none of the VIF values exceed 10 and from the Tolerance values, all the values are exceeding 0.1. From those values, we can conclude that no sign of multicollinearity exist in this model.

Regression Model

Test Concerning the Regression Coefficient

Table 20: Coefficients For Each Predictor Variable Using Enter Process

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tol	VIF
1	(Constant)	7.595	1.239		6.132	.000					
	Marketing strategy (X1)	-.245	.118	-.201	-2.068	.041	-.243	-.208	-.188	.877	1.140
	Bureaucracy problem (X2)	.292	.116	.246	2.517	.014	.326	.250	.229	.863	1.159
	Financial (X3)	-.176	.090	-.198	-1.949	.054	-.346	-.196	-.177	.799	1.252
	Rent (X4)	.196	.113	.163	1.741	.085	.109	.176	.158	.946	1.057

Dependent Variable: level of challengers

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	.464	.216	.182	1.757	.216	6.525	4	95	.000

a Predictors: (Constant), rent, financial, marketing strategy, bureaucracy problem

b Dependent Variable: level of challengers

Table 21: Model Summary For Each Predictor Variable Using Enter Process

From the table 20 and 21 above, it shows that only marketing strategy and bureaucracy problems can include into the model because it has less than 0.05 significance value. The p-value for F test is 0.000 which is significance to the model. But there is only 21.6% of the level of challengers is describing by the marketing strategy, bureaucracy problems, financial and rent. Another 78.4% of the level of challengers is described by the other factors. From the VIF and TOL values show that there are no multicollinearity exist in the data. Therefore, stepwise process should be done to get the final model.

Table 22: Coefficients For Each Predictor Variable Using Stepwise Process

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tol	VIF
1	(Constant)	9.584	.375		25.557	.000					
	Financial (X3)	-.307	.084	-.346	3.650	.000	-.346	-.346	-.346	1.000	1.000
2	(Constant)	7.100	1.131		6.275	.000					
	Financial (X3)	-.233	.088	-.262	2.630	.010	-.346	-.258	-.244	.867	1.153
	Bureaucracy Problem (X2)	.274	.118	.231	2.321	.022	.326	.229	.215	.867	1.153

Dependent Variable: level of challengers

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	.346(a)	.511	.120	1.832	.120	13.320	1	98	.000
2	.407(b)	.549	.166	1.793	.046	5.387	1	97	.022

a Predictors: (Constant), financial

b Predictors: (Constant), financial, bureaucracy problem

c Dependent Variable: level of challengers

Table 23: Model Summary For Each Predictor Variable Using Stepwise Process

Table 22 and 23 above shows that after the stepwise process, only financial and bureaucracy problems variables were included into the model since the p-value is less than 0.05. The p-value for F test is 0.000 which is significance to the model .Now, there is 54.9% of the level of challengers is described by financial and bureaucracy problems. Both VIF and TOL values are show that the multicollinearity does not exist. The final estimated regression function:

$$\hat{Y}_i = \beta_0 + \beta_2 X_{i2} + \beta_3 X_{i3}$$
$$Y_i = 7.110 + 0.274 X_2 - 0.233 X_3$$

Where X_2 = Bureaucracy problems
 X_3 = Financial

The interpretation of the model after stepwise:

$\beta_0 = 7.110$ means when the bureaucracy problems (X_2) and financial (X_3) is zero, the level of challengers is expected to 7.110.

$\beta_2 = 0.274$ means for every unit change in bureaucracy problems (X_2), the level of challengers is expected to increase by 0.274

$\beta_3 = 0.233$ means for every unit change in financial (X_3), the level of challengers is expected to decrease by 0.233

The Coefficient of Determination

Only 54.9% of total variation level of challengers has been explained by bureaucracy problems and financial. Since, we do not include marketing strategy and rent into the model, the percentage was reduced. Then, only 45.1% of total variation in level of challengers is explained by the other factors.

Normal P-P Plot of Regression Standardized Residual

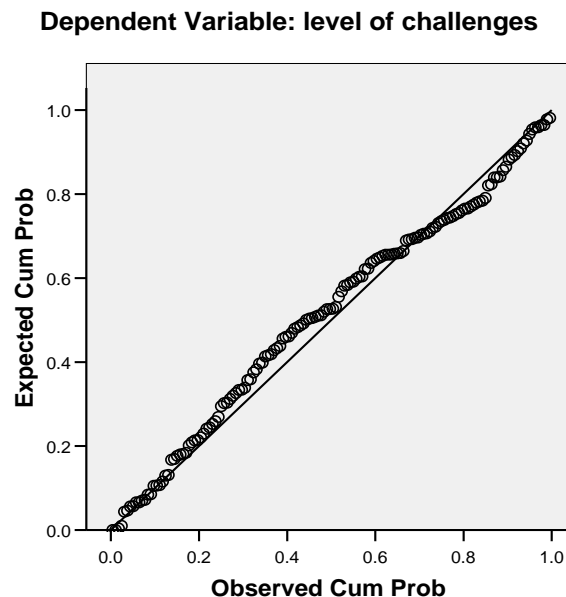


Figure 1 : Normal Probability Plot

The normal plot shows the points scattered along the straight line. So it indicates that the data is approximately normal.

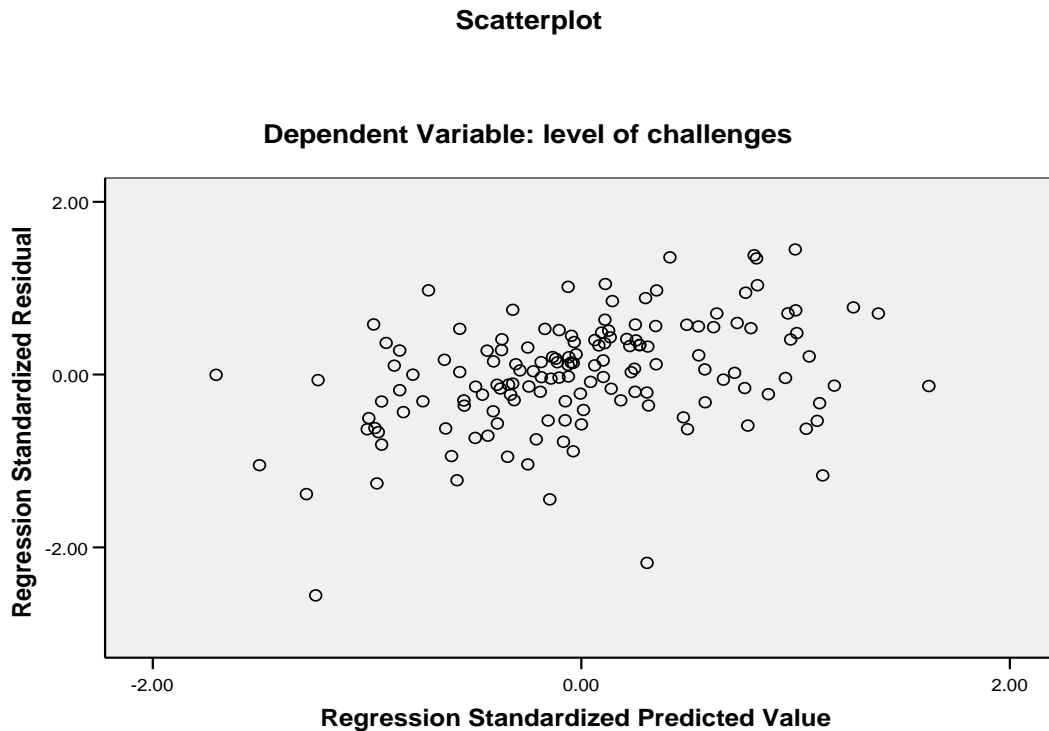


Figure 2 : Scatterplot of Residuals Versus Predicted Values

From the figure of residual versus the predicted value above, we can see that the points in the scatter plot are randomly scattered. We can conclude that the distribution of the error (residuals) has a constant variance.

Research Framework

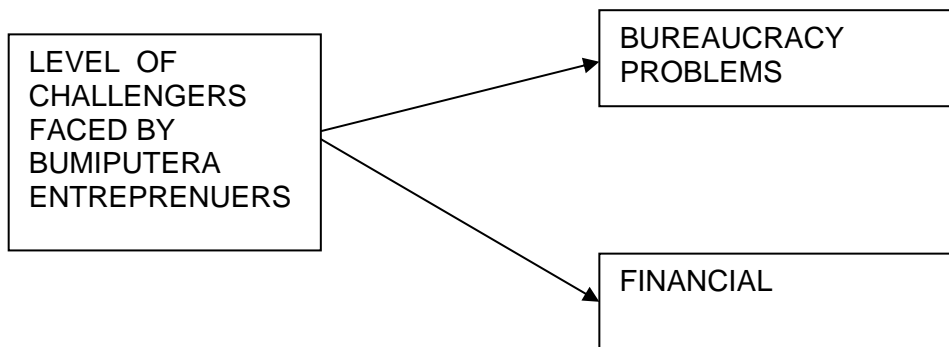


Figure 3 : Final Framework Level Of Challengers Faced By Bumiputera Entrepreneurs

The figure 3 above is the final framework of challengers faced by bumiputera entrepreneurs. There are two factors / variables contribute to the level of challengers faced by bumiputera entrepreneurs in dealing with their business where the factors are bureaucracy problems and financial.

CONCLUSION

Based on the analysis and results from the previous chapter, we can conclude that the Cronbach's Alpha reliability coefficient is 0.623, that it indicates there is an acceptable internal consistency. From the descriptive analysis, we can summarize that there were 59% of the respondents are female and 41% are male and the mostly respondents business location were at other location; Dataran Pahlawan, Melaka Mall and Giant. Majority of the respondents' age are around 31-40 years old. Most of the respondents possess the SPM qualification, involve in clothes business sector, have dealing with their business for 1-5 years and the background of their business are they start with their owned business. The most common sources of capital are they used their own money to start their business. Strategic location is the most common factor that respondents dealing with their business now. 51% of the respondents have workers where 45% majority of them have 1-3 workers. While the other 49% does not have any workers at all. From test of normality, all variables are normally distributed. Then from Chi-Square Analysis, there is no association relationship between level of challengers and demographic factor such as gender, age, education level, duration of business, background of business, sources of capital, business types and total number of workers. The comparison means show that there is no significance different between level of challengers and gender, workers, education level, duration of business, background of business, sources of capital, capital and business types. Factor Analysis extract four factors towards challengers from the data. The factors are Marketing Strategy, Bureaucracy Problems, Financial and Rent. When Regression Analysis were conducted, we found that the important factor to determine the level of challengers are financial and bureaucracy problems. Rent and Marketing Strategy toward level of challengers are not significant predictor variables. Even though the study shows that financial and bureaucracy problems are the significant predictor variables, it can only explain 54.9% of the total variation in level of challengers. Another 45.1% of the variation in challengers is explained by other factors. We can conclude that the model is appropriate since the distribution of the error term is normal and has constant variance.

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BM(18)

EXPLORING DRIVING FORCES FOR THE GROWTH OF INDUSTRIAL CLUSTERS: EMPIRICAL EVIDENCE FROM HSINCHU SCIENCE PARK

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ABSTRACT

Industrial clusters have received considerable attention from economists and industrial analysts. The main purpose of this paper is to contribute to the understanding of the driving forces behind the growth of industrial clusters. We try to examine the impacts of and determine the relationships among different driving forces. Taiwan's Hsinchu Science Park, because of its connection with innovative participators, is a prime example for this paper. This research adopts the Decision Making Trial and Evaluation Laboratory (DEMATEL) as the main analytical tool. Our research results show that Local Demand Conditions and Factor Conditions are the most important driving forces for advancing industrial cluster performance. This paper concludes by discussing managerial implications for industry and government.

Keywords: *industrial cluster, driving force, taiwan hsinchu science park, decision making trial and evaluation laboratory (DEMATEL)*

INTRODUCTION

The increasing competition and globalization of industries, markets, and technologies has raised the demand for outside-in innovation and acquisition of technology through integrated innovation clusters (Becker & Gassmann, 2006). Companies need to develop cluster competence in order to link their organizations to other players in the market to allow interactions beyond organizational boundaries (Ritter & Gemunden, 2004). The formation of clusters of innovation is a useful concept for transforming both tangible and intangible knowledge into embodied and disembodied technical change (Liyanage, 1995).

Clusters are defined as selected sets of multiple autonomous organizations, which interact directly or indirectly, based on one or more agreements between them. The aim of clusters is to gain a competitive advantage for the individual organizations involved and occasionally for the entire cluster as well. Cluster competence enables a company to establish and use relationships with other organizations (Ritter & Gemunden, 2004).

Heretofore, the traditional industrial system has often focused on promoting scientific and technological policies. These system models have typically believed in the science push effect in the radical industrial process. Compared with traditional hierarchical systems, however, clusters between industries and other research institutions can reduce innovation costs (Clark & Guy, 1998; Gemunden, Ritter & Heydebreck, 1996), gain complementary resources or knowledge (Williams, 2005; Teng,

Tseng, & Chiang, 2006; Ritter & Gemunden, 2004), receive funds (Rothschild & Darr, 2005; Colombo & Delmastro, 2002), and advance competitive positions (Ritter & Gemunden, 2004).

Previous studies have also examined the cluster structure (Ritter & Gemunden, 2004; Gemunden, Ritter, & Heydebreck, 1996; Clark & Guy, 1998), and some studies have addressed the cluster effect (Teng, Tseng, & Chiang, 2006). A number of empirical studies have also provided evidence that clusters affect innovation performance (Colombo & Delmastro, 2002). Particularly, in past studies, scholars in the field of innovation systems have found it most useful to compare innovation systems between different industries or countries (Chang & Shih, 2004).

Some scholars have drawn attention to the Taiwanese innovation system (Hu, Lin, & Chang, 2005; Lee & Tunzelmann, 2005; Lai & Shyu, 2005; Tasi & Wang, 2005; Yang, Cheng, & Shyu, 2006). Taiwan is one of the world's largest manufacturers of high-technology components and products. Taiwan maintains its current competitive position through investment in research and development (Tasi & Wang, 2005; Lai & Shyu, 2005). To this end, the establishment of a business-friendly environment and local innovation clusters, and the creation of an environment to enhance innovation capabilities, are pressing tasks (Hu et al., 2005). The development of high-tech industry has obviously reached maturity in Taiwan. According to the World Economic Forum's "2007-2008 Global Competitiveness Report," Taiwan has again taken first place in the world in the "State of Cluster Development" index (see appendix 1) (Chen, 2007).

The Hsinchu Science Park (HSP) of Taiwan is now one of the world's most significant areas for [semiconductor manufacturing](#). It is home to the world's top two [semiconductor foundries](#), Taiwan Semiconductor Manufacturing Company ([TSMC](#)) and [United Microelectronics Corporation](#) (UMC) (Tasi & Wang, 2005; Lai & Shyu, 2005; Chen, 2007). The HSP, established by the government of [Taiwan](#) in [1980](#), straddles [Hsinchu City](#) and [Hsinchu County](#) on the island of [Taiwan](#). Industries in the HSP cover primarily six spheres—semiconductors, computer peripherals, communications, opto-electronics, biotechnology, and precision machinery. Firms in the science park bring in high-tech industries and, in addition, help transform Taiwan's labor-intensive industries into technology-intensive industries.

The main purpose of this paper is to build up a Decision Making Trial and Evaluation Laboratory (DEMATEL) model to segment and evaluate the required driving forces of industrial cluster growth in the HSP. The DEMATEL is a suitable method that helps us in gathering group knowledge for forming a structural model, as well as in visualizing the causal relationship of subsystems through a causal diagram (Wu & Lee, 2007). We take the HSP of Taiwan for pursuing our case purposes. Discussing the relationship between different drivers and making a causal map that finds out the causal group and effect group, this research provides Taiwan industries and government with some strategic recommendations.

Section 2 of this paper briefly outlines the factors driving the growth of industry clusters as rooted in important prior research. Section 3 presents how we adopt the DEMATEL methodology. Section 4 displays our empirical results along with some discussion relating to managerial implications. Concluding remarks are given in Section 5.

WHAT FACTORS DRIVE INDUSTRIAL CLUSTERS TO BE NATIONALLY COMPETITIVE?

A major breakthrough for the cluster concept was Porter's Competitive Advantage of Nations (1998), which advocated specialization according to historical strength by emphasizing the power of industrial clusters. Porter highlighted that multiple factors beyond those internal to the firm may improve its performance. In his "diamond model," four sets of interrelated forces are brought forward to explain industrial clusters: factor input conditions; local demand conditions; related and supported industries; and firm structure, strategy, and rivalry.

National competitive advantages are achieved by industrial clusters (Cooke, 2001; Porter, 1998; Enright, 1992, 1993). In a highly competitive and global environment, regional industrial clusters provide a valuable mechanism for boosting national competitiveness. Clusters are the key organizational unit for understanding and improving the performance of national economies and competitiveness. An industrial cluster is a geographic concentration of interconnected businesses, suppliers, service providers, and associated institutions (Mills, Reynolds, & Reamer, 2008). That is, the industrial clusters stimulate innovation and improve productivity; they are a critical element of national competitiveness. They also provide a unique environment for accelerating technological innovation, nurturing new start-up firms, attracting investment, and generating economic growth. In summary, industrial clusters improve national competitiveness by increasing both inter-organization and industrial productivity, advancing innovation capability, and urging new enterprise formation (Lin, Tng, & Hung, 2006).

In addition, national cultures and cultural differences can be used as a source of competitive advantage. It is therefore important to recognize clusters' own cultural benefits and deficits. Where deficits are identified, cultures offering solutions to those deficits can be used as benchmarks. Our research, therefore, also attempts to provoke discussion on the value of looking at the cultural influences on the growth of clusters. This approach could be used to help determine the catalytic role that such development organizations should be played by emphasizing the need to base decision-making on cultural as well as on economic factors in order to stimulate cluster formation and enable innovation by optimizing cultural interchange. The culture of the cluster influences the culture of the workforce and the culture of business. Hence a cultural understanding of operations excellence is critical to success. Suppliers can learn from performance evaluation about the need to improve supervision, precision, cycle time, and skills, and to participate in improvement projects.

In a highly competitive industrial environment, industries need to establish a cluster that shares information and resources to attain the synergy-effect among firms and to increase their national competitive advantages. Therefore, we should find out what the driving forces are for those industrial clusters. We chiefly adopt the concepts of the Diamond Model (Porter, 1988), adding in the factor of culture, as a base for deducing what the most important cluster driving forces are and for analyzing the relationship and impacts among those forces, in exploring the notion of industrial clustering as a means to enhance national competitiveness.

FACTOR CONDITIONS

Porter agreed that a state's or nation's endowment of factors for encouraging production has a role in determining competitive advantage. However, Porter broadened the definition of factors for production into five major categories: human resources, physical resources, knowledge resources, capital resources, and infrastructure (Rojas, 2007).

Abundant natural resources, which are factors of production, could provide the original momentum for establishing an industry. Their presence might also have enticed a predecessor industry to the location, thereby creating the initial framework for a subsequent industry (Porter, 1998).

The fact that competitive pressure compels firms to innovate in order to overcome their microeconomic environment's disadvantages represents a major theme in Porter's work. The remaining fundamental determinants in the model play an important and powerful role in inciting firms to innovate so as to remain competitive players in their industries. Specialized factors of production are skilled labor, capital, and information infrastructure. Specialized factors involve heavy, sustained investment, and they are more difficult to duplicate. These factors include entrepreneurship and venture capital.

Entrepreneurship is the engine of cluster development growth. Entrepreneurs play an important role in selecting and applying new ideas, and venture capital investment plays a vital role in creating phenomenal economic growth (Wonglimpiyarat, 2008). Finally, having a science and information infrastructure means that a country or region establishes a science and technology platform for improving or upgrading science linkage between players, such as science parks or information centers. The science park concept was originated in the late 1950s. The idea was, and still is, to provide a technical, logistical, administrative, and financial infrastructure to help young enterprises gain a toehold for their products in an increasingly competitive market.

LOCAL DEMAND CONDITIONS

Consumer demand plays possibly the most important role in forming and building up an industrial cluster. A large number of industrial customers in the nearby area create sufficient demand to enable suppliers to acquire and operate expensive specialized machinery.

Porter (1998) has argued that a sophisticated domestic market is an important element for producing competitiveness. Firms that face a sophisticated domestic market are likely to sell superior products because the market demands high quality, and a close proximity to such consumers enables the firm to better understand the needs and desires of the customers (Lai & Shyu, 2005). As a result, demand conditions can stimulate an industry through local demand for a product that also proves viable in regional, national, and international markets (Woodward, 2004).

RELATED AND SUPPORTING INDUSTRIES

Spatial proximity of upstream or downstream industries facilitates the exchange of information and promotes a continuous exchange of ideas and innovations. The availability, density, and interconnectedness of vertically and horizontally related industries are important drivers for industrial clusters (Lai & Shyu, 2005). This includes suppliers and related industries.

Related industries refer to firms that provide complementary products or services to one another. While competing on the basis of their value chain management within their product- or service-specific industry, they might share or coordinate certain activities, such as distribution, technology development, manufacturing, or marketing (Porter, 1998). Competitive related industries can provide opportunities for technological exchanges and, possibly, can accelerate the development of competitive local supplier industries serving both. However, close working relationships among related industries do not happen automatically. Related industries must explicitly seek to forge alliances that will add to their competitive advantage (Rojas, 2007).

Close working relationships between downstream firms and local input suppliers can facilitate the process of innovation and upgrading (Porter, 1998). Related and supporting industries could drive the creation of an industry through spin-offs, serving a particular market that is outside the realm of another local industry (Rojas, 2007).

FIRM STRUCTURE, STRATEGY, AND RIVALRY

Porter (1998) argues that intense competition spurs innovation. The world is dominated by dynamic conditions. Direct competition impels firms to work for an increase in productivity and innovation. Firm strategy, structure, and rivalry refer to the various approaches to a firm's inception, organization, and management that establish the context for local rivalry and competitive advantage. Differences in management systems and organizational structure offer opportunities for establishing competitive advantage. Relationships between labor and management represent a particularly important element for the firm, given their powerful impact on the process of innovation and improvements (Porter, 1998). Porter established that rivalry with domestic firms proves to be more beneficial than other factors in terms of innovation and improvements. Local rivals compel one another to seek effective cost-cutting measures, product/service innovations, and organizational improvements. Local competitive pressure also leads to commercially successful firms, which in turn, lures new firms to the industry.

Rivalry is the key element compelling the initial industry to become competitive through upgrading and innovation. A cluster of domestic rivals encourages the formation of more specialized suppliers and related industries. The geographic proximity in the cluster between rival firms and their suppliers or related industries facilitates research exchanges and collaboration. This broadens the depth, breadth, and specialization of the cluster, thereby inducing further investment in advanced infrastructure and factor creation (Rojas, 2007).

GOVERNMENT SUPPORT

The role of government in Porter's Diamond Model is to act as a catalyst and challenger; it is to encourage—or even push—companies to raise their aspirations and move to higher levels of competitive performance. Government must encourage companies to raise their performance, to stimulate early demand for advanced products, to focus on specialized factor creation, and to stimulate local rivalry by limiting direct cooperation and enforcing anti-trust regulations.

Besides, government must provide the required infrastructural needs of the developing industrial cluster. The role of the government in a regional economy is necessarily a variable over the life cycle of the industry cluster, and as a result it needs to have the capability to identify and monitor the set of natural industries that exist within the region and their stages of development (Porter, 1998). However, government's role requires a paradigm shift, both in "mind set" and in programs and services (Porter, 1998). In the new paradigm, government acts as facilitator, promoting partnerships and alliances, and focusing on investments in skills development, infrastructure, and new technologies. The government has taken a much more commanding role than formerly, encouraging the creation of clusters by offering inducements to companies to relocate there.

CULTURE

Innovation is an outcome of an innovative culture. Clusters with an innovative culture will increase the life-expectancy and productivity of the infrastructure and business capital that they host, and the productivity and prosperity of their community (Porter, 1998). Hall (1976) argued that cultures vary greatly in the processing of information and patterns of communication. Cultural differences were found to predict stress, negative attitudes toward mergers, and the lack of cooperation between firms subsequent to a merger (Weber, Shenkar, & Raveh, 1996). More relevant to our study, Olie (1994) has argued that the blending of diverse cultures tends to be a challenging obstacle to successful collaboration.

THE DECISION MAKING TRIAL AND EVALUATION LABORATORY (DEMATEL) METHOD

The DEMATEL method was developed to study the structural relations in a complex system (Liou, Yen, & Tzeng, 2008). The mathematical concepts are borrowed from Liou, Yen, and Tzeng (2008) and Wu (2008). DEMATEL has been adapted in many academic fields, such as industry analysis. Wu and Lee (2007) combined DEMATEL and fuzzy theory to segment required competencies for better promoting the competency development of global managers. Liou, Yen, and

Tezng (2007) used fuzzy logic and DEMATEL to build an effective safety management system for airlines. Huang, Shyu, and Tzeng (2007) used DEMATEL and gray relational analysis to reconfigure innovation policy portfolios presented for the Taiwanese government's policy definition.

The DEMATEL model construction process is described below:

Step 1: Generating the direct-relation matrix

To measure the relationship between criteria requires that the comparison scale be constructed according to the following four levels: No influence (0), Low influence (1), Medium influence (2), High influence (3), and Very high influence (4). The integer score that the *k*th expert gives to indicate the degree that factor *i* has on factor *j* is x_{ij}^k . The $n \times n$ matrix *A* is found by averaging all experts' scores.

$$a_{ij} = \frac{1}{H} \sum_{k=1}^H x_{ij}^k \dots\dots\dots(1)$$

Step 2: Normalizing the direct-relation matrix

On the base of the direct-relation matrix *A*, the normalized direct-relation matrix *X* can be obtained by the following formulas:

$$\text{Let } s = \max(\max_{1 \leq i \leq n} \sum_{j=1}^n a_{ij}, \max_{1 \leq j \leq n} \sum_{i=1}^n a_{ij}) \dots\dots\dots(2)$$

$$\text{Then } X = \frac{A}{s} \dots\dots\dots(3)$$

The sum of each row *j* of matrix *A* represents the direct effects that factor *i* gives to the other

factors; $\max(\max_{1 \leq i \leq n} \sum_{j=1}^n a_{ij}, \max_{1 \leq j \leq n} \sum_{i=1}^n a_{ij})$ represents the direct effects on others.

Step 3: Attaining the total-relation matrix

Once the normalized direct-relation *X* is obtained, the total-relation matrix *T* can be calculated by applying the following formula, (4), in which *I* is denoted as the identity matrix.

$$T = X(I - X)^{-1} \dots\dots\dots(4)$$

Step 4: Producing a causal diagram

The sum of rows and the sum of columns are separately denoted as vector *D* and vector *R*. The horizontal axis vector $(D + R)$, named "Prominence," is made by adding *D* to *R*, which represents how much importance the criterion has. Equally, the vertical axis $(D - R)$, named "Relation," is made

by subtracting D from R , which may divide criteria into a cause group and an effect group. Based on the above statements, when $(D - R)$ is positive, the criterion belongs to the cause group. Otherwise, when the $(D - R)$ is negative, the criterion belongs to the effect group. Therefore, the causal diagram can be acquired by mapping the dataset of $(D + R, D - R)$.

$$T = [t_{ij}]_{n \times n} \quad i, j = 1, 2, \dots, n \quad \dots \dots \dots (5)$$

$$D = \left[\sum_{j=1}^n t_{ij} \right] = [t_{i\cdot}]_{n \times 1} \quad \dots \dots \dots (6)$$

$$R = \left[\sum_{i=1}^n t_{ij} \right]_{1 \times n}^t = [t_{\cdot j}]_{n \times 1} \quad \dots \dots \dots (7)$$

Step 5: Setting a threshold value and obtaining the inner dependence matrix

To explain the structural relation among factors while keeping the complexity of the whole system at a manageable level, it is necessary to set a threshold value P to filter out negligible effects in matrix T . Only the factors whose effect in matrix T is greater than the threshold value will be shown in an inner dependence matrix. Here the threshold value P has been chosen by the experts and the results of the literature review.

EMPIRICAL EVIDENCE FROM HSINCHU SCIENCE PARK

Cooke (2001) states that clusters are the key determinants of economic growth because they can improve regional productivity, innovation, and new business. Consequently, cluster thinking offers important lessons for economic development and practice (Cortright, 2006).

According to the World Economic Forum’s “2007-2008 Global Competitiveness Report,” Taiwan has taken first place in the world in the “State of Cluster Development” index (Chen, 2007), as noted before. Besides, Furman et al. (2002) have given Taiwan a Cluster Innovation Environment Subindex of 9.6, giving it a reasonable rank of eight in the economies surveyed.

Industrial parks have been the cornerstone of Taiwan’s industrial development since their creation in the 1970s and are a foundation of the island’s economic success (Lee, 2006). The greatest contribution of industrial clusters is their ability to stabilize Taiwan’s industrial development and to allow the industries to upgrade their technological level. Industrial clusters have also stimulated the economy of Taiwan, particularly the service-oriented industry, and have created a mutually beneficial relationship between high-tech and traditional industries. The importance of this cluster to innovation cannot be underestimated since, according to Porter, the electronics cluster in Taiwan accounts for 80% of all USPTO patent filings (Porter, 2001).

Given the above, we may well believe that the industrial country Taiwan has mainly derived its competitiveness from the strength of industrial clusters. Among these, its “local industrial clustering” has been often cited as the major source of Taiwan’s success (Kraemer et al., 1996; Kim & Tunzelmann, 1998).

RESEARCH FRAMEWORK

This study attempts to find out the impact of the major driving forces behind Taiwan’s HSP clustering and to measure the relationships among those forces. We adopt the Diamond Model (Porter, 1998) in addition to the concept of culture to give the priority to these driving forces. Based on deductions from the prior literature, the driving forces in question are factor conditions, local demand conditions, related and supporting industries, firm structure and strategy and rivalry, government support, and culture. We then apply the Decision Making Trial and Evaluation Laboratory (DEMATEL) to address the related issues. Figure 1 denotes our research framework.

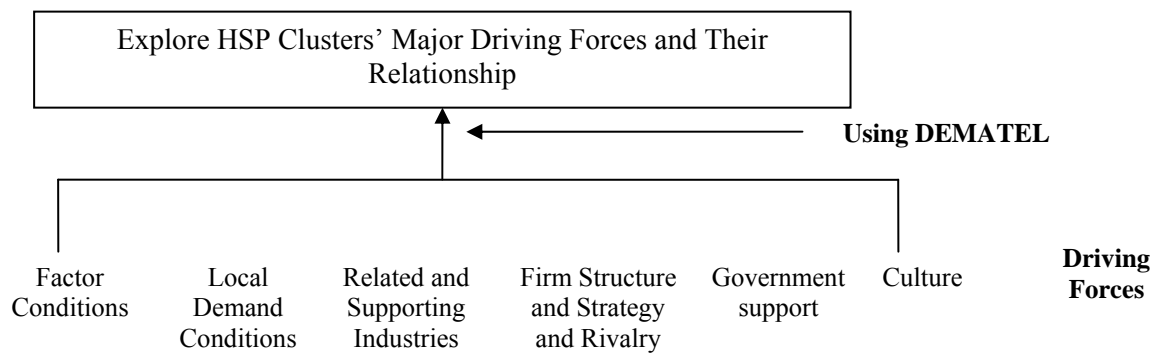


Figure 1 Research Framework

IDENTIFYING RELATIONSHIP BETWEEN FACTORS USING DEMATEL

Our purpose is not only to find out the most important driving force for the growth of industrial clusters but also to measure the relationships among these driving forces. Ten experts helped us with the survey, including four industrial analysts from the Industrial Technology Research Institute, four managers of high-tech companies, one professor of management, and one government representative from the Bureau of Urban Development of the Hsinchu City Government. These experts followed our proposed method with a three-step procedure.

First, we made the decision goal and set up a committee. Through literature investigation and studying experts’ opinions, the committee finally adopted five dimensions. As noted, we adopted the factors of the Diamond Model (Porter, 1998) in addition to the cultural concept as our driving forces. Table 1 entails the details of their definitions. Based on the above dimensions, we employed the DEMATEL method for capturing the complex relationships among these evaluation criteria.

Then we obtained the collected pair-wise comparison results; the preliminary average direct-influence matrix is shown in Table 2. Based on the direct-influence matrix, we continually normalized

these numbers into what is shown in Table 3—the direct-relation matrix (calculated by formula (2) and (3)). Tables 4 and 5 mean “total-influence matrix” and “total effects and net effects for each factor,” respectively. Then we used formula (5)-(7) as based on the normalized matrix to produce the causal diagram by mapping a dataset of $(D + R, D - R)$, as displayed in Figure 2.

We can then clearly and intuitively discover the importance order of these dimensions for driving industrial cluster growth, according to the resulting causal diagram. Also looking at this causal diagram, these driving forces can be divided into a causal group, which includes D1 and D2, along with an effect group, which includes D3, D4, D5, and D6.

Table 1: Dimensions of the Driving Forces for the Growth of Industrial Clusters

Dimension		Dimension Description
Factor Conditions	D1	Specialized factors of production are skilled labor, capital, and information infrastructure. The factors include entrepreneurship and venture capital. Entrepreneurship is the engine of cluster development growth. Venture capital markets create a positive impact on industrial development. The science and information infrastructure means that a country or region should establish a science and technology platform for improving or upgrading science linkage between players, such as science parks or information centers.
Local Demand Conditions	D2	Consumer demand plays an important role in forming and building up an industrial cluster. A large market also enables suppliers to provide specialized products and services. Suppliers gain from the nearby market for their output, while the client firms in the cluster gain from easy access to a range of services.
Related and Supporting Industries	D3	Spatial proximity of upstream or downstream industries facilitates the exchange of information and promotes a continuous exchange of ideas and innovations. The availability, density, and interconnectedness of vertically and horizontally related industries are an important driver for industrial clusters.
Firm Structure, Strategy, and Rivalry	D4	Intense competition spurs innovation. The world is dominated by dynamic conditions. Direct competition impels firms to work for increases in productivity and innovation.
Government Support	D5	Government must provide the required infrastructural needs for a developing industrial cluster. Government also encourages companies to raise their performance, to stimulate early demand for advanced products, and to focus on specialized factor creation; government can stimulate local rivalry by limiting direct cooperation and enforcing anti-trust regulations.
Culture	D6	Innovation is an outcome of an innovative culture. Clusters with an innovative culture will increase the life-expectancy and productivity of the infrastructure.

Table 2: Direct-Influence Matrix

	D1	D2	D3	D4	D5	D6
D1	0.00	1.60	3.40	3.40	3.10	2.00
D2	1.40	0.00	2.80	2.80	2.50	2.00
D3	3.20	2.40	0.00	3.70	2.80	1.90
D4	3.40	2.50	3.60	0.00	3.00	1.90
D5	3.40	2.30	2.70	2.90	0.00	1.90
D6	1.60	2.20	1.70	1.90	2.00	0.00

Table 3: Direct-Relation Matrix

	D1	D2	D3	D4	D5	D6
D1	0.000	0.111	0.236	0.236	0.215	0.139
D2	0.097	0.000	0.194	0.194	0.174	0.139
D3	0.222	0.167	0.000	0.257	0.194	0.132
D4	0.236	0.174	0.250	0.000	0.208	0.132
D5	0.236	0.160	0.188	0.201	0.000	0.132
D6	0.111	0.153	0.118	0.132	0.139	0.000

Table 4: Total-Influence Matrix

	D1	D2	D3	D4	D5	D6
D1	1.4197	1.2877	1.6942	1.7345	1.5989	1.1783
D2	1.3061	1.0200	1.4500	1.4847	1.3661	1.0294
D3	1.6378	1.3603	1.5454	1.7910	1.6239	1.2028
D4	1.6801	1.3924	1.7805	1.6225	1.6665	1.2276
D5	1.5707	1.2909	1.6219	1.6701	1.3848	1.1465
D6	1.1016	0.9753	1.1705	1.2090	1.1292	0.7514

Table 5: Total Effects and Net Effects for Each Factor

	D	R	D + r	d - r
D1	8.91	8.72	17.63	0.20
D2	7.66	7.33	14.98	0.33
D3	9.16	9.26	18.42	-0.10
D4	9.37	9.51	18.88	-0.14
D5	8.68	8.77	17.45	-0.08
D6	6.34	6.54	12.87	-0.20

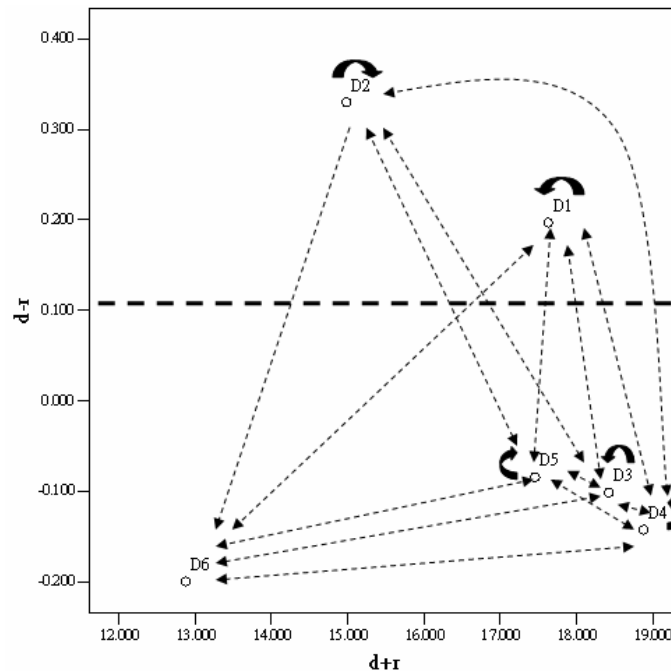


Figure 2: Impact-Relationship Map

DISCUSSIONS

In this empirical study, we try to discover the major driving forces for the growth of industrial clusters and to find out the relationships among these driving forces. We take Hsinchu Science Park of

Taiwan as our case for study. According to the empirical results, this research concludes with some managerial implications, as follows.

We can find out the relationships among these driving forces based on Table 4 and Figure 2. From the results, we understand that most of the driving forces form a system and also are self-reinforcing. Self-reinforcing implies that the effect not only improves other driving forces' effectiveness but also enhances its own influence. That said, these driving forces influence each other and have a self-relation, except for D6 (culture dimension), as only the value of D6-D6 is 0.7514, which is smaller than one. The main reason why culture is a weak driving force behind Taiwan's industrial clustering is that Taiwan's industry is mainly export-oriented and more and more globalized due to its Original Design Manufacturing (ODM) mode. A weaker culture may therefore result from the gradual spread of higher internationalization within the science park. However, according to our observation there is little blending of diverse cultures, which tends to be a challenging obstacle to successful collaboration within the cluster. This research outcome also accords with previous studies. For instance, Porter (1998) believed that the clustering of industry would lead towards vigorous competition and would result in the rapid development of skilled workers, the creation of related technological industries, and specialized infrastructure that would give each firms within the cluster a competitive advantage. The rivalry for final goods stimulates the emergence of an industry that provides specialized intermediate goods. Keen domestic competition leads to more sophisticated consumers, who come to expect upgrading and innovation.

In addition, our research results from using the DEMATEL method point out that the major causal dimensions are D2 and D1. The experts chose D2 (Local Demand Conditions) to be the most important dimension among the set. D1 (Factor Conditions) is the second most important dimension. We will interpret why these two are important and how Taiwan has advanced its industrial clustering performance through these driving forces.

First, the experts identify local demand conditions as the most critical and determinative driving force for the growth of industrial clusters. In Taiwan, a large market enables suppliers to provide specialized products and services. Suppliers gain from a nearby market for their output, while the client firms in the cluster gain from easy access to a range of services. This interaction can get the most immediate and the newest responses regarding technical problems or market demand. Proximity to a local market also plays a key role in potentially increasing a firm's competitive advantage. Timeframes tend to be shorter for responding to local demand pressures, and the firms tend to be more confident in understanding and satisfying local demand requests. Porter indicated that local market size is the most important for enhancing competitive advantage in industries with substantial research and development requirements, major economies of scale in production, or significant generational leaps in technology (Porter, 1998). A rapidly growing local demand provides firms with the incentive to incorporate new technologies faster and to upgrade or expand their capacity with the necessary conviction that they will be used. This pulling force for innovations from the demand side has its complementary pushing force located among related and supporting industries (Rojas, 2007).

What needs to be mentioned particularly is that Taiwan's local demand factor also involves the condition of cooperation and global networking. In Taiwan, hundreds of other relatively unknown firms are partners in the success of high-profile companies like the Taiwan Semiconductor Manufacturing Corporation (TSMC), Acer, and Quanta, who have direct links to major multinational markets. These companies have developed their own capabilities by collaborating with customers and suppliers to develop new products or improve existing products (Saxenian, 2006). So the adaptive capacity of Taiwan's technology base derives from collaborations among local producers as well as from their long-distance partnerships. In particular, the fragmentation and localization of production in the Hsinchu region are keys to the flexibility, speed, and innovative learning-by-doing of its IC firms (Saxenian, 2006).

Second, the committee observes that "factor conditions" are also a critical driving force for the growth of industrial clusters. The factor conditions refer to the specific factors. These are more difficult than other conditions to duplicate. This can lead to a competitive advantage, because if other firms cannot easily duplicate these factors, they are valuable. Based on our definition of factor conditions, specialized factors of production are skilled labor, capital, and information infrastructure. The main factor conditions include entrepreneurship, venture capital, science parks, and incubators for the growth of the industrial cluster.

Taiwan's venture capital industry is the third most active venture capital market in the world, ranking behind that of the United States and Israel. In the aftermath of the Asian Economic Crisis of 1997 (Chang & Shih, 2004), the annual growth rate in the number of Taiwan venture capital companies and the growth rate of venture capital investment exceeded 50 per cent in 1997 and 1998, a clear indication of the rapid development of Taiwan's venture capital sector over the last few years (Chang & Shih, 2004). On the other hand, since 1996, the Small and Medium Enterprise (SME) Administration of the Ministry of Economic Affairs of Taiwan has been using the SME Development Fund to encourage both public agencies and private sectors to set up SME incubation centers in Taiwan (Chen, 2007). A total of 79 SME incubators have been established in northern, central, southern, and eastern Taiwan. Finally, in Taiwanese policies we can see that the role of government as a direct provider (as opposed to facilitator) is emphasized; for example, it establishes research institutes to directly conduct a range of research that then becomes available to local industry. These institutes, such as the Industrial Technology Research Institute (ITRI), Technological Information Center, and National Science Council (NSC), conduct research on a large scale and undertake studies on the feasibility of industrializing new technology. Although it tries to link universities via conferences, in effect the Taiwanese government is focused on providing the tools of innovation, i.e., technically educated students, government funded research, training, and information (Chen, 2007).

CONCLUDING REMARKS

Carroll and Reid (2004) contend that clustering brings a variety of benefits to firms and the local economy. They believe that cluster-based economic development represents an opportunity for industries in the region to reach unprecedented levels of competitiveness. Industrial clusters then

provide sourcing companies with a greater depth to their supply chain and allow for the potential of inter-firm learning and co-operation. Clusters also give firms the ability to draw together complementary skills in order to bid for large contracts for which, as individual units, they would be unable to compete successfully (Carroll & Reid, 2004). Productivity, innovation, and new business formation are enhanced under such circumstances. As a result, clusters work by acting as economic communities based on informal and formal, hard and soft forms of networking between firms and agencies (Cooke, 2001).

We have proposed the DEMATEL method to discover the most important driving forces for the growth of industrial clusters, using the Taiwan HSP as an example. We also measure the relationships among these driving forces. This research has beneficial results and implications for industries and policy makers as follows.

First, this research helps divide all dimensions into causal groups and effect groups in terms of the driving forces behind industrial clustering. According to our research results, local demand conditions and factor conditions are the major driving force for the growth of industrial clusters, also being the causal group among the driving forces. As a side note, research results indicate that most of the driving forces form a system and also are self-reinforcing. This implies that the clustering of industry will lead toward vigorous competition that will result in the rapid development of skilled workers, the creation of related technological industries, and development of a specialized infrastructure that gives the cluster a competitive advantage.

This research might have some limitations. The Hsinchu Science Park is our research objective. Science parks located in different places or countries probably have different clustering features and characteristics. Therefore, the comparison among different science parks can be a meaningful and interesting research topic regarding the aspect of industrial clustering.

Appendix 1: WEF Ranking of the Competitiveness of Industrial Clusters

	2007-2008		2006-2007		2005-2006	
	Score	Global Ranking	Score	Global Ranking	Score	Global Ranking
Taiwan	5.7	1	5.52	1	5.39	2
United States	5.3	2	5.22	2	5.19	4
South Korea	5.1	3	4.19	31	4.38	21
Singapore	5.1	4	4.92	7	5.15	6
England	4.8	9	5.06	4	4.63	14
Germany	4.8	10	4.90	8	4.45	17
Finland	4.8	11	5.07	3	5.33	3
Japan	4.7	12	4.33	27	5.46	1
Switzerland	4.7	13	4.67	15	4.31	23
Hong Kong	4.7	14	4.75	12	4.68	11
Italy	4.5	21	3.19	85	5.16	5

Source: Chen, 2007

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BM(19)

AN ANALYSIS OF AUDITORS LITIGATION

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EXECUTIVE SUMMARY

- Auditors' litigation research indicates that the main sources of these are lack of independency, compromising of accounting and auditing standards, acceptance of high-risk clients and conflicts of interest.
- Application of accounting and auditing standards differ from one country to another.
- Clients' lawsuits are mostly weak and time consuming.
- Auditors' litigations caused some of the audit firm to provide more of the non-assurance services rather than assurance services.

As more clients' needs raised due the fast change of technology it also creates an impact in changing the auditing profession. Unfortunately, the auditing profession was not prepared for these challenges.

Keywords: auditors' litigation, auditing firms, accounting and auditing standards

Lack of Independency

Auditing firms stay for years auditing the same company hence the relationship outside the auditing scope develops which compromise their auditing responsibility. Clulow, 2002: 5 indicates that Enron accounts and finance departments were stuffed with Andersen's employees hence strong personal ties arise which compromise audit independency. Clulow, 2002: 3 further indicates that if you are auditing your own creations, it is very difficult to criticize them.

Compromising of Accounting and Auditing Standards

Findings from Fisher (2003: 42) clearly indicates that most of the auditing firms, which compromised the accounting and auditing standards, ended up in fire. PwC was accused of making false and misleading auditing conclusions at Russian Gas monopoly Gazprom. This incident led Hermitage's CEO William Browder to question the reputation of the auditing profession.

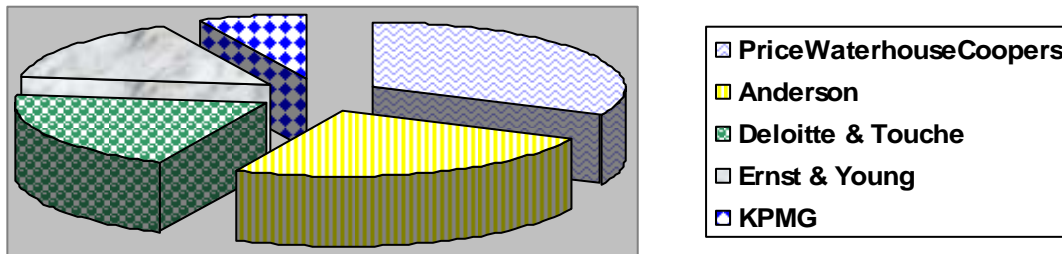
Acceptance of High Risk Clients

Due to high competition in this particular industry, some of the audit firms may overlook the issue of assessing risk before client acceptance, which leads to litigation. The table below indicates high-risk clients by different audit firms and the pie below shows the impact of these selection leads to fire.

Based on the clients' selection and the results of the litigations, it shows that PriceWaterhouseCoopers (PwC) have gotten more fines than the others excluding Anderson.

Which audit companies are in controversial sector?		
	Company	Auditor
Pharmaceutical	GlaxoSmithKline Eli Lilly	PwC E&Y
Oil	Shell Esso	PwC PwC
Tobacco	British American Tobacco Imperial Tobacco	PwC PwC
Defence	BAE Systems (formerly British Aerospace)	KPMG
GM Food	Syngenta	PwC

Adapted from Haythornthwaite, 2003:25



Conflict of interest

The study by Clulow (2002: 3) identifies that there is a conflict between auditing and consultancy arms of the multi-national audit firms and the consequential on audit independency. Clulow further comments that over the years major audit firms have transformed themselves into 'professional services' companies which derive an increasing proportion of revenues and profits from consulting, selling computer systems, advising clients on tax shelters, and evaluating their business strategies.

Because of the impact caused by the above statement, the office of the Auditor General in RSA prohibits private firms of auditors from doing non-audit work on their public sector audit clients.

Accounting and Auditing Standards

The biggest problem raised by Enron is over accounting standards. In America, the Financial Accounting Standards Board (FASB) which are known as Generally Accepted Accounting Principles (GAAP) hugely differ from other countries settings eg. International Accounting Standard Board (IASB). According to David Crains, a former head of IASB indicates that the Enron episode could not have happened if the international was used which FASB fail to take into account, eg. Exclusion of off-Crains tried to bring together the two great standards setting bodies (FASB & IASB) to formulate one body but in vain due to ego and tension.

Effect of Accounting Standards

This is explained by the example below called the fable of two factories:

- John purchased Building A valued R5 000
- William purchased Building B valued R20 000

Building A & B are respectively the same and in the same locality.

Limitation of the research

Auditing litigation is a very sensitive issue to discuss with auditing professionals. Some of the partners and employees refused to disclose any matter concerning this issue. As a result, the litigation issue will take time to be resolved.

Recommendations

Audit firms should come together and discuss this matter in an open platform. Solutions should be structured based on the outcome of this brainstorming session.

Audit firms should only accept auditing engagements that are risk acceptable. Finally, an international body must be structured to administer and guide the accounting and auditing professions.

Conclusion

The research conducted reveals that there is a lot to be done in investigating the cause of audit litigations as it involves more factors than the one already outlined in this paper.

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BM(20)

SMALL ENTERPRISES ENVIRONMENTAL MANAGEMENT PRACTICES IN TERENGGANU – A MAIL SURVEY

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ABSTRACT

Over the past two decades, various environmental degradations such as air and water pollution, noise, foul smell, flash flood as well heavy sedimentation in river system due to lackadaisical attitudes towards environmental management amongst businesses have gathered more attention from various stakeholders in our country. The public, environmental non-governmental organisations (ENGOS) and the relevant government agency such as Department of the Environment (DOE) exert pressure on Malaysian businesses to be more environmentally responsible. Hence, businesses can no longer take environmental issues exacerbated by their activities for granted, instead need to internalise them and taken serious attention like other business activities such as marketing, human resources management, and operation management. In other words, to ensure sustainability, businesses need to consider the triple bottom lines – planet, profit and people. So far much attention has been given by the Malaysian government and other stakeholders to large businesses to tackle environmental problems in our country. This is obvious, due to sheer size of their businesses, they are easily visible pertaining to environmental issues. But nevertheless, the main aim of achieving sustainable development in Malaysia in which in line with the 9th. Malaysian Plan (2006-2020) would not be achieved unless other players, small enterprises also play significant roles to ensure their activities are environmentally responsible. Although a small enterprise individually contributes least to environmental degradation in our country, taking together it has a large impact on the environment. Such a study on this filed of interest –small enterprises environmental management- is still in an early state in our country. In this respect this study is timely, it examines small entrepreneurs' perceptions and environmental management practices in the state of Terengganu. Methodologically, this research used mail survey method to gather information from various types of small businesses, ranged from furniture, clothes industry to food processing businesses. Results of this study provide some insights into environmental management practices amongst small businesses in Terengganu.

Keywords: small enterprises, environmental management, mail survey, Terengganu

INTRODUCTION

Over the last three decades Malaysia has paid serious attention to manufacturing and industrial sectors as the engine of economic growth. Consequently, industrial areas have grown rapidly throughout the country. This has been facilitated by foreign direct investment of various international companies especially from Japan, the United States and European countries who considered Malaysia as a haven for their investments. It could not be denied that political stability, competitive labour workforce in unskilled and semi-skilled labours coupled with conducive government policies to woo foreign investors through pioneer status policy, tax exemption to certain industry, and attractive lands offered by the government. Moreover, trade missions lead by relevant ministry, i.e. Ministry of International Trade and Industry (MITI) to above-mentioned countries also play their vital roles. Since the late 1980s, Malaysia's manufacturing exports have surpassed those of primary commodities like rubber, palm oil and petroleum (Ohmae 1990). Although it cannot be denied that industrialization and modernisation that Malaysia has achieved contribute significantly to her economy, it is not without

negative consequences to the natural environment. Their impacts are becoming increasingly visible with the evidence of deterioration that is observable in many places throughout the country (Sharifah and Sham Sani, 2002, Hamirdin, 1997). Air and water pollution, heavy sedimentation, flash flood, and landslides are constant news in the media. According to the report of the Department of the Environment (DOE) based from 900 monitoring stations in 120 rivers across the country, the department classified only 32 as clean, 75 as slightly polluted and 13 rivers as highly polluted (DOE 1998). Recent report from the organisation showed the situation yet improved. This is evidence when violation of Environmental Quality Act (1974) amongst businesses has been frequently reported in local medias. Amongst businesses, manufacturing is one of the major contributors to river pollution in the country.

Realising negative consequences of waste produced by the manufacturing firms on the natural environment, Malaysia government through the DOE has imposed stringent regulations on the players in the industry. A stern action has been taken on the culprit not only to ensure they do not repeat the same offence but also to act as a deterrent on others not to do the same. Consequently, the action has forced the manufacturing firms to be more environmentally responsible in their activities. Not only they avoid court action, but also far reaching impacts in terms of good name when their companies convicted if found guilty by the court. There is an increasing number of businesses especially big players have integrated environmental agenda into their corporate strategies. They established environmental management system (EMS) in their organisations.

But nevertheless, sustainable development (henceforth SD) is not going to be achieved unless other important players, small and medium enterprises (SMEs) are also environmentally responsible. Though, big businesses received more attention SMEs contribute significantly to our economy. According to the statistics from the Ministry of International Trade Industry (MITI) SMEs in Malaysia contribute more than 75 per cent of the overall industrial growth in our economy (Berita Harian, 28 April 1999). Similar to its medium and big business counterparts, small business' activities have also contributed to environmental problems in the country. Although an individual contribution towards environmental problem is relatively small compared to big businesses, taking together, they have a very large impact to such a problem (Welford 1994; Tilley 1999). In this regard, special attention should also be given to small businesses in order to address environmental degradation in the country. But, one must bear in mind that small businesses is not a little version of big businesses, in regard of their limitations in terms of resources –finance, human, technology to name but three. They need different approaches of addressing the problem. In this vein, an investigation of the perceptions' of their owners and current environmental management practices is paramount in country. This is indeed timely in the country where such a study is in its infancy. It is hoped that the results of this study will shed some lights into the current environmental practices as well as their owners' perception matter pertaining to the natural environment.

RESEARCH OBJECTIVES

Realising the dearth of literature of small business and environmental management in Malaysia, the two-pronged objective of the study are: firstly, to study perceptions' of entrepreneurs of small manufacturing firms on the environmental management, and secondly to investigate environmental management practices of their businesses. It is hoped that the results of this mail survey study will shed some light into environmental practices adopted by small business in the country.

LITERATURE REVIEW

There are a number of reasons why research pertaining to SMEs is paramount important. First argument is based on the premise that small firms are significant to any particular countries economic and environmental terms. Small firms not only constitute the largest of business constitutions, but at the same time employed significant numbers of employees. Second, the potential environmental impact of the small firm sector could be underestimated by many people. Even though there is relatively little quantitative data available that measures the environmental impact of individual small firms compare to big businesses, it is estimated that the cumulative environmental impact of the sector as a whole could be quite considerable. For example, it has been suggested that in the UK small firms cumulatively could contribute as much as 70% of all industrial pollution (Groundwork, 1995). Third, despite the increasing number of research in environmental management, small firms are a comparatively under researched field in academia in both developed and developing countries. The business–environment literature has in the main neglected small firms, instead focusing its attention on the activities of large firms (Smith, Kemp & Duff, 2000). Fourth, argument to support the importance of small firm research is based on the premise that environmental solutions designed for large firms cannot necessarily be applied to small firms. It has been noted small firms often differ from larger firms in their management style, organizational structure and the characteristics of the owner–managers (Dandridge, 1979). Small firms are by comparison often resource poor, presenting problems accessing finance and labour and finding the necessary time to manage environmental matters (Welsh and White, 1981). Small firms are not little big firms. They need their own unique answers to, and understanding of, the difficult environmental problems they face. Final argument is to compare big businesses because management and ownership of small firms are usually synonymous. Hence, this provides a unique opportunity for their owners to put environmental or green values into practice in the workplace and in turn to influence the behaviour of employees, customer and other stakeholders. For the above reasons small firms ought not to be overlooked in the search for knowledge and understanding of the relationship between business and the environment.

Overall, most research pertaining to small business and environmental performance were conducted in developed countries (Welford, 1993, Groundwork, 1995, Tilley, 1999a, 1999b, Friedman & Miles, 2001, Shaper, 2002, Hillary 2004, Debby 2008). A number of related studies were also conducted in developing countries (Sonnenfeld, 2000, Frijns, Phuong and Arthur 2000). However, not many researchers have delved into this particular research area in Malaysia in specific and the South East Asia region in general (Yaacob, Mahmood, R & Nik Ismail, 2007).

Up until now, studies showed that the owners of small firms' perception and their involvement in environmental management measures to address the natural environment have been one of mixed fortunes. Welford, (1993) investigated environmental management of 102 SMEs in West Yorkshire, UK. In terms of environmental policies he found only a handful of SMEs had environmental policies. When the management of the firms were asked whether they thought that environmental issues would become more important or not in the next five years (study was conducted in 1992 and 1993), the management of the SMEs claimed it is becoming more important. When asked whether firms thought that environmental issues would become more important to their customers, high the number of firms thinking their customer's demand would change increased substantially between 1992 and 1993. In terms of environmental pressure, the author found governmental stakeholders exerted the highest pressure on those firms to be environmentally responsible. This was followed by European community. On the contrary, pressure from pressure groups was considered weak. When they were asked to identify the key impediments to further environmental improvement the main answered revolved around knowledge and skills, not seen as important in the organization, and other priority is more important than environmental management. Cost implications did not seem as main barrier for environmental management in the firms. In the same country, another researcher, Tilley ((1999a) in her study of small manufacturing firms found there was a substantial gap between the environmental views and attitudes of small owner-managers and the actual practices of their firms. She found they were generally positive and supportive of environmentalism but in practice their firms were generally tend to lag behind.

In another study in Western Australia, Schaper (2002) found most owners of pharmaceutical companies did not have enough time or access to the necessary information needed to make their businesses environmentally friendly. His study showed most small firms not seriously response to environmental issues, if they response more often than not at the minimum requirements – end-of-pipe solutions, i.e. cleaning up the most obvious environmental damage, such as pollution or was that they directly create and under environmental regulations. In a further study, Hillary (2004) investigated the adoption of EMS and EMAS amongst 33 SMEs in Austria, Denmark, Finland, France, Germany, the Netherlands, Sweden and the UK. Her study sheds some light on the barriers, opportunities and drivers for EMS adoption by the SME sector in the above-mentioned countries. She identified a range of issues, which influenced the adoption of formalized EMS. Despite these problems, the paper suggests SMEs do find organizational, financial and people benefits from adopting EMS. In a recent study on small automobile repair enterprises in Chicago, US by Debby (2008) found owner experience and external pressures (government intervention) and market opportunities (subcontracting, supply chain innovation, product diffusion) were amongst important drivers of environmental behaviours. The study showed although firm's owner reported no examples of customer demand driving environmental action, regulatory intervention was mostly triggered by the growing number of nuisance complaints such as odor, and garbage.

As far as small business and environmental management is concerned, there were some studies conducted in developing countries. For instance, Sonnenfeld (2000) studied a pulp and paper manufacturing in the South East Asia. He found the industry, especially small pulp factories have failed to ecologically modernise compared with their big size counterparts. They were unable to make a significant move in reducing the amount of waste as well as consumption of water in their production due to the usage of old and environmentally unfriendly machinery. A further study was conducted by Frijns, Phuong and Arthur (2000) in Vietnam. One of the main issues focused was technology development amongst SMEs. Overall, they found the development in environmental technology in SMEs in the country was still in an infant stage.

Until now, not many researchers have delved into this particular research area in developing countries including Malaysia. Due to dearth of such study in developing countries, there is a need for further research of the relationship between small firms and the environment this is especially true in Asia where the region experience potential growth in small scale business where 70 percent of the world's manufacturing will take place in Asia in the next decade (Sector based public policy in the Asia Pacific Region, US-AEP, 1999 cited in Rao, *et al.* (in press). In order to ensure sustainability of this world, small business in Asia who partly responsible for environmental issues need to behave accordingly. This is how this study contributes to study of small business and the natural environment field in developing countries.

RESEARCH METHODOLOGY

This study employed the method of primary data collection using a closed-ended questionnaire as the research instrument. The questionnaire was piloted to 30 small entrepreneurs in Kuala Terengganu prior to this survey. The questionnaire was divided into four parts. Part 1 of the questionnaire comprised of questions pertaining to demographic profiles of small firms. These included years of establishment, number of employees, legal status and type of manufacturing firms. Part 2 was designed to collect information on the perceptions of respondents on environmental management which regards to their businesses like perception of respondents on the importance of environment management at present and in the very near future to their businesses. Part 3 required respondents to choose environmental practices that they exercise in their businesses. Amongst environmental practices list down were recycle, reduce usage of utilities to the usage of environmentally friendly machines. The last part, part 4 of the questionnaire comprised of questions related with awareness of respondents on impact of their businesses on the environment. As in the previous part, respondents were also allowed to choose more than one answer. A Malay language questionnaire was used to ensure that respondents were competent to participate in the survey as they comfortable with the language. In Terengganu, as other states in Malaysia, the majority of SMEs' owners are those who do not study at any universities or colleges.

The research used mail survey method to gather information from prospective respondents. There are a number of reasons why this data collecting technique was chosen. First, low cost involved in the study, the researcher only spent RM 200 for stamps – 20 cents for outgoing letter and the same amount for incoming letter from the respondents. This is deemed appropriate when location of respondents is

scattered geographically throughout the state of Terengganu. The data collecting cost would be much higher if face to face survey is conducted -escalating price of fuel as well as research assistants' payment. Apart from cost, potential for interviewer bias is also low using mail survey.

But mail survey is not without limitations. First is low flexibility. The respondents only depend on structured questions of the questionnaire. No one is there to explain if she or he encountered any difficulty to understand the questionnaire. Low speed is another limitation. Although in the invitation letter, the researcher informed prospective respondents to answer and send back the filled-in questionnaire in two weeks time, it took longer than that. Due to a poor respond rate, the researcher waited until three months.

However, before data collection begins, the respondents and their addresses were identified. The directory of small and medium entrepreneurs, 2003 edition was used as a sampling frame. The purpose of using the 2003 edition was to ensure businesses have been established for some time. In mid March 2008 the researcher sent out a total of 250 prospective small entrepreneurs throughout the state of Terengganu. They were used based on a combination of cluster and judgemental sampling. This was conducted to ensure that all industries and all eight districts in Terengganu were selected. Table 1 shows number of samples in each industry and its respective population. The total sample in the study is about 10 per cent of the whole population (2560).

Table 1: Number of samples and population in various sectors

Sector	No. of samples	No. of Population	Percentage (%)
Food and beverages	22	100	22
Agriculture and livestock	10	19	52.6
Wood industry	12	146	8.2
Textile and handicrafts	25	105	23.8
Construction-wholesale	90	1585	5.7
Engineering	8	24	33.3
Factory	10	22	45.5
Printing	6	22	27.3
Construction-real estate	10	64	15.6
Hotel	10	65	15.4
Shipping	3	8	37.5
Services	18	150	12.0
Commerce	20	230	8.7
Transportation	6	20	30
Total	250	2560	9.8

Table 2: Number of response of small business in each sector

Sector	No. of samples	No. of Response	Respond rate Percentage (%)
Food and beverages	22	6	27.3
Agriculture and livestock	10	1	10
Wood industry	12	2	16.7
Textile and handicrafts	25	2	8
Construction-wholesale	90	5	5.6
Engineering	8	0	12.5
Factory	10	1	10
Printing	6	1	16.7
Construction-real estate	10	5	50
Hotel	10	0	0
Shipping	3	0	0
Services	18	1	5.6
Commerce	20	1	5.0
Transportation	6	0	0
Total	250	26	10

To facilitate responses from prospective respondents, the researcher included stamped returned envelopes with his address written on them. Apart from the research questionnaire, the cover letter of University Technology MARA, Terengganu was also attached in the hope to increase response from prospective respondents. Although in the invitation letters, the respondents were asked to send back the research questionnaires in two weeks time, most of those who responded did not heed that. Until the mid April (1 month later), the researcher received only 20 feedbacks from the respondents. A month later, the researcher received other 6 responds from the respondents. Overall, out of 250 letters, the researcher only received 26 responses, it means the response rate was only 10 per cent. The benchmark (acceptable rate) for mail survey is to be said around 20 per cent in developed countries like in the UK (Ahmad, 2003). Although a low rate of return raises concern about potential serious non bias, 10 per cent is acceptable in Malaysia and other developing countries where the public and businesses seldom entertain invitation letter in academic research. However, surveys of organizations typically receive substantially lower return rates than surveys of individuals, with 15% return rates sometimes reaching a level of acceptability for organizational surveys (Baldauf, Reisinger, & Moncrief, 1999; Tomaskovic-Devey, Leiter, & Thompson, 1994). Because organizational surveys are usually delivered to workplaces, factors such as preoccupation with work, confidentiality of information, or workplace rules and policies cause organizations to return surveys at low rates (Greer, Chuchinprakarn, & Seshadri, 2000). A valuable lesson to be learned from this mail survey is that in the future study a reminder letter as well as incentives should be provided to increase response rate.

Altogether 31 letters (about 12 percent of total letters of invitation) were sent back to the researcher (Table 3). The main reason was the owners already left the premises, accounting of more than 58 per cent of the reasons. Followed by no such address (29 %), no statement by postmen (9.7 %) and insufficient address (3.2 %). Table 3 shows reasons why the letters of invitation were retoured. Apart from the reason - letters of invitation did not reach prospective respondents, during the data collection period, no attempt was taken by the researcher to call those who did not response as to know why they do not cooperate. Perhaps, they were not interested.

Table 3: Reasons the letters of invitation were retoured

Why the mails were retoured	Frequency	Percentage (%)
Insufficient address	0	3.2
Unknown at	0	0
Refused to accept	1	0
Left the current address	18	58.1
Unclaimed	0	0
Deceased	0	0
No such road	0	0
No such number/address	9	29.0
No statement	3	9.7
Total	31	100

Out of 26 completed returned questionnaires, one questionnaire was dropped because it did not fulfil the requirement of small business. The organisation had more than 100 employees. It is considered as medium enterprises rather than small business.

FINDINGS

Demographic profiles

Table 4 shows profiles of small manufacturing firms. All businesses were in the manufacturing sector. A total of 26 businesses from various locations in the state of Terengganu participated in this study. More than 80 per cent of small businesses in the survey have being established for more than 10 years. The rest, 20 per cent of them were established between 5 to 9 years. The majority of the businesses (68 %) employed less than 10 employees. Judging from this figure, overwhelmingly the samples come from micro SMEs. In terms of legal status of business, 48 per cent of them were private limited company, this is followed by sole proprietorship and partnership with their respective percentage was 40 per cent and 12 per cent. Types of industry of small business vary from contractor, hardware, sawmill to food processing companies. Of these, contractor firms constitute the largest proportion, 40 per cent of the samples.

Table 4: Demographic Profiles of small business

	Frequency	Percentage
Years of establishment		
Less 5 years	0	0%
5-9 years	5	20%
More 10 years	4	80%
Number of Employees		
Less 10	17	68%
10 – 19	3	12%
Between 20 to 49	5	20
Legal status of business		
Sole proprietorship	10	40%
Private limited	12	48%
Partnership	3	12%
Types of business		
Construction	10	40%
Woods	2	8%
Food processing	6	24%
Textiles	1	4%
Printing	1	4%
Others	5	20%

Environmental policy and perception on the importance of environmental management

As expected none of these small businesses had written environmental written at their premises. Arguably, there are two explanations can be inferred here, first those businesses do not have environmentally policy, second, if they have any, it is on the heads of their owners or managers. Failure to have a written environmental policy means employees and customers do not know their environmental policy.

Table 5 shows perceptions of entrepreneurs of the importance of environmental management on their businesses at present and in the next 10 years. Almost half (about 50 per cent) of them saw environmental management as important on business at present. On the other hand, 44 per cent of them perceived it as very important. Only 8 perceived environmental management as not important for their businesses. When the same question of the importance of environmental management was asked for the next 10 years, the result shows about 30 per cent respondents saw environmental management as very important. This shows more than 60 per cent of entrepreneurs perceived environmental management as very important. Meanwhile only 28 per cent perceived it as important. Eight per cent respondents perceived environmental management as not important to their organisation. Comparing these two periods of time, it is observed that in general, in the next 10 years environmental issues are perceived as very important compared with the present. This is evident when very important perception of the issue has increased twice compared with present time. On the other hand, those perceived environmental management as important at present (48 per cent) had reduced to only 28 percent. The results showed participants perceived the importance of environmental management in the very near future compared with present situation. Meanwhile, there are no changes of the percentage of those who said

environmental management as not important for both periods. Overall, these results showed that in the next 10 years, a majority of respondents believe environmental management is more relatively important for their business than at present.

Table 5: Perception of the importance of environmental management on business

	At present		Next 10 years	
	Very important	11	44%	16
Important	12	48%	7	28%
Not Important	2	8%	2	8%

Table 6: Entrepreneurs' intention and perception on environment management

Statement	Yes	No
Intention to relate business with the environment	13(52%)	12 (48%)
Intention to sell environmentally friendly products	8(32%)	17(68%)
Competitors will take into considerations of environmental issues into their businesses	13(52%)	12(48%)
Worth investment for businesses on environmentally friendly technology/machine	15(60%)	10(40%)
Malaysian Environmental legislation in the future is not good for business	4 (16%)	21(84%)

Table 6 shows entrepreneurs' intention and perception on environmental management related to their industries. Almost an equal percentage of respondents answered yes and no for the question related with their intention to relate or to associate their business with the environment -52 per cent said yes and 48 per cent said no. On the other hand, a significant difference was also observed on their intention to sell environmentally friendly products to their consumers, where almost 70 respondents answered no for the question and the rest (30 per cent) said yes. As with the intention to relate business with the environment, an equal weight was observed between yes (52%) and no (48%) for the question that competitors will take into considerations of environmental issues into their businesses. Meanwhile, a higher percentage (60%) of respondents believed it as worth to invest in environmentally friendly technology/machine in business. In addition, overwhelmingly respondents (84 %) in the survey disagreed with the statement that Malaysian environmental legislation in the future is not good for their businesses. In other words, the majority of entrepreneurs believed Malaysian environmental legislation in the future is good for their organisations.

Environmental Management Practices

Table 7 shows environmental management practices exercised by those small businesses. Of these 13 different activities, the highest percentage exercised by these businesses was to avoid open burning, where more than 70 per cent claimed so.

In addition, both activities; have a proper garbage bins and inform employees to be more environmentally sensitive to their employees are also highly practised among small businesses; have the same percentage (64%). Moreover, reduced waste of material (60 %) and reduced usage of electricity (60 %) were highly practised by these businesses. On the other hand, other activities: reduce

usage of water, minimise usage of petrol or fuel, reduce vehicles mobility and used unlead petrol/fuel were moderately practiced by small businesses.

On the other hand, activities like recycling least practices by small businesses in the study. This is evidenced when low percentage was observed for recycled used materials (36%) and buy recycled materials (36%). The same observation was observed for reduce vehicle mobility (40%) and use environmentally friendly machine/technology (40%). The lowest percentage of environmental practice was observed for minimise usage of raw materials of only 24 per cent.

Table 7: Environmental Management Practices

	Frequency(N)*	Percentage (%)*
Buy recycled materials	9	36
Recycle used materials	11	44
Reduce usage of electricity	15	60
Reduce usage of water	14	56
Minimise usage of raw materials	6	24
Have proper garbage bins	16	64
Using unleaded petrol/fuel for vehicle	12	48
Minimise usage of petrol/fuel	13	52
Reduce vehicle mobility/trip	10	40
Use environmentally friendly technology/machine	10	40
Inform employees to be more environmentally conscious	16	64
Avoid open burning practice	18	72
Reduce waste of raw materials in production process	15	60

* Multiple responses were permitted

Impact of business activities on the environment

The impact of business activities on the environment is shown in Table 8. The majority of the respondents (44%) in the study claimed no impact at all of their businesses on the natural environment. Amongst those who claimed that their businesses had impact to the environment, the highest percentage was noise pollution, where 36 per cent said so. This was closely followed by dust (32%) and smoke (28 %). Apart from that they claimed also liquid waste and oil grease/sludge as negative impacts of their activities, their respective percentage were 20 per cent and 16 per cent. The lowest negative impact was solid waste with its percentage 8 per cent.

Table 8: Impact of business activities on environment

	Frequency(N)*	Percentage (%)*
No impact at all	11	44
Smoke	7	28
Dust	8	32
Solid waste	2	8
Liquid waste	5	20
Oil grease/Sludge	4	16
Noise	9	36

* Multiple responses were permitted

DISCUSSION AND CONCLUSION

By and large, the results of the study showed that entrepreneurs of the small manufacturing firms in Terengganu were positive as far as environmental management is concerned. It is interesting to note that the majority of respondents perceived the importance of environmental management at present and relatively more important in the near future. But nevertheless, their positive perceptions on the importance of environmental management do not mirrored their intentions to relate their businesses with environmentally friendly business. An equal percentage of owner managers in this study agreed and disagreed to relate their business with the environment. This mirrors their answers when the equal percentage believed and not believed competitors will take into considerations of environmental issues into their businesses. Negative attitudes of them are more apparent when majority of them did not have intention to buy environmentally friendly products. However, they believed the investment in such products is worthy of investment for their businesses. Arguably, such thought shows entrepreneurs believed in the near future there would be more environmentally. Additionally, they overwhelmingly believed business and environmental conservation was not against each other. This is evidenced as overwhelmingly respondents disagreed with the statement that environmental regulations are not good for their businesses.

The positive perceptions of environmental management of those entrepreneurs were partly mirrored in their practices. It is observed that the highest percentage of exercise practised by these businesses was to avoid open burning, where more than 70 per cent of respondents claimed to do so. The results come as no surprise because in Malaysia an open burning exercise is banned according to subsection 45(1) and section 51 of the Environmental Quality Act 1974 (ILBS, 2007 p.259). The order comes into operation on 21 August 2000 and small businesses are also not spared from the regulation.

Apart from complying with environmental regulation, the majority of small businesses also paid particular attention to practices that could reduce operational costs of their businesses. In other words these environmental management practices were largely economically motivated. Among popular practices were; minimise waste of materials in production process and minimise usage of utilities – electricity and water, reduce usage of fuel and vehicle mobility. Moreover, most of them reported that they informed their employees to be more environmentally conscious. Intuitively the researcher believes this might have relationship with economic motive. Another important exercise was proper garbage bins at their premises. Arguably, this exercise can be explained as good house keeping rather than environmental reason *per se*.

In the meanwhile, activities like buy recycled materials, recycle used materials, minimise usage of raw materials, use environmentally friendly technology were less practised. Perhaps those entrepreneurs did not perceive practices like reduce operational costs of their businesses, moreover some of the practices had yet to be accepted in practice in manufacturing firm on the whole. Lack of knowledge about recycle activities coupled with less availability of recycled materials as well as knowledge about environmentally friendly technology also the answers of such behaviour. In terms of lack of practice amongst small businesses to minimise usage of raw materials in this study seems to

reflect finding of pulp and paper industry in the South East Asia including Malaysia. He argued that due to the availability of raw materials prevent the industry to do recycling. This was also observed in the study. Low recycling practices amongst businesses have relationship with excessive usage of materials.

Since the findings of the study show the management of the small businesses in the study is equally divided between positive attitude and negative attitude towards environmental management coupled with low awareness on the negative impacts of their businesses activities on the natural environment, they should be exposed by relevant authorities the importance of taking care of the environment and the relationship between business and environmental crises. With accurate information they should realise environmental management is not only good for the environment but also good for businesses. This in turn dilute negative attitudes amongst businesses that environmental management very much as additional burden. In order to encourage small businesses to adopt such practices, relevant authorities which have direct contact with small businesses like Small and Medium Industries and Development Corporation (SMIDEC) and DOE need to provide knowledge and guidelines to small businesses to promote recycle activities and other activities which sound environment in ensuring our country sustainable development. Apart from that other government agencies and private institutions such as financial institutions should provide financial incentives to encourage environmental management in their practices.

In conclusion, small business entrepreneurs in Terengganu show a positive attitude on environmental management. However, there is a gap between attitude and practice, they seemed to concentrate on the practices that motivated by regulatory pressure and economic motives. Understanding of the importance of environmental management coupled with suitable assistance from related authorities would in turn further boost environmental practices amongst small businesses in the study.

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MODELING THE PRICE OF STANDARD MALAYSIA RUBBER IN THE COMMODITY MARKET

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ABSTRACT

Forecasting the market prices of any commodity in the market has never been easy due to many uncertainties in the macroeconomic variables. The small effect of certain variable would cause the market price to fluctuate heavily. This study attempts to model the price movement of Standard Malaysia Rubber (SMR 20) using two methods namely the Box-Jenkins and Holt-winter. The study obtains the monthly data for ten years which is from January 1998 to August 2008. These data were obtained from the Malaysia Rubber Board. Under the Box-Jenkins method, the study found that the Autoregressive Integrated Moving Average (ARIMA) was the most suitable under ARIMA (2,1,1) series since it produces the lowest Mean Square Error (MSE) as compared to other ARIMA series. Under the Holt-winter method, the study found the forecasted range has wider fluctuation as compared to the Box-Jenkins method. The study makes thorough discussion regarding the results obtained from the two approaches. The study also provides certain recommendation for the future researchers in the area market.

Keywords: market uncertainty, forecasting, price fluctuation.

INTRODUCTION

The world produced about 9.0 million tones of rubber a year (BERNAMA). Malaysia, Thailand and Indonesia, amount 80% of the world market supply of the rubber. Natural rubber price often fluctuate, like any other commodity market influenced by many factors. The expensive petroleum helped push the rubber prices upwards as it prompted industry players to shift to natural rubber from synthetic rubber which is made from petrochemical. Demand from overseas mainly China and India is likely to increase next year, especially from the automotive industry. As the industry is growing, industry players need more rubber for their production causing the price to increase further. Another factor that will determine the trend of rubber is weather, which affects tapping activities in producing countries such as Thailand and Malaysia. The prices will stay high and will even go higher if the projected output is not met due to unfavorable weather conditions. However, it was difficult to predict prices currently due to many uncertainties as the world petroleum market will continue to influence the regional future market performance. The positive development in the global rubber market in 2005 together with strategies implemented by the Malaysia Rubber Board contributed towards sustaining the rubber industry in Malaysia as an important source of growth to the Malaysian economy. This study was interested in Modeling the Price of Standard Malaysia Rubber (SMR) using the two well known methods, namely the Holt-Winter's and Box-Jenkin.

LITERATURE REVIEW

There are many studies conducted by previous researchers on various commodities including rubber. Most of the studies conducted involved price, production, consumption, export, and import. Forecasting on rubber prices is rarely found in journal and articles.

The journal of Natural Rubber Research title A Statistical Forecast of Rubber Price by Mohd Napi and Mohd Yusof Shahabudin (1998) illustrates a statistical application of the Box-Jenkins univariate model for forecasting the prices of the various grades of natural rubber (NR). The data for the analysis were based on the monthly average daily prices of NR for the period from 1977 to 1987. The prices of the various grades of rubber were forecasted using a single model comprising of a backward shift operator and two parameters for auto-regressive and moving average

The prices of the various grades of natural rubber (NR) continuously change against time due to the volume of supply and demand in the market and a host of another non-economic factor. Thus, it is not easy to predict or forecast prices of the NR grades. Among the forecasting software's employed include classical exponential smoothing, census II decomposition, and Box-Jenkins Methodology. Box-Jenkins method is the most appropriate method among the three since the average percentage of absolute error is the smallest compared with other tested models. Furthermore, the Box-Jenkins structure approach eliminates hit-and-miss tactics. Thus, the researchers decided to employ the Box-Jenkins method in this study to forecast the future prices of natural rubber.

There are two main groups of rubber namely RSS and SMR. The RSS and SMR groups consist of five and six grades respectively. The data for price analysis were collected from January 1977 to May 1987 based on the average daily prices. The method used for the analysis is Box-Jenkins univariate model. Before deriving at the final model, the process of model identification, parameter estimation, and diagnostic checking are carried out. Preliminary identification suggests that the two groups of rubber grades can be describes by a single model in the form $(1 - B)^2(1 - B^{10})(1 - \theta_1 B - \theta_2 B^2)(1 - \theta_{10} B^{10})y_t = (1 - \Phi B)(1 - \Phi^{10} B^{10})$ et where B is the backward shift operator and θ and Φ are parameters for auto regressive and moving average models respectively. The precision of the estimated prices is measured by the percentage absolute error for the various RSS and SMR grades.

The results shown the patterns of prices of the various grades of NR are almost similar. There is no drastic change in the long-term trend for the past ten years under study.

The study of '*Time Series Analysis for Natural Field Latex Prices Prediction*' by Waliah Atthirawang and Porntip Chatchaipun (2004) illustrates that main objective of the study was to find the suitable tool for predicting the prices of natural field latex across the 2 day ahead in the forecast horizon. Two techniques namely transfer function and neural networks models were proposed. Data set of natural field latex prices at Hatyai market and yen currencies exchange rate extracted from 2001 to 2003 were selected into both models. To compare the forecasting accuracy, root mean squared error

(RMSE) and mean absolute percentage error (MAPE) were employed to ascertain whether one model forecasting predicts significantly better than another model.

The final results of forecasting data obtained by both approaches were compared with the test data. Subsequently, root mean squared error (RMSE) and mean absolute percentage error (MAPE) were employed to evaluate the accuracy of the both models. The error of Neural networks model was slightly smaller. The findings implied that neural networks model achieved higher performance than transfer function model. The results of the study indicate that Neural networks forecasting method is a better alternative approach for predicting natural field latex prices.

The study of “ *Price Discovery through Crude Palm Oil* “ by Fatimah Mohd Arshad and Zainalabidin Mohamed (1991), Faculty of Economics and Management, University Putra Malaysia examines the forward pricing efficiency of the local crude palm oil (CPO) futures market. In an efficient market, the relevant signal to be used by the producers, traders and processors is simply the futures price. The forward pricing efficiency was measured in terms of the forecasting ability of Malaysian crude palm oil futures price on physical price. The relative predictive power of futures price was compared with the various forecasts estimated from the proven forecasting techniques like moving average, exponential smoothing, Box Jenkins, and econometric. The relative predictability of future prices as a forecast for spot prices during various months before delivery was also measured.

OBJECTIVE OF THE STUDY

The objectives of this study are:

- 1) To identify the existence of Time Series Components such as trend, cyclical, seasonal or irregular variation in the data.
- 2) To determine and estimate the best model of forecast(s) using Box-Jenkins methodology and Holt Winter’s method.
- 3) To select the best model and to develop models capable to be used for further study.

METHODOLOGY

Data

This study involved secondary data that has been taken from website Malaysian Rubber Board. This study utilized monthly prices of Standard Malaysia Rubber 20 (SMR 20) price and will be analyzed using two methods that are Holt-Winter’s Method and Box-Jenkins Methodology. The data used in this study is about the SMR 20 price. This data is collected in monthly period which consists of 128 data from January 1998 to August 2008.

The Model for the Study

This study proposes Holt-Winter’s Method and ARIMA (Autoregressive Moving Average Processes). Holt Winter’s trend and seasonality is one such technique that takes into account the trend and seasonality factor. The Holt Winter’s method consists of three basis equation that defines the level

component, the trend component, and the seasonality component. The equations are represented as follow:

Level component:

$$L_t = \alpha \frac{y_t}{S_{t-s}} + (1 - \alpha)(L_{t-1} + b_{t-1})$$

Trend component:

$$b_t = \beta(L_t - L_{t-1}) + (1 - \beta)b_{t-1}$$

Seasonality component:

$$S_t = \gamma \frac{y_t}{L_t} + (1 - \gamma)S_{t-s}$$

The m-step-ahead forecast is calculated as:

$$F_{t+m} = (L_t + b_t \times m)S_{t-s+m}$$

Where,

- L_t – the level component of the series, comprising of the smoothed values but does not include the seasonality component.
- y_t – the actual values which include seasonality,
- α – the smoothing constant for level ($0 < \alpha < 1$),
- β – the smoothing constant for the trend estimate ($0 < \beta < 1$),
- γ – the smoothing constant for seasonality estimate ($0 < \gamma < 1$),
- s – the length seasonality (e.g. number of quarters or months in year which are 4 and 12, respectively),
- b_t – the estimate of the trend component,
- S_t – the estimate of the seasonality component,
- L_t – the length seasonality,
- m – the number of step ahead to be forecast,
- F_{t+m} – forecast for m-step ahead. (1)

The Box-Jenkins approach is synonymous with the general ARIMA modeling. This approach was first introduced by George E.P. Box (University of Wisconsin, USA) and Gwilym M.Jenkins (University of Lancaster,UK) in 1976. They provided a comprehensive explanation of the technique of analyzing the time series data to be used in the univariate ARIMA model. ARIMA models have been employed to forecast commodity price.

The ARIMA modeling is commonly applied to the time series analysis, forecasting and control. The term ARIMA in short stands for the combination that comprises of Autoregressive/Integrated/Moving Average models. In the ARIMA model, time series data can be divided into stationary process and non-stationary process. There are three models to describe

stationary process; Autoregressive AR (p), Moving Average MA (q) and where (d) denotes the number of time the variable Y_t need to be differenced in order to achieve stationary. The procedure for Box-Jenkins methods involve four general steps namely model identification, model estimation, diagnostic checking, and use of the fitted model to forecast future values. The best strategy to undertake when developing models for forecasting purpose is to understand the characteristics of series involved, and how it behaves over time. A major advantage of undertaking this strategy is that it enables the researchers to select the most appropriate model from large selection of model formulation available. The easiest way of achieving this objective is through constructing time plots.

RESULT AND DISCUSSIONS

Box-Jenkin Method

The data investigated in the study covers the years between 1998 to August 2008. In Box-Jenkins approach, this is done by visual analysis of the sample’s autocorrelations (AC) and partial autocorrelation (PAC). Since the data is not stationary, differencing is necessary. For SMR 20 Price data series, based on the number of significant spikes and MSE’s from all possible pairs, the four smallest MSE are chosen and the following four models have been identified and estimated.

Table 1: The Possible Models for SMR 20 Price.

SMR 20 Price
<ul style="list-style-type: none"> • ARIMA (1,1,1) • ARIMA (1,1,2) • ARIMA (2,1,1) • ARIMA (2,1,2)

More sophisticated technique of establishing the stationary condition of the residuals is to check the Ljung-Box Q statistic.

After obtaining the models, all the appropriate statistic measures are summarised as in Table 2. The calculated Q values are the Box-Pierce (Ljung-Box) Chi-Squared statistic, and the tabulated Q values are obtained using the Chi-Square table.

Table 2: Summary of Portmanteau Test for each model.

MSE	Model			
	ARIMA (1,1,1)	ARIMA (1,1,2)	ARIMA (2,1,1)	ARIMA (2,1,2)
Calculated Q	7.0	5.1	5.8	4.9
DF	9	8	8	7
Tabulated Q	16.919	15.507	15.507	14.067
Decision (5% sig.level)	Accept H_0	Accept H_0	Accept H_0	Accept H_0
Conclusion	The errors are white noise	The errors are white noise	The errors are white noise	The errors are white noise
MSE	798.4	787.7	797.8	793.6

From the above Table 2, the study fails to reject the null hypothesis due to the smaller calculated Q values as compared to the respective tabulated values at the respective Degree of Freedom (DF). Hence, the entire four models for SMR 20 Price are well specified since the errors are white noise. To select the best model, the study proceeds with model estimation and validation.

Table 3: MSE, MAPE and RMSE value for ARIMA model.

	Statistics	Model			
		ARIMA (1,1,1)	ARIMA (1,1,2)	ARIMA (2,1,1)	ARIMA (2,1,2)
Fitted Period (1998-2006)	MSE	691.037	691.6146	699.8266	692.0137
	MAPE	5.1792	5.2701	5.1874	5.2983
	RMSE	26.2876	26.2986	26.4542	26.3062
Evaluation Period (2007 till August 2008)	MSE	1218.698	1109.76	1127.431	1104.041
	MAPE	3.4791	3.3322	3.3512	3.3202
	RMSE	34.9099	33.3131	33.5772	33.2271

On the basis of the size of the MSE, MAPE and RMSE calculated over the evaluation period, we can conclude that the ‘best’ model is ARIMA (2,1,2) since its MSE is the smallest compared to the other three models. Since MAPE and RMSE for the model are also the smallest, therefore it is clear that the model ARIMA (2,1,2) is the most suitable for the data series.

Usually, the benchmark model is used as a basis of comparison against the standard model. In this study, the Holt-Winters model is chosen as the comparison with the estimated model.

Holt Winter Method

The estimation was done at the estimation part with the objective of minimizing the mean square error. The solver function is used to select the best parameter value and find the best parameter Holt-Winters. To generate one step ahead forecast on the hold-out part of the data sets, the suitable error measure uses MSE, MAPE and RMSE to compare their forecasting performances. The best model selected is chosen based on the smallest value of MSE and MAPE and RMSE. With the assumption of Multiplicative effect, $\alpha = 1.00$, $\beta = 0.01$ and $\gamma = 0.00$ had been used to obtain the smallest MSE value of Holt-Winter’s model.

Table 4: Summary of Evaluation using the MSE, MAPE and RMSE

	Holt-Winter’s Model		
	MSE	MAPE	RMSE
Fitted Period (Jan 98 until Dec 08)	2105.32	8.3110	45.88
Evaluation Period (Jan 07 until Aug 08)	6361.204	6.8194	79.7760

The following table (Table 5) presents the results of the evaluating the models. For each of the model evaluated, the value of the MSE was calculated.

Table 5: Summary of Evaluation using MSE's for Holt-Winter's Model and Box-Jenkins Methodology

MSE	Model Types	
	ARIMA (2,1,1)	Holt-Winter's Method
Fitted Period	692.0137	2105.32
Evaluation Period	1104.041	6364.204

On the basis of the size of the MSE calculated over the evaluation period, we can conclude that the 'best' model for SMR 20 Price is ARIMA (2,1,2). The model is selected since the error measures calculated for this model are the smallest compared to the respective error measures of other models. The Holt-Winter's model is compared to ARIMA model. However, these Holt-Winter's models have large MSE's.

LIMITATION OF STUDY

In this study there are few limitations. The main limitation is the data for SMR 20 price. The data have some problems in 2006 due to the random shock occurs at that time.

The second limitation is the data collected considered a fairly short time series data. With 128 data on monthly basis it might not give an accurate analysis or explanation.

CONCLUSION

The main task of this study is to determine the best model to forecast the SMR 20 Price. In the study, two methods of forecasting were used; Holt-Winter's method and Box-Jenkins methodology. Based on the result of the analysis it can be concluded that ARIMA (2, 1, 2) modeling was found to be the most appropriate technique in forecasting SMR 20 data series due to the smallest error measure of MSE, MAPE and RMSE as compared to the Holt-Winter's method. However, it was difficult to predict prices accurately nowadays due to too many uncertainties in the prices of other commodities. For example, the heavy fluctuation in petroleum prices lately was not due to natural forces involving actual demand and supply but due to excessive speculation on the shortage of supply in the future due to certain political developments in the oil supply regions. The fake news had created huge demand around the world which pushes the price unreasonably high. The fake movements of petroleum prices have pushed the rubber prices to fluctuate abnormally. Malaysian rubber prices are expected to rely on the price of petroleum which is currently on the downward trend. Demand for the local rubber is expected to decrease due to the expectation of global recession in the near future. Forecasting future prices is important for accurate decision making; however during the period of economic uncertainties the price movement is no longer "random". When the data is not normal, the forecasting method is no longer applicable and hence the forecasted prices deviate largely from the actual price.

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BM(22)

LECTURERS' PERCEPTIONS TOWARDS PROGRAM COORDINATORS' LEADERSHIP STYLE

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ABSTRACTS

A true leader always has a vision. The success of an organization depends on its leader who knows where to go and how to get there. This leader values other's skills and experiences and develop the individual who has the potential. Leadership role in education is not an exceptional. Program coordinators should possess leadership skills to appropriately lead and manage their faculties in branch campus. Prior research revealed that a leader's behaviors, leadership style, and actions influenced how his/her followers reacted to him/her (House, 1977; Bass, 1985; Zaccaro & Klimoski, 2001). However, different followers often have different perceptions towards the same leader. The objective of this article is to examine if there is any difference in perceptions based on lecturers' age, gender and working experiences in determining the rating of their program coordinator as their immediate leaders by looking at the four types of leadership skills namely structural, creativity, human resource and power. On top of that, this paper also examines the relationship between lecturers' demographic variables (such as age, gender and working experience) and their perceptions on program coordinators' leadership style as a whole. A total of 49 lecturers from various disciplines in UiTM Machang campus are approached to fill up the questionnaires. The data are then analyzed using SPSS package. The results reveal that there is significant difference on lecturers' gender and age groups with their perceptions towards program coordinators' leadership styles but there is no significant difference between lecturers' working experiences and program coordinators leadership styles.

Keywords: leadership skills, leadership

INTRODUCTION

Leadership is important in every single organization, be it private or public sector, from sole proprietor to multinational organizations. This is because an organization's success depends on the leader and his/her leadership skills. Therefore, for firm's effectiveness, the leader should possess leadership skills to appropriately lead and management their operations.

Leadership in education is an amazing responsibility. Leaders today need to be exceptional and need to have followers who will help them to carry out the vision so that the university will be successful. Prior research revealed that a leader's behaviors, leadership style, and actions influenced how his/her followers reacted to him/her (House, 1977; Bass, 1985; Zaccaro & Klimoski, 2001). However followers are often different in their reactions and attitudes to the same leader, i.e. two followers may hold widely different views of and attitudes toward the same leader (Dansereau, Graen, & Haga, 1975; Dansereau & Yammarino, 2000).

The purpose of this article is to examine if there is any differences in perceptions based on lecturers' age, gender and working experiences in determining the rating of their program coordinator as their immediate leaders by looking at the four types of leadership skills namely structural, creativity, human resource and power. On top of that, this paper will also examine the relationship between

lecturers' demographic variables (such as age, gender and working experience) and their perceptions on program coordinators' leadership style as a whole. This study has been carried out in Universiti Teknologi Mara, Kelantan campus in 2007.

This study is significant in such a way that while there has been much written on leadership and gender, this study, however, focused on the follower's perspectives with regard to their gender, age and working experience on their leaders' leadership styles. On top of that, this study would then be able to make contribution to leadership and followership literature.

This paper is divided into a few sections. The following section outlines the objectives and hypotheses of the study. Next section talks about literature review. Then it follows with the discussion on methodology that was conducted in the study. Finally, the findings of the study and discussion are exhibited at the last part of the article.

Objectives

The general objective of this study is to examine the lecturers' rating on their program coordinators' leadership styles.

Specific Objectives

The specific objectives of the study are shown below:

1. To look at the differences in the perceptions of lecturers based on gender, age and years of service correspondent to each type of program coordinators' leadership styles namely structural, creativity, human resource and power.
2. To examine the relationship between lecturers' demographic variables (the age group, gender and years of service) and their ratings of the program coordinators' leadership styles.

Hypotheses

Based on the objectives of the study above, the following hypotheses are formulated.

- HA1: There is significant difference between gender of lecturers and their perceptions towards program coordinator's leadership styles.
- HA2: There is significant difference between the age group of lecturers and their perceptions towards program coordinator's leadership styles.
- HA3: There is a significant difference between the years of service of lecturers and their perceptions towards the program coordinator's leadership styles.

LITERATURE REVIEW

Leadership

Leaders are the ones who motivate its subordinates/followers within an organization to meet a common vision of the firm (Grove & Montgomery, 2001). Leadership today seems to take more of a team effort where everyone in the organization is responsible (Yukl, 2002). The leadership styles make the followers more important than ever to the success of the organization.

Many believed that leaders were endowed with certain traits (Mann, 1959; Stogdill, 1948) such as physical, social, and personal. All these were used to explain a leader's ability to lead. Bass (1990) discovered that leaders and followers viewed the traits differently. Some leaders' traits may change over time and may also change depending on the situation and people involved.

Lord, Foti, and DeVader's (1984) research found that true leaders stand out because their characteristics match the expectations that the followers have of them. They believed leadership and followership were connected. Hersey and Blanchard (1988) developed the situational leadership model in which leadership focused on strategies that involve the followers and depended on the situation.

Bolman and Deal Leadership Model

Bolman and Deal find that leaders view organization experiences according to leadership styles or frames. They define structural, human resources, political, and symbolic as the four frames of leadership. They define :

- a. structural leader as clear goals, assign specific roles for their constituents, and coordinate specific activities with specific policies, procedures, and chains of command.
- b. human resource leader focuses on needs of people, value the feelings and relationships of people, assume the organization must meet basic human needs through facilitation and empowerment.
- c. power leader focuses on individual and group interests, advocate and negotiate between different interest groups for use of limited resources, build power bases through networking and negotiating compromises.
- d. symbolic leader develops symbols and culture to shape human behavior and reflects a shared mission and identify for the organization, instill enthusiasm, a sense of charisma, and drama to the organization.

(Sasnett and Ross, 2007)

Effective leadership and Followers

Effective leaders know how to use their skills to get their followers to get things done. Leaders who are effective have faculties and staffs who are committed to them and trust them. Effective leaders have hope, direction, vision, mission, and core values that followers appreciate and respect. An

effective leader even inspires others to follow (Atchison, 2003). Effective leadership is central to successful organizations (Burns, 1978; Graham, 1995; Kouzes & Posner, 1995; Senge, 1990).

Good effective leaders want followers to see the organization's values as the same as theirs. According to Atchinson (2003), they have the ability to get followers to 'subordinate their self interests for a greater good'. These leaders have the ability to convince their followers that the benefits of the organization in the long run will be greater if they help now for the good of all (Atchison, 2003).

Followership

Though many researches have been done on leadership, majority of them has looked at leadership and not followership. The researchers have agreed that leaders must have followers in order to be successful and followers need leaders to be successful. This kind of relationship is described as reciprocal and interdependent (Hollander, 1997). Kouzes and Posner (1995) showed followers like leaders who are trustworthy, competent, visionary, and inspiring. They also found that followers want leaders to carry out what they say they will. On top of that, the researchers found that followers want leaders who are positive, enthusiastic and energetic.

Kouzes and Posner (1995) believed that good leaders must also be good followers. Graham (1995) suggested that looking at the relationships between leaders and followers was important to school reform. Most of the effective leaders know that their followers are the most important part of their organizations. Garner (1989) found that leaders earn their position by followers wanting to follow them. In another words, leaders must earn the respect of their followers. In most of the cases, the majority of one's time is spent following rather than leading and to be a good follower, one must also be a leader (Crandall & Wallace, 1997; Kelley, 1992). All leaders were once followers, and good leaders know that their power and authority comes from the willingness of followers to follow them (Crandall & Wallace, 1997).

Gender and Age

Studies of gender and age as predictors of leadership style or leaders' use of influence tactics are nearly absent from the research literature. Ojode et al. (1999) examined gender, age and educational level of followers as predictors of perception of leadership style. Vecchio and Boatwright (2002) examined gender and maturity (combination of age and educational level) of followers as predictors of idealized styles of leadership. They found that employees with high level of education and greater job tenure expressed less preference for leader structuring (task oriented behaviors); they also found that women (relative to men) expressed greater preference for leader considerateness (relationship-orientated behaviors). Besides, the finding from Brown (2007) showed that there was no difference in the perceptions of the followers on their leaders' behaviors and skills based on gender.

A few studies included gender and age as demographic variables in the examination of leadership style. These studies produced mixed findings on the significance of the effects of these variables on leadership style. Three studies (Kazan, 2000; Payden, 1997; Thomas, 1996) showed differences in self perceptions of leadership based on age, and one study (Rasor, 1995) showed that younger age in

leaders predicted higher evaluations by both superiors and subordinates. The finding from John et al (2007) also showed that the combination of age and gender did not produce an overall main effect on leadership styles or influence tactics.

On the other hand, based on Walumbwa, Wu, & Ojode (2004), the gender of the follower impacts the perception of an instructor's leadership style. Additionally, the author's findings suggest that followers' gender-schema parameters may influence how they assess an instructor's effectiveness.

To conclude from this section of leaders and followers, it is found that modern ideas of leadership involve followership. While leadership is crucial to reform (Bredeson, 1991), followers are important to the leader (Day et al. 1990). Followers are affected by their leader's skills and behaviors (Bass, 1990). Leaders can help or hurt the follower's effectiveness in a school's success (Bass, 1990; Kelly, Thornton, & Daugherty, 2005; Ubben & Hughes, 1992), just as followers can help or hurt the leader's effectiveness in school's success (Richardson, Lane & Flanigan, 1996). Followers in this new era want to work with a true leader in a successful organization. True leaders must help to set the vision and involve everyone in the organization to achieve the goal of success. No matter which leadership theory one is practicing, for there to be a leader, there must be the followers. The relationship between the two is not only important to the followers but also to be the success of the organization.

METHODOLOGY

In this study, 49 lecturers from UiTM, Campus Kelantan from various faculties were selected randomly as the respondents of this study. The leaders represented the program coordinators and lecturers were referred as the followers. These lecturers were given 10 minutes each to answer the questionnaires on their perceptions as the followers of their leaders' leadership styles. The data from the respondents were then transferred to SPSS version 14.0 to analyze. The methods employed in this study were independent t-test and ANOVA in SPSS to analyze the data.

The survey consisted of a demographic section requesting information about the follower (i.e. gender, age, and years of service/ working experiences). 18 skills and behaviors of the leader rated on a Likert-type scale from 1(not at all like my program coordinator) to 5 (very much like my program coordinator). Each of the skills and behaviors on the survey was selected based on the literature review (Astin & Leland, 1991; Bass, 1990; Bass & Avolio, 1990; Bolman & Deal, 1992; Hudson & Rea, 1998; Lowe & Gardner, 2000; Mandell & Pherwani, 2003; Ross & Offerman, 1997). The skills and behaviors are then divided into four leadership styles according to Bolman and Deal Leadership Model.

DATA ANALYSIS

The questionnaires collected from 49 lecturers in December 2007 are entered into SPSS 14.0 package for data processing and statistical analyses.

Demographic Characteristics

Table 4.1 below shows the profile of 49 respondents in terms of gender, age, marital status, years of service, faculty, designation and qualification.

Table 4.1: Profile of Respondents

Variable	Frequency	%
Gender		
Male	15	30.6
Female	34	69.4
Age		
22 – 30 years old	11	22.4
31 – 40 years old	19	38.8
41 – 50 years old	17	34.7
51 and above	2	4.1
Marital Status		
Single	13	25.5
Married	38	74.5
Years of Service		
Less than 5 years	21	42.9
5 to 9 years	16	32.7
10 to 14 years	3	6.1
15 to 19 years	4	8.2
20 years and above	5	10.2
Faculty		
BM	19	38.8
AC	5	10.2
AD	4	8.2
CITU	1	2.0
APB	12	24.5
TMSK	4	8.2
IS	2	4.1
Law	2	4.1
Designation		
Lecturer	40	81.6
Senior Lecturer	2	4.1
Associate Prof.	5	10.2
Contract	2	4.1
Qualification		
PhD	2	4.1
Masters	44	89.8
Degree	3	6.1

Mahalanobis Distance Value Analysis

The dataset is then tested for the outliers using mahalanobis distance value analysis by employing SPSS 14. The results are as follow:

Chi Square Value (X^2) = (18, 0.001) = 42.31.

Outlier Multivariate = Mahalanobis distance < Chi Square value
 = 39.742 < 42.31

Therefore, normal data (Ferdinand, 2002) is achieved.

Reliability Coefficients for the major variables

Next, the data set is tested for the reliability of leadership styles. This is to determine the extent to which a variable or set of variables is consistent in what it is intended to measure. The 18 skills and behaviors used in this survey were divided into four leadership styles based on Bolman & Deal (1992). The results are shown in Table 4.2. All the major variables achieved Cronbach alpha test where each of the construct is more than 0.60. Moss et al. (1998) suggest that an alpha score of 0.6 is generally acceptable.

Table 4.2 – Reliability Coefficients for the major variables

Types of Leadership	Number of Items	Cronbach Alpha
Type A – Structural	2	0.625
Type B – Creativity	4	0.867
Type C – Human Resource	7	0.886
Type D – Power	4	0.784

Normality Test

Normality test is to determine whether the degree to which the distribution of the sample data corresponds to a normal distribution. The rule of thumb for z stat: not more than + - 3 for skewness, kurtosis not more than 7. The results of normality test for 18 items in this study for z-stat skewness and z-stat kurtosis fall into the respective rule of thumb range. In other words, the data is normal distributed.

Mean, Standard Deviation and Hypotheses

Gender and Leadership Styles

Table 4.3i shows the mean and standard deviation of the ratings given by the lecturers on the four leadership styles of the program coordinators. The means range from 3.507 to 4.086 indicating the lecturers' ratings of their program coordinators' on each of the leadership styles based on the lecturers' gender. The standard deviations reveal little variability between the ratings. In general, the results show that there is not much difference between lecturers' gender and their ratings of the program coordinators' leadership styles. Both the male and female lecturers moderately agreed that their leaders possess structural, creativity, human resource and power leadership styles. However, if were to compare, the male lecturers show higher mean score than the female lecturers on rating the four types of leadership styles.

Table 4.3i Mean and Standard Deviation for Gender and Leadership Styles

Leadership Styles	gender	N	Mean	Std. Deviation	Std. Error Mean
i. Structural	male	15	3.967	0.667	0.172
	female	34	3.735	0.761	0.131
ii. Creativity	male	15	4.000	0.681	0.176
	female	34	3.507	0.667	0.114
iii. Human Resource	male	15	4.086	0.618	0.159
	female	34	3.517	0.600	0.103
iv. Power	male	15	3.783	0.667	0.172
	female	34	3.625	0.716	0.123

HA1: There is significant difference between gender of lecturers and their perceptions towards program coordinator’s leadership styles.

Table 4.3ii: Leadership Style as endogenous variable by gender

Endogenous Variable	Male (Mean)	Female (Mean)
Leadership styles	3.9589	3.5961
N	15	34
Std. Deviation	0.59775	0.56642
Std Error	0.15434	0.09714
t-test	2.032 *(0.048)	

*P<0.05

To test for HA1, 4 types of leadership styles are combined and are tested against lecturers’ gender as shown in Table 4.3ii above. The findings show that t test =2.032 and it is significant at 5% confidence level. Thus, HA1 is accepted indicating that there is significant difference between lecturers’ gender and their perceptions on program coordinators’ leadership styles.

Age Group and Leadership styles

Table 4.4i depicts lecturers’ rating of the program coordinators leadership styles based on lecturers’ age group. The means range from 3.386 to 4.118 while the standard deviations vary slightly. The results show that there is not much difference among the mean score between lecturers’ age group and their ratings of the program coordinators’ leadership styles. Generally, all age groups moderately agreed that their leaders possess structural, creativity, human resource and power leadership styles. However, the results show that there is slightly a higher mean score for 41-50 age group lecturers on all the four types of leadership styles.

Table 4.4i: Age Group and Leadership Styles

Leadership Styles	Age	N	Mean	Std. Deviation	Std. Error
i. Structural	22-30	11	3.455	0.757	0.228
	31-40	19	3.737	0.695	0.159
	41-50	17	4.118	0.719	0.174
	≥ 51	2	3.750	0.354	0.250
	Total	49	3.806	0.735	0.105
ii. Creativity	22-30	11	3.386	0.778	0.234
	31-40	19	3.566	0.645	0.148
	41-50	17	3.956	0.692	0.168
	≥ 51	2	3.500	0.000	0.000
	Total	49	3.658	0.703	0.100
iii. Human Resources	22-30	11	3.468	0.606	0.183
	31-40	19	3.496	0.607	0.139
	41-50	17	4.034	0.658	0.159
	≥ 51	2	3.857	0.202	0.143
	Total	49	3.691	0.655	0.094
iv. Power	22-30	11	3.500	0.536	0.162
	31-40	19	3.408	0.657	0.151
	41-50	17	4.029	0.661	0.160
	≥ 51	2	4.125	1.237	0.875
	Total	49	3.673	0.698	0.100

HA2: There is significant difference between the age group of lecturers and their perceptions towards program coordinator's leadership styles.

Table 4.4ii: Leadership Style as endogenously variable by age group

Endogenous Variable	22-30 (Mean)	31-40 (Mean)	41-50 (Mean)	≥ 51 (Mean)	Total
Leadership Styles	3.4521	3.5517	4.0341	3.8080	3.7072
N	11	19	17	2	49
Std Deviation	0.55143	0.54774	0.57582	0.44826	0.59441
Std Error	0.16626	0.12566	0.13966	0.31696	0.08492
F	3.240 (0.031)				

*P<0.05

ANOVA test is performed to determine if leadership styles is related to the lecturers' age group based on lecturers' perception. The result shows that F test = 3.240 and it is significant at 5% confidence level. This means that the leadership styles are significantly related to lecturers' age group. Thus, HA2 is accepted.

Years of Service and Leadership Styles

Table 4.5i shows the results for mean and standard deviation between years of service and leadership styles. The means range from 3.417 to 4.250 while the standard deviations vary slightly from the range 0.224 to 0.816. The results show that the number of years service by lecturers and program coordinators' leadership styles have not much difference in its mean score. This is to say that mostly the lecturers moderately agreed that their leaders possess structural, creativity, human resource and power leadership styles. Nevertheless, those with a service between 16-20 years have registered higher mean scores in structural, human resource and power leadership style.

Table 4.5i: Years of Service and Leadership Styles

Leadership Styles	Years of Service	N	Mean	Std. Deviation	Std. Error
i. Structural	0-5	21	3.619	0.805	0.176
	6-10	16	3.969	0.763	0.191
	11-15	3	3.500	0.500	0.289
	16-20	4	4.250	0.645	0.323
	≥21	5	3.900	0.224	0.100
	Total	49	3.806	0.735	0.105
ii. Creativity	0-5	21	3.488	0.816	0.178
	6-10	16	3.828	0.650	0.163
	11-15	3	3.583	0.382	0.220
	16-20	4	3.813	0.718	0.359
	≥21	5	3.750	0.500	0.224
	Total	49	3.658	0.703	0.100
iii. Human Resources	0-5	21	3.537	0.758	0.166
	6-10	16	3.804	0.634	0.159
	11-15	3	3.619	0.436	0.252
	16-20	4	3.929	0.600	0.300
	≥21	5	3.829	0.370	0.165
	Total	49	3.691	0.655	0.094
iv. Power	0-5	21	3.417	0.730	0.159
	6-10	16	3.891	0.671	0.168
	11-15	3	3.500	0.433	0.250
	16-20	4	4.000	0.540	0.270
	≥21	5	3.900	0.675	0.302
	Total	49	3.673	0.698	0.100

HA3: There is a significant difference between the years of service of lecturers and their perceptions towards the program coordinator’s leadership styles.

Table 4.5ii: Leadership Style as endogenously variable by years of service

Endogenous Variable	0-5 (Mean)	6-10 (Mean)	11-15 (Mean)	16-20 (Mean)	≥ 21 (Mean)	Total
Leadership Styles	3.5153	3.8728	3.5506	3.9978	3.8446	3.7072
N	21	16	3	4	5	49
Std Deviation	0.67635	0.54092	0.39126	0.57256	0.32184	0.59441
Std Error	0.14759	0.13523	0.22590	0.28628	0.14393	0.08492
F	1.240 (0.308)					

*P<0.05

ANOVA test is performed to determine if leadership style is related to the lecturers’ years of service based on lecturers’ perception. F-test = 1.240 and it is not significant at 5% level. This implies that there is no significant difference between lecturers’ years of service and their perceptions towards the program coordinators’ leadership styles. Therefore, HA3 is rejected.

CONCLUSION

Discussion on the Findings

This study is conducted to examine lecturers' perceptions towards program coordinators' Leadership Style based on lecturers' gender, age and the years of service/experience in the campus. A total of 49 respondents were asked to rate their program coordinators' leadership styles according to Bolmen and Deal's Leadership Model.

From the three hypotheses outlined and tested in this study, only HA2 is accepted. The other two are rejected at 5% confidence level as depicted in the summary in Table 5.1 below.

Table 5.1: Summary of the Hypotheses Findings

Hypotheses	Results
HA1: There is significant difference between gender of lecturers and their perceptions towards program coordinator's leadership styles.	Accepted
HA2: There is significant difference between the age group of lecturers and their perceptions towards program coordinator's leadership styles.	Accepted
HA3: There is a significant difference between the years of service of lecturers and their perceptions towards the program coordinator's leadership styles.	Rejected

The finding from the first hypothesis showed that there is significant difference between lecturers' gender and the rating of program coordinators' leadership styles. However, this is not consistent with the finding from Brown (2007) where the finding showed no difference in the perceptions of the subordinates on their leaders' behaviors and skills based on gender. So did Robinson and Lipman-Blumen (2003), Carless (1998) and Billing and Alvesson (2000), which found little or no difference between leadership skills and gender. However, there is another study, which discovered that gender stereotypes still influenced the perceptions people have on leaders (Sczesney, Bosik, Neff & Schyn, 2004). This might be the situation of what was happening in UiTM Machang.

The finding from second hypothesis exhibits that there is significant difference in the age groups of the followers and their ratings of program coordinators' leadership skills and behaviors. In other words, there is different perceptions in lecturers' ratings of their leaders based on their age. However, this is not consistent with Leithwood and Jantzi (1999). The study found that followers' perceptions do matter, but they do not differ in young or old lecturers. Based on the literature review, it appears that there is a lack of current research on followership age and leadership styles.

The last hypothesis's finding depicted that there is no significant difference in the lecturers ratings of their program coordinators' skills and behaviors based on the followers' years of service in the organization. This is consistent with the findings by Ojode et al. (1999), and Vecchio and Boatwright (2002). They found that employees with high level of education and greater job tenure expressed less preference for leader leadership style.

Implication

Perceptions and attitudes about program coordinators as leaders are important to understand. Lecturers are influenced by program coordinators leaders' skills and behaviors. Leaders can help or hurt the lecturers' effectiveness in university, and so for the other way round. The more program coordinators are aware of their lecturers' expectations, the better the program coordinators can help the lecturers to be more successful in their academic career. The more satisfied the lecturers are, the more benefits students would gain, and the better quality the university would be.

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AN ASSESSMENT OF THE LEARNER AUTONOMY OF DISTANCE LEARNERS IN MALAYSIA

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ABSTRACT

The changes of economy and job demand have prompted many individuals to pursue higher education via distance learning. However, many of these adults embarked into this journey without realizing that they are expected to be more independent in their quest of learning. Many are still expecting to be spoon-fed by their instructors and guided by structured programs. The lack of learner autonomy on the part of the learners has contributed significantly to attrition and delay in the completion of their studies. Most research on success and retention of distance learners has focused on (i) Predisposing characteristics of the learners (ii) Life changes and (iii) Institutional. There is a lack of research which explains the psychological and cognitive conditions that exist and are required for independence in learning (Derrick, 2001). This study investigated the learner autonomy profile of distance learners in Malaysia in terms of their desire to learn, resourcefulness, initiative and persistence. A questionnaire survey was distributed to distance learners coming from a range of academic departments from both public and private universities. The usable questionnaire of 249 collected via multistage random sampling was used for the analysis of the study. The results showed that distance learners in Malaysia displayed moderate level of learner autonomy with persistence as the greatest contribution to their willingness to participate. The understanding of the attributes of learner autonomy gives an insight of distance learners' willingness to participate in their learning. The implication suggests that Malaysian distance learners' learner autonomy could be improved if appropriate facilitation is given.

Keywords: *Distance Learners, Learner Autonomy, Desire to Learn, Resourcefulness, Initiative and Persistence*

INTRODUCTION

Education plays a crucial role in developing human capital in which knowledge, skills and competencies of individuals become the critical success factors to enhance human abilities and capacities. As the economy continues to change, and the nature of jobs and work continues to change, education and training should not be limited solely to an intensive period prior to entrance into the labour force, but should be undertaken regularly throughout a worker's career. In line with this, Ungku Aziz (1997) contends that academics have for long maintained that adult education will play a major role in producing a knowledge workforce, with competency in basic skills in literacy, numeracy and operacy in thinking. Maznah (2001) agrees that it is also imperative that adult learners be trained to become "knowledge workers" to meet the growing needs of the country's human resource base. It is in this regard that distance education may be the answer.

Currently, open and distance education serves as a very crucial platform to increase knowledge among Malaysian workforce. There is a great demand for adult education among the working population. To date, there are about 75,000 distance learners pursuing their education in both public and private higher institutions in Malaysia and leading the pack is OUM which has the enrolment

exceeding 50,000 students. However, despite the significant interest in distance education, institutions are facing a serious challenge of increasing attrition rate among the distance learners. Distance learners have greater tendency to dropout from a program or an individual course than their face-to-face counterparts according to studies reporting higher attrition and dropout rates among distance learners (Flood, 2002; Giles, 2002; Parker, 1999). A dropout rate ranging from 19% to 90% was reported for various distance learning programs (Potashnik & Capper 1999), with Asian open universities in Indonesia, China and Thailand registering a drop out rate of 30% - 50% (Mayo, 1998). In local context, according to Prof Tan Sri Anuwar Ali (2007), in distance learning institution throughout the world, attrition rate of students is said can be as high as 40% and OUM managed to reduce to half of that rate. Similarly, in a study done in 2001 on UiTM online learners, it was reported a 49.7% dropout rate in which dropping out was defined as discontinuation, deferment of study, failure or simply not turning up for the final examinations (Alias, Jamaludin & Ismail, 2001)

[Powell et al. \(1990\)](#) posited student success and persistence were contributed by predisposing characteristics, life changes and institutional factors. [Vergidis and Panagiotakopoulos \(2002\)](#) found that the increase of drop-out rate among distance learners stemmed external factors such as from family or work obligations, rather than from factors intrinsic to the course or its delivery. Adults' ability and willingness to participate in adult education are also affected by factors such as their everyday activities, i.e. their family, work, health, condition, personality (Knox's; 1977) and "insurmountable social-psychological barrier" (Howard; 2002). Even though these aspects of personal and institutional evaluation are valuable in understanding attrition among distance learners, a paramount attention and understanding of the psychological and cognitive aspects associated with for sustained and enduring learning is crucial especially for adult learners. In order to facilitate and enhance this capacity, there is a need to understand the behaviors which are important for independent, autonomous learning (Derrick, 2003). This understanding would greatly improve retention and successful completion of students engaging in distance learning. .

Studies have also indicated that the lack of self-regulated learning skills, or the inability to function autonomously may lead to adults dropping out of courses, failing to enroll in subsequent courses, and overall dissatisfaction with learning in distance courses (Calvin, 2005; Dzakiria, 2004; Zimmerman, 2001). In local distance learning context, studies have shown that Malaysian distance learners tend to be less self-directed than their western counterparts and lack the pertinent strategies to survive the learning mode (Haron, 2004; Jamaludin, 2004; Hashim, 2004). Nor Aziah et. al (2001) in a study done found that the problem of dropouts in UiTM online distance learning program did not lie in the provision of technology infrastructure but instead it resided on the lack of independent and initiative on the part of the learners. Dzakiria (2004) using qualitative approach in his study on distance learners in Unversiti Utara Malaysia, found that there was a lack of autonomous skills and ability to carry out self-directed learning among the distance learners. All the mentioned local research investigated learner autonomy from the perspective of program structures and learners characteristics. To the best knowledge of the researcher, to date no local research has been carried out to investigate the psychological aspects of learner autonomy among adult learners Malaysia.

Theories of student attrition has been primarily descriptive and atheoretical (Andres & Carpenter, 1997) until the early 1970s when the emergence of psychological theories began to appear in the literature (Attinasi, 1986; Ethington, 1990; Fishbein & Ajzen, 1975). It is asserted that behaviours that are self-directed, independent, and autonomous are essential attributes for improving retention and completion rates in learning and these behaviours and attitudes reside in the cognitive and psychological realm of the individual. In distance learning context, retention and completion rates in learning are alarming, hence, these behaviours (self-directed, independent, and autonomous are even more essential as learners encounter various barriers to their success that do not exist in the traditional face-to-face classroom. This study aims to investigate the psychological perspective of learner autonomy among distance learners in Malaysia in order to understand their learning ability.

THEORETICAL FRAMEWORK

This study is based on Fishbein & Ajzen's Behavioral Model (1975) and Long's "psychological conceptualization" in self-directed learning. Fishbein & Ajzen's Behavioral Model asserts that a person should perform those behaviours he or she intends to perform. Long claims that control is essential for learners who wish to engage in life-long learning. Based on these ideas, Confessore postulates that before one can behave, s/he has to have the precursor of autonomy. As such, it is important to assess intentions to engage in a particular behaviour rather than assess actual behaviours from past experiences in learning. Subsequently, Confessore (1994) began a series of research efforts to test the notion that learner autonomy could be best understood in terms of a four component constructs: 1) desire to learn, 2) resourcefulness 3) initiative, and 4) persistence. Confessore suggested that individuals who exhibit desire to learn, resourcefulness, initiative, and persistence in their learning activities possess traits, which are essential to successful self-direction learning. Under the guidance of Confessore, Carr (1999), Ponton (1999), Derrick (2000), and Meyer (2001) developed inventories to assess the four factors making up learner autonomy. These four inventories combined to make up the Learner Autonomy Profile (LAP), which can be used to assess learner autonomy at the individual and group levels.

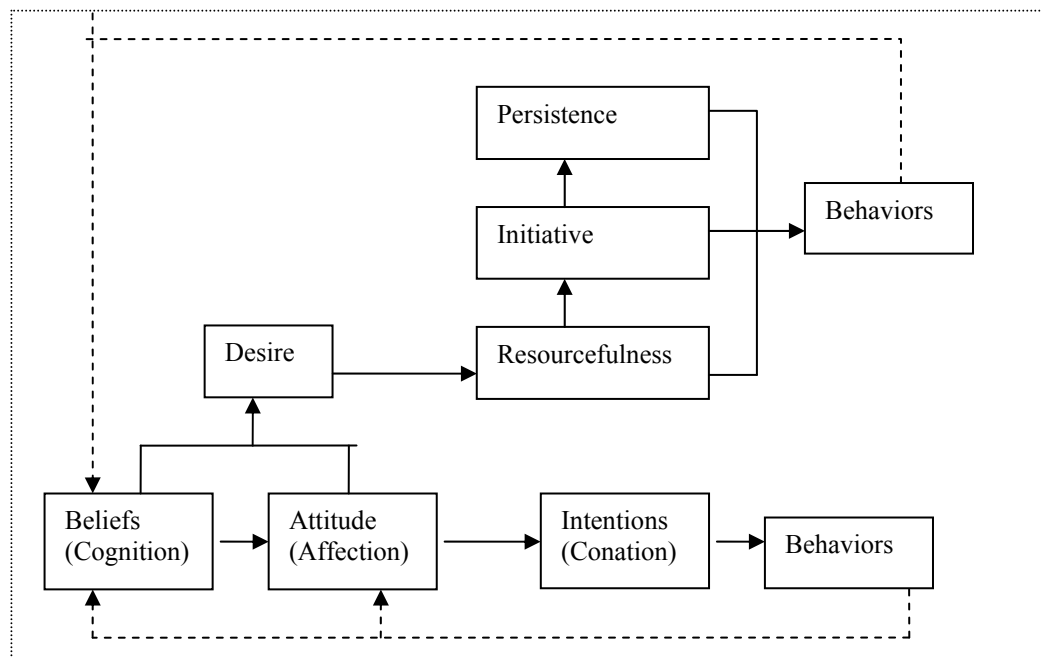


Figure 1: Fishbein & Ajzen's Behavioral Model & Observable Expression of Learner Autonomy

Desire to Learn

According to Meyer (2001), intentionality, or desire, is essential to learner autonomy, and presupposes the ability to access and direct our power to become the master of our own destiny. On the other hand, lack of intention, or desire, makes us slaves to the emotion of the moment and consequently ineffective in every area of our lives. To fully understand a learner's ability to develop intentions, it is important to understand an individual's circumstances and issues of expression (basic freedom). His group identity, growth and balance, and love issues, (power management); and his basic communication skills and basic change behaviour (change skills).

Learner Resourcefulness

Carr (1999) has determined that the seven behaviours that constitute resourcefulness in the autonomous learner are: prioritizing learning over other things, deferring gratification, making choices in favor of learning when in conflict with other activities, looking to the future benefits of the learning undertaken now, and solving problems (which includes planning, evaluating alternatives, and anticipating consequences). According to Carr (1999), the resourceful learner is able to recognize the anticipated future value of the learning, keep learning a priority despite having other goals or obstacles, postpone activities that may be exciting or fun for the future value of the learning, and solve problems related to the learning endeavor.

Initiative

Ponton (1999) asserts that initiative is a behavioral syndrome described by the presence of co-occurring behaviours and that an autonomous learner with initiative would exhibit the following behaviours: goal-directedness, action-orientation, persistence in overcoming obstacles, active-approach to problem solving, and self-startedness. In his research, Ponton describes the important of establishing goals and working towards the accomplishment of those goals; how quickly an individual transfers the intention to engage in some learning activity into action; the role of self motivation; assuming the responsibility for finding solutions to barriers or obstacles that may occur in learning; and sustained action despite the presence of obstacles.

Persistence

Derrick (2000) looks at the essence of autonomy as the process in which an intentional decision is made by the learner to engage in behaviours that allow the self to maintain and control the learning, and an understanding of the construct of persistence requires an understanding of the concept of autonomy as it relates to learning. Further research on the characteristic behaviours demonstrated by individuals with the intentions to persist in autonomous learning have led to the identification of persistence as a behaviour syndrome described by the presence of the co-occurring behaviours of volition, self-regulation, and goal-maintenance.

METHODOLOGY

A short form of Learner Autonomy Profile (LAP) consisting of 66 questions was administered to distance learners at both public and private universities in Malaysia. To ensure representative of Malaysian distance learners, only universities which offer both Science and Arts programs were chosen. Students consist of both degree students and higher diploma students coming from a range of academic departments in the universities. The usable questionnaire of 249 collected via multistage random sampling was used for the analysis of the study. Descriptive statistics was used to describe the data and analysis was done using the SPSS 14.0

FINDINGS AND DISCUSSIONS

Descriptive statistics such as mean scores, standard deviation, percentages and frequency distribution were used to describe the learner autonomy profiles. For descriptive data analyses purposes, three levels have been created for the total scores of the variable (learner autonomy). In order to assign scores to the Hi and Lo categories, the master file for the Short form Learner Autonomy Profile were inspected. By doing that, it is to ensure that the study sample's scores would reflect performance compared to the general population rather than just the current study sample.

Table 1: Frequencies, percentages, means and standard deviations of respondents' learner autonomy

Variable	Frequency	%	Mean	Std. deviation
(n = 249)				
Learner Autonomy			7.02	1.25
Low	116	46.6 %		
Moderate	65	26.1%		
High	68	27.3%		

The results indicate that 46.6% (116) of the respondents has low willingness to participate actively in their learning activities. On the other hand, about 26.1% (65) of the respondents' learner autonomy was moderate. However, there was only a slight increase in the high learner autonomy which was 27.3% (68) as compared to the moderate learner autonomy. In addition, based on the 10-point Likert scale used in the survey instrument, the minimum rating was 3.06 and the maximum was 9.56, with a standard deviation of 1.25. The mean rating for the level of learner autonomy was 7.02, implying that the learner autonomy level of the respondents was relatively moderate.

Based on percentage, it was found that 46.6 % or 116 out of the 249 participating distance learners have low level of learner autonomy and 53.4% or 133 participating distance learners displayed moderate to high level of learner autonomy. The findings depicted that the participating distance learners comprise a range of those who displayed low as well as high autonomy in their learning behaviours. However, a large majority of these learners fell on low learner autonomy which means their willingness to participate actively in a learning process is constantly being hampered by psychological challenges related to their desire to learn, resourcefulness, initiative and persistence. As mentioned earlier, the current research is the first to use LAP in Malaysia to measure distance learners learner autonomy, hence, no comparison could be made to see the differences. However, the current results show consistency with other previous research done by local researchers using other instruments.

Thang (2001, 2003 & 2005) , using both quantitative and qualitative data revealed that the undergraduates of both distance learners and on-campus learners of the National University of Malaysia displayed a lack of autonomy in their learning of English as a Second Language and seemed to prefer a more teacher-centred approach to learning. Thang's study revealed that learners prefer their teachers to be in-charge which include telling them their mistakes, guiding them and motivating them. Thang & Azarina (2006) further extent the study to other public universities (UKM. UPM. OUM) and found that a large majority of the students from all three universities (15% or 98 out of 645 respondents) showed a lack of autonomy in their learning too. Similarly, Dzakiria (2004) using qualitative approach in his study on distance learners in Unversiti Utara Malaysia, found that there was a lack of autonomous skills and ability to carry out self- directed learning among the distance learners. Both Thang's and Dzakiria's studies gave an insight of distance learners' ability to participate in learning, however both studies did not investigate the psychological aspects of the learners.

Table 2 presents the learner autonomy mean scores of distance learners enrolling in the distance learning programs in Malaysia according to constructs. A ten-point Likert scale was used to address the learner willingness to participate actively in the learning. The respondents were asked to response how often they perform the behaviours stated. The mean and standard deviation of the distribution of scores on each construct of adult learners enrolling in the distance learning programs in Malaysia are displayed.

Table 2: Learner Autonomy Mean Scores According to Constructs

Learner Autonomy Constructs	Mean (N=249)	Std. deviation
Desire to Learn	7.24	1.32
Resourcefulness	6.78	1.22
Initiative	6.86	1.31
Persistence	7.37	1.52

The findings showed that persistence and desire to learn are the most important constructs in learner autonomy as indicated by the mean score of 7.37, followed by desire to learn with the mean score of 7.24, initiatives 6.86 and resourcefulness 6.78. These findings reflected that persistence and desire to learn are two prominent constructs in determining Malaysian distance learners' willingness to participate actively and productively in distance learning. Persistence in distance learning is vital to promote sustainable and enduring learning. In having strong persistence enable learners to remain in their learning even when being confront with various obstacles. In Malaysia, the current distance learning approach used is hybrid and blended learning (DL blended). This approach offers ways to make learning more convenient and accessible to many adult learners. They allow the student to continue learning when classroom or site based attendance is difficult for multiple reasons. By increasing learning flexibility, this approach helps to facilitate student persistence. Subsequently, this improves retention in distance learning. Similarly, having strong desire to learn is vital as this variable has the most influence on whether an individual learner exhibits autonomous behavior was their commitment or desire to learn at this point in time (Merriam & Caffarella, 1999).

The findings also implied the current trend of higher education seekers in Malaysia who come from the adult working population. There is a vast increase of distance learners in Malaysia over the years and this indicates that more and more adults are embarking into lifelong learning. Most of these working adults are between 30 to 40 years old, married with young children and aged parents to look after, studies in whatever little time they have between daily chores and responsibilities and may have very little knowledge about computers (OUM Tutor's Handbook). These are the people who display great desire to pursue higher education for self-development, self-enrichment and upgrading of skills despite being constantly challenged by jobs and family commitment. Hence, without having strong desire to learn, universities in Malaysia which offered distance learning programs will not have such high enrolment in recent years.

Table 3: Learner Autonomy Profile Mean Scores of Distance Learners in Malaysia.

Scale & Subscale	HPM	M	SD	Skewness
DESIRE	210	151.98	27.63	-.35
Circumstance	30	21.40	4.98	-.27
Expression	30	20.42	4.53	-.06
Group Identity	30	21.59	4.57	-.46
Growth & Balance	30	22.58	4.45	-.45
Love Issues	30	22.05	4.44	-.43
Communication Skills	30	22.05	4.32	-.43
Change Skills	30	21.90	4.39	-.29
RESOURCEFULNESS	210	142.30	25.59	-.25
Learning Priority	30	22.52	4.51	-.49
Deferring Gratification	30	19.07	4.28	.16
Resolving Conflict	30	15.09	5.88	.21
Future Orientation	30	21.65	4.74	-.42
Planning	30	21.85	4.82	-.52
Evaluating Alternatives	30	21.36	4.72	-.32
Anticipating Consequences	30	20.75	4.53	-.11
INITIATIVE	150	102.88	19.59	-.35
Goal-Directedness	30	21.19	4.55	-.30
Active Orientation	30	21.21	4.68	-.09
Overcoming Obstacles	30	19.55	4.42	-.13
Active Approach	30	21.81	4.81	-.47
Self-Starting	30	19.11	4.12	.12
PERSISTENCE	90	66.27	13.67	-.57
Volition	30	22.46	4.79	-.46
Self-Regulation	30	21.76	4.77	-.59
Goal-Maintenance	30	22.06	4.71	-.49
SHORT FORM TOTAL	660	463.43	82.27	-.41

Note. $n=249$

Table 3 displayed the overall learner autonomy profile mean scores of 22 subscales. All the subscales indicated close range of mean scores except for resolving conflict in the construct of resourcefulness which has the lowest mean. This may indicate that the respondents undertaking learning in the blended learning environment are not able to resolve conflict. Resolving conflict is defined as the extent to which an individual makes choices in favor of learning activities when in conflict with other activities (Carr, 1999). This component assesses issues related to attempts to resume normal functions that have been interrupted and attempts to break ineffective or harmful habits in order to adopt new, more effective behaviors related to learning. Davis (2006) in a study comparing the learner autonomy of adult learners in asynchronous learning environment versus the traditional classroom found that learner form asynchronous learning environment possess a greater degree of resourcefulness particularly in resolving conflict. She concludes that students undertaking leaning in this environment have a greater capacity to manage conflict because time and space are not requisites of asynchronous learning environments. The findings in this study indicated that learners in Malaysia who undertake distance learning via blended approach have poor ability to resolve conflict. One possible explanation of this phenomenon is due to the structure of the blended approach which requires

learners to meet face to face four times per semester for every course taken. As most distance learners take an average of three courses per semester, this means they have to meet up with their tutor almost every weekend. Thus, learners are constantly being confronted with conflict between class time and work, time traveling to class, and flexibility in setting their own pace and time. This is consistent with the definition of resolving conflict provided by HRDE (2000) which states, "Resolving conflict refers to making choices in favour of learning activities when they are in conflict with other activities."

CONCLUSION

Learning at a distance is different from traditional learning experiences. Many distance learners have left the educational setting for many years before embarking into distance learning. As a result many feel incompetent and lacking in motivation and learning skills needed to complete their course. Malaysian distance learners in general are more reserved and passive participants as the result of their cultural orientations towards learning. Besides a supportive and positive learning environment experiences to enhance and facilitate learning, learners need to believe that he/she has the ability to be successful. The LAP is valuable tool which could help to measure learner's intentions when faced with learning choices and most importantly it could be used to facilitate learners' learning behaviour. Understanding the learner autonomy profile which consists of the constructs of persistence, initiative, resourcefulness and desire to learn in distance learners is vital. This is because distance learners have selected an academic environment that separates them from the classroom and as a result may face additional challenges requiring them to display more autonomous behaviors. It is vital therefore to examine learners to determine if they exhibit characteristics that define learner autonomy so that intervention could be carried out to help students to develop desirable skills that encourage behavioral changes, which may enable them to make choices that lead to more successful outcomes.

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ENHANCING QUALITY FDI FOR EMERGING ECONOMIES: AN APPROACH TO BOOST EFFECTIVE MEASURES FROM MULTI NATIONAL COMPANIES TO STIMULATE SPILLOVER IMPACT

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ABSTRACT

The world understandably has acknowledged the great contribution of foreign investors to many third world countries' economic prosperity. Progressing mostly through merger and acquisitions, the investments play their part in formatting not only to job creation but also to technology capabilities, production capacity expansion and trade development. The contribution has however very recently being contested as the investing activities may have failed in demonstrating real substantial impact on financial and economic expansion for the developing host countries. In order to sketch a mold for investing corporations to compose real spillover impact, this paper attempts to excavate the experience among the related emerging economies. The plan, through a triangulation approach, is to unite the result of the expected host country experience and the findings of survey in the view of the participating organizations to finally derive a suggestion on enhancing highly beneficial Foreign Direct Investment (FDI).

Keywords: *foreign direct investment, host country, home country, multinational corporations*

RESEARCH BACKGROUND

The becoming-liberal world has now fastens the route for a stiff competition among developing countries en route for winning a productive investment to enhance their economic prosperity. Many has came out with several distinguished approaches such as tax holidays, local purchasing incentive, intra trade benefits and other earnings related inducements. Others found themselves circling around the effort of offering greater facilities and enacting investor-favor regulations. All of them simultaneously declare themselves the FDI friendly nations with the intention of attracting more foreign investment.

The more traditional model of rejecting foreign capital and heavily relied on state control is now a history. The next model that welcomes liberalization as the basis of economic development has not only greeting the foreign investment but badly begging them and further competing to win the capital flows over others. As Sylvia T. Ciesluk² (2007) remarks that the idea of bringing home FDI is believed to be "the best medicine for a backward economy". She adds, generally, FDI has appeared to be the key to achieving economic prosperity and rising living standard. Known as the neo-classical model, this paradigm did somehow bring some relief to the developing host nations. Many of the emerging economies have yet to witness them very clearly.

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Raj Kumar³ (2003) in *Asia-Pacific Development Journal* states that FDI has currently reaching more countries than ever. The investment has been unevenly distributed throughout the globe. Moreover, as the world noticing, several East Asian countries are nowadays gradually replacing the more customary FDI destination like the neighboring South East Asia. China and Vietnam are believably to be the emerging major entrants. As shown figure 1, it is not difficult to assume that destinations of FDI are simply very broad as every single corner of the world participates to be either the host country, home country or both at the same time. Though they vary in values, the quantity of the investment altered almost simultaneously from year to year. In the context of worldwide economic contraction and equity declines, foreign investment slowing it phase from the year 2000 onwards. Approaching the mid-years of the new millennium, China and its bordering Asian Tigers have noticeably survived the struggle again.

Various years	1990-1995 annual average	1996	1997	1998	1999	2000	2001	2002
World	225,321	386,140	481,912	686,028	1,079,083	1,392,957	823,734	651,190
Developed Countries	145,019	219,908	269,655	472,265	824,643	1,120,528	589,288	460,335
Asia*	1,724	1,615	5,175	5,031	15,810	13,311	9,673	10,974
North America	47,058	94,089	114,925	197,243	308,118	380,764	172,787	50,625
Oceania	8,854	8,341	10,281	6,966	4,510	16,576	6,015	14,345
Western Europe	87,383	115,863	139,274	263,025	496,205	709,877	400,813	384,391
Developing Countries	80,302	166,232	212,257	213,763	254,440	272,429	234,446	190,855
Africa	4,320	5,835	10,667	8,928	12,231	8,489	18,769	10,998
Latin America & Caribbean	22,259	52,856	73,275	82,040	108,255	95,358	83,725	56,019
Asia	47,321	93,331	109,092	99,983	108,529	142,091	106,778	94,989
Oceania	388	663	190	333	280	118	159	140
Central & Eastern Europe	6,014	13,547	19,033	22,479	25,145	26,373	25,015	28,709

Source: UNCTAD, *World Investment Report, various issues* (* Israel & Japan)

Figure 1: Total FDI Inflows, by Destinations
(In Million of US Dollars)

As for Malaysia, foreign investors involve via three (3) basic instruments which are foreign direct investment (FDI), portfolio investment and other short term investment activities in the financial and money market. Realizing that FDI has becoming a critical economic source for this country, Malaysia puts the effort to become another liberal competitor. Johan Olsson (1996) in his article describes, “Malaysian market is fairly open oriented, with tariffs only averaging approximately fifteen percent (15%) and almost non-existent non-tariff barriers and foreign exchange controls”. The statement is simply factual as many of Malaysian government strategies strongly supporting more initiatives to attract FDI into the country. The country for example, has pursued various tax incentives and liberalization of equity participation in the process. Moreover, mass investments venturing into upgrading nation’s infrastructure were obviously evident for the past several years.

²⁶² The Fletcher School of Law and Diplomacy, Tufts University, US., in her PhD Thesis, March 2007

³ Raj Kumar, Chief, Poverty and Development Decision, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

The engine in the course of moving out investment into another country is off course multi national companies (MNCs), almost entirely corporations. Some of them also originated from privately-owned companies or state-owned institutions. A report from local newspapers⁴, states that Japan remains the biggest foreign direct investor *Berita Harian*, August 10).

To name a few, Sony, National, Toyota and Honda are some of familiar Japanese brands that participate in our manufacturing sector. Among others, the US, Germany and Singapore are at top table (Statistical Report 2005 from Malaysian Industrial Development Authority). The reasons for the country to seek FDI are mainly the positive impact on income growth, production expansion and international trade development (Zainudi, 2002).

Country	1975	1976	1977	1978	1979	1980	1981	1982
Asia	61.6	59.1	61.9	60.8	58.8	57.9	58.3	58.1
Singapore	18.8	17.3	18.9	21.6	23.8	24.5	26.6	30.1
Japan	25.7	28.2	27.4	25.1	21.3	20.4	20.4	17.7
Hong Kong	13.8	10.2	12.8	10.7	10.9	10.5	9.1	8.1
Rest of Asia	3.3	3.4	2.8	3.4	2.8	2.5	2.2	2.2
Others	38.4	40.9	56.9	39.1	41.4	42.1	41.7	39.5
United Kingdom	11.1	13.2	16.1	16.1	16.6	18.4	16.7	16.3
West Germany	2.3	2.7	16.1	2.1	2.2	2.2	2.6	2.8
Rest of Europe	3.6	4.1	3.8	5.3	7.0	7.0	7.1	5.4
USA	13.4	15.5	15.5	10.9	7.7	6.6	5.9	5.8
Others	8.0	5.4	5.4	4.7	7.9	7.9	9.4	9.2

Source: MIDA Yearly Report, various issues
Figure 2: FDI (%) by Country of Origin, 1975 – 1982

The figure above shows the historical background of Malaysian FDI inflows in the earlier phase of the country's development. The Asian economic leaders, Japan and Singapore remained as major FDI sources. The UK was also a significant contributor that perhaps had prolonged its export-oriented investment since the pre-independent era. The trend has currently shifts gear into much more rapid participation from around the globe. The US and several Western Europeans have currently becoming substantial FDI providers while Japan, as stated earlier remains at the top table.

The major highlights of the background is however to emphasize that FDI, around the globe, has however being questioned on its effectiveness in delivering the economic spillover to the host countries. Both the figures above are quantifiable evident of FDI movement which in deed have yet to show any of the quality feature of the investment. As opposed to the idea of focusing attracting the quantity of FDI, many scholars believe that host countries are becoming less independent in that matter as FDI quantity enhances more political risk and social unrest. More understandable difficult circumstances are clarified in the later pages in the problem statement section.

⁴ *Berita Harian* is a local newspaper published in Malaysia

PROBLEM STATEMENT

As mentioned before, the reality of the positive economic spillover derive from FDI is however in doubt. In many genuine cases, drastic change from disallowing any FDI to welcome it with open arms has given participating corporations overwhelming protections and incentives. Concerning this matter, John H. Dunning (2006) writes that the anxiety “has largely fueled by today’s environment of free-flowing information – led to the reevaluation of the neo-classical model”.

According to the World Investment Report 2006⁵ (WIR 2006, p184), the economic impact of FDI is difficult to measure with precision. The outcome may vary from a host country to another. WIR 2006 also reported that the effect of FDI is not easy to distinguish and quantify. Some economists, according to Sylvia (2007) who parallels to Raj Kumar’s (2003) statement, suggest that the unrealized spillover has varied across countries and over time.

In some obvious cases, in countries those rely on FDI rewards there have been economic difficulties such as increasing inequality in wealth distribution in the host country. Moreover, Dunning (2006) mentions the static-one-dimensional neo-classical model has “ignored international public goods such as environment, security and human rights”. Other renowned globalization gurus, Keichi Omhae for instance, belief that mass initiative of firm going abroad has the impact of challenging the sovereignty of the host nation.

A strong case that been receiving great deal of international criticism was between the Unocal, an American corporation, and the ruling government of Myanmar. The company’s immediate rough action in protecting its pipeline from potential attacks from anti-government guerillas was reported to stimulate refugee problem. In some ways, the event has marked a resilient instance of human right abuse against the locals. At the same time, the host government had deepened into trouble as the U.S. Congress passed a new amendment on its foreign investment rule to directly ban any new U.S. investment in Myanmar. At this point of time, the ruling government of Myanmar has obviously loosing its power of conduct. Other evident cases include the case of Nike’s abusing under age labor in China to cut its oversea operating cost and Chiquita mistreatment of environment in Central America that led into national NGO’s protest.

Kumar and Pradhan (2002) have also stated that while FDI may bring in social benefits such as capital asset investment, technology enhancement and other know-how skills, the positive impact of domestic economy “may not take place due to poor linkage or poor absorptive capacity”. As Organization of Economic Cooperation Development (OECD) reports, a host country should have already achieved a certain standard or the socio-economic “threshold” before it could benefit the potential spillover effect from the foreign investment. According to Sylvia (2007), a good benchmark of threshold should incorporate “sufficient level of development in education, technology, infrastructure and business-economic health” at large. The uncertainty lies here. How many developing countries have really been that good to make the absorptive effect take place? Will a country like Indonesia benefiting the FDI which has been there for more than a century ago? How many years

would it take for Viet Nam to achieve the minimum threshold so the citizen would fairly enjoy the FDI reimbursement while the struggle has shown no sign to stop? Thus, as many economist and financial theorists strongly belief that the unrealized spillovers should be valued at their quality rather than the quantity, a rather quantifiable approach is need here to further dig the situation among the host countries.

On the legal aspect, many or almost the entire of existing international investment agreements (IIAs) have apparently investor-favor. In fact, host nations seem to have no other choice except to liberalize their regulations for the sake winning the competition among each other. The Republic of Kazakhstan for example, during it post independent era after freed from the former Russia, has reduced its trade distortions and privatized its small and medium size enterprises (SMEs). In the case of Malaysia, the country known to enact the non-tariff barriers, liberalize the international equity holdings, increase support on export oriented business and deregulate its foreign exchange controls. In short, many developing countries prefer to have a pro-FDI position along the way.

There are two (2) basic features of IIA being practiced around the globe namely investment law and investment code. As investment law obviously protect the interest of the foreign investor, investment code that meant to protect host countries is said to be becoming less reliable. Bilateral investment agreement (BIT) is an example of a rule, currently turning out to be the most popular source of international contract between home and host country. According to Salacuse and Sullivan (2005), BIT in many cases, protects “international investor from changes in the local law and the impartiality of the host country decision makers”. The statement easily derives the assumption that a major disadvantage for a host to signing a BIT is a loss of policy flexibility. This effect, they believe, could be “harmful to the host country”.

Moreover, when the two parties encounter a breach of treaty, a settlement known as dispute settlement facility (DSF) would normally take affect. According to Betschinger⁶ (2004), the resolutions are frequently in favor of the foreign investor. In fact, many of the host countries are willingly to work that out in such away that they could gain the positive image for the investing to flow in even more. Nevertheless, neither BIT nor DSF has actually ensuring the FDI to stimulate its expected economic spillover. The existence of quality FDI remains in doubt.

To sum, it is save to say that a host country, almost all the time, seems to be on the crossroads between realizing a national agenda and loosing its foreign investment. As big majority of them have yet to reach the minimum threshold, their absorbent capacity remains incompetent thus retarding the hope for prosperous economy. Moreover, as illustrated earlier, the initiative of tightening international rule of investing is understandably be very harmful to the hosting country.

⁵ Published by United Nations Conference on Trade and Development (UNCTAD), 2006

Here, the reevaluation of the neo-classical model should take place thus a more leveraging approach in confronting an FDI is simply desirable. Therefore, the research is designed to expose the real position and experience among the emerging economies. The research at the same time is to consider participating corporations' view via a well structured survey to ascertain the areas that they may potentially participate to directly benefiting the host economies.

RELATED LITERATURE

McMillan (1999) verifies that initiatives of admiring FDI to some extent have seemed to be a major instrument to maintain the system of dominance. Rationally, as international firms becoming the central focus of developing countries, there are potentials that other principal core businesses in enhancing social economic among the host nation have been overlooked. This state of affair, according to the supporters of *dependencia* theory, could be a threat for the socio-economic stability of the hosting country since the huge income could be concentrated in the hands of a smaller group of elite. This would almost surely prolong the risk of political and social unrest.

A pro-FDI position nevertheless may hurt developing countries. According OECD report (2002), certain adverse effects are possible which could deteriorate the balance of payment (BoP) of the participating nations when the MNCs profits were repatriated. In short, if the income is not shared locally at sufficient amount, there would be a sudden foreign exchange outflow in the BoP. Moreover, in a worst case scenario, a country may even keen on or at least forced to sacrifice the well being of the local labor market by lowering the wage and accepting lower environmental management standard. Such occurrence however, is not a case for Malaysia so far.

More scholars are nowadays calling for a remodeling of the current neo-classical model. As oppose to idea of modernization approach which, derived from the current model, *bargaining* school of thought argues that the spillover of FDI would depends on the bargaining power of the host. Countries with great leaders and transparent vision perhaps could manage the FDI correctly thus reflecting into maximization of the host economy. McMillan (1999) support this statement by saying that "a host country with a weak bargaining position relative to foreign investor will have more difficulty attracting FDI and in turning the investment flows that do arrive into economic growth and long-term development. Kumar (2002) adds, the varied effects of FDI are explained by the quality of the FDI received. Both McMillan's and Kumar's idea are conflicting to the modernization approach that simplifying FDI can better promote the local economy through boosting the productive capacity and growth.

⁶ Marie-Ann Betschinger in her PhD Proposal, University of Muenster, Germany, 2004

Moreover, according to Raj (2003), many East Asian nations are strong pro-export bias as many of these countries have “wide and long exposure of FDI”. This could probably have developed since the colonization era which later brought forward to their current position. Even the current WIR (2006) report also agrees that a strong export bias may present certain risk for the host country. Such problem may occur when the participating MNCs attempt to monopolize certain market area. This would reflect into lower local productivity and smaller market for other potential investment to chip in.

Furthermore, when a big chunk of FDI originated from a specific country, the host country understandably would surely be dependent to the home country politically. Such situation may consequently reflect into overwhelming trade deficit in the host BoP as the country experience huge current account shortage. This case, which also corresponding to the *dependencia* theory discussed earlier, is simply true for several poor countries in Southern African region where the FDI originated from South Africa itself (Rummy and Pingo, 2004). Responding to the situation, *structuralist* scholars explain that in reality developing countries have lack the power and necessary expertise to ensure their highest absorbent capacity.

The failure of current practice and model should not only be viewed through the discussion of the pessimistic impact experienced by the host country. The truth is the fundamental objective of MNCs moving abroad is not to focus on developing others. MNCs taken off across border, according to Raj (2003), are basically to find the best match between their mobile assets (e.g., technology, R&D, training and strategic management) and their immobile assets of “different location within an integrated production and marketing system”. The auto makers of Japan for example, currently run many different facilities in all over South East Asia region. They produce many different models of vehicles to take advantage of their know-how capability at the expense of favorable production cost in the host country and while enhancing their marketing coverage. Those have got nothing to do with the host nation economic development, obviously.

Relating to this issue, many of those famous international business theories states that MNCs go abroad is for the sake of their own survival. The Product Life Cycle (PLC) theory, for example explains that when a firm found itself struggling out the competition at its maturity or declining stage at home, they intent to broadened their scope of business abroad (Shapiro, 2005). Moreover, Imperfect Market theory emphasize that the real world suffers from the imperfection as there are too many of those production factors are immobile⁷. The solution for this is for the firm to go international. Yet again, has any of this hypotheses corresponding to the expected spillover?

As oppose to its obviously visible negative impact, FDI spillover is however not easily determined. According to the recent WIR, “there is no precise method specifying a counterfactual (i.e., what would happened if a MNC or MNCs had not made a particular investment or investments)”. Basically, there are two basic approaches in evaluating FDI quality namely econometric approach and qualitative measure. The former determine the relationship between amount of inward FDI and a variety of measure of economic indicators. The later analyses a range of aspects of MNCs impact on host

economy qualitatively. Thus, it is safe to say that there are mechanisms for such research to take place though there are opposing opinions on approaching it.

Corresponding to the uncertainty in determining the spillover effect of FDI, Sylvia (2007) explains that “rapid success of” several host nations that advanced in their economy could not be concluded based in their liberalization. But she admits that the right policies, which in this matter are not quantifiable in nature, could be the “key variables” ensuring the development.

Several earlier research employed social indicators to break up the situation. Their investigation is basically comparison to realize the capability of country reaching the suggested threshold by investing the level of labor productivity, education standard and skilled labor availability (World Bank Country Brief, 2003)⁸. The related details of the suggested variable are explained below:

1. Labor productivity (LP)
LP variable derives a ratio between Gross Domestic Product (GDP) of a country compare to the total number of employees employed in a year in all sectors. It also portrays the yearly output or contribution of employees in all area of a county into its GDP. It is derived from dividing GDP over number of employed labor
2. Education attainment (EA)
This variable is to measure the fundamental academic enrolment and general education statue. One of the EA measurements is to observe a county’s literacy rate. The other one is derive from dividing the number of enrollment in schools over the number of children that eligible for that
3. Education quality (EQual)
One way to discover the EQual of a country is simply, for example, to calculate the corruption event in the education system. It reveals the accountability and integrity of the system
4. Skilled labor availability (SL)
The SL variable quantifies the standard of the labor market of a country. It compares the number of skilled labor to the number of graduates available. The variable also computes the number of scholars and researchers actively participate pursuing their career in the country

Moreover, OECD (2002), Li and Liu (2005) and Krogstrup et. Al. (2005), come out with a threshold argument as a reference. The argument lies on several indicators that set some minimum requirements to compare whether or not the investigating country reaching the threshold standard. To name a few, among the variables are technology gap, education standard, financial sector development and institutional quality. The related explanation of the suggested variables is as below:

1. Technology gap (TG)
TG reflects into the comparison of technology usage in a host country to the home. It is derived by comparing the GDP per capita of the home and the GDP per capita of the host.

The analysis suggest that the value above 12.6% signifying that the host country is not absorbing the spillover effect

2. Education standard (ES)

Understandably, ES explains the level of education among the citizens. It shows the level of enrollment of the resident into schools and tertiary education institution. Among the quantifiable measure, for a country to reach the minimum threshold, is the minimum number of years for a male going for education that is 0.52 years

3. Financial sector development (FSD)

There are twofold of measurements here. The first is derived from the observation on the size of equity capitalization compare to the country's GDP. Secondly is the percentage resulting from credit amount of credit provided by the local financial institutions in comparison with, again, the county's GDP. The minimum degree for the former is 89% and the later is between 12% to 13%.

4. Institutional quality (IQual)

IQual is quantified based on a rather sophisticated the regulatory quality (RQual) suggested by Krogstrup et. Al., (2005). They suggest that the RQual should range from - 2.50 to +2.50

Without denying their possible deficiencies, it is almost secure to say that there are variables available and in fact suggested by others. Moreover, McMillan (1999) was also suggesting that there are variables that influencing the ability of a host country to influence foreign investor in order to ensure the spillover benefits. The variables are:

1. The ability to monitor investor and industry behavior
2. The cost of duplicating, or foregoing what the investor offers
3. Healthy competition standard within industry
4. Vulnerability of foreigners' assets and earnings to adverse treatment by the host government
5. The ability to discount political tension caused by the investment dispute

⁷Also Shapiro 2005

⁸Example simplified from the case of Kazakhstan Republic, 2003

As this research designed to explore key areas of which the MNCs are willing to participate towards stimulating the spillover, several illustrations are selected to prove that the further suggested initiatives are possible. The basis of any suggestion, as proposed by (2003), is however lies on the foundation that economic benefits would be realized only when the corporate objectives of the firms are not contested (World Bank, 2004). This derives the idea that it is compulsory for the host government to realize specific areas they should work together. The areas, for examples, are development in the private sectors, enhancing local education progress and improvement of basic necessities of the citizen's need. Should both the public sector and foreign investor found their converging areas to work with, the match is the best explain the outcome of the research.

While voluntarily act failed to take effect, there have been initiatives from MNCs in many ways benefiting to a host country. A case of Chiquita, a corporate giant operating in Central America that had faced a major threat on its operation license by the environmental activists due to the mistreatment of the ecosystem, could be a clear example. Instead of fighting the critics, Chiquita formed a strategic partnership with Rainforest Alliance, the activist themselves in order to improve the company's effect on countries development. After conforming the needs of the new alliance, the company found is self successfully increased productivity and efficiently reduced the costs. The initiative further took Chiquita to enjoying a greater brand reputation.

Moreover, Chevron-Texaco, a giant oil and gas company of the US, took a step in enhancing local entrepreneurship development in the Balkan areas. Cooperating the project with United Nation Development Program (UNDP Report, years unknown), the company gave out 71 micro credits support which subsequently created 530 jobs relatively⁹. The illustrations simplified above are only some of the successful cooperative developments blends with suggested indicators and smart effective government policy portray that producing quality FDI is actually possible.

RESEARCH OBJECTIVES

1. To determine the real experience of selected emerging economies in confronting their FDI. This objective is serves to excavate the reality in term of their current development in the form of socio economic status. From here, the research would expectedly derive specific indicators related directly to further evaluate the quality of their FDI
2. To determine the specific factors influencing decision making process among participative foreign investors on investing or/and reinvesting their income in the selected regions. From this objective, the research could move on to form a prioritized preference or benchmark for MNCs to make decision
3. To determine the precise areas that MNCs could keen on cooperating with the public sector in order to stimulate the spillover thus giving birth to a quality FDI

⁹To read more, please refer to UNCTAD report on "Social Responsibility", United Nations, 2001

RESEARCH DESIGN & METHODOLOGY

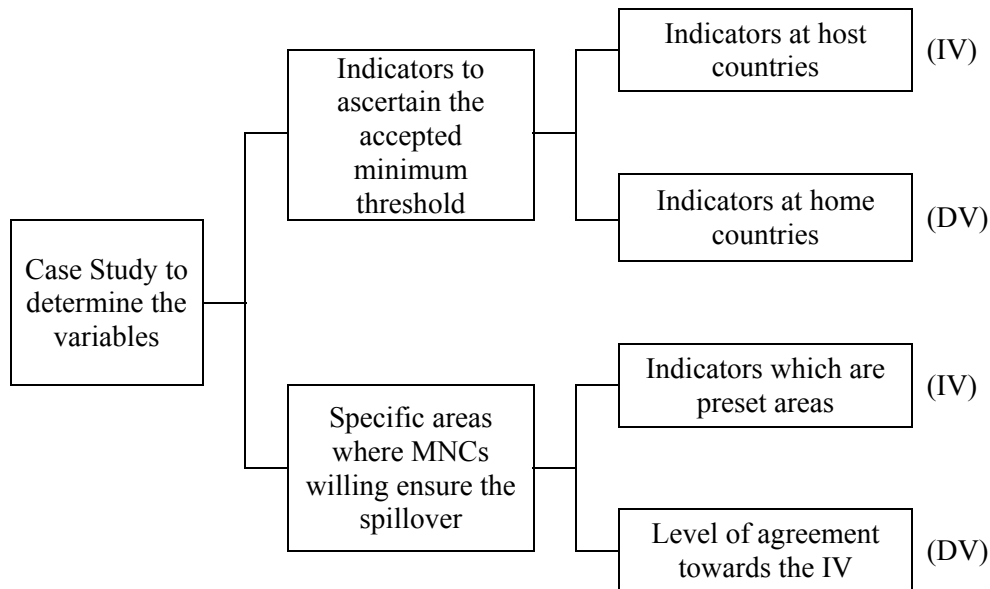
Triangulation approach, as proposed by Vicky (2006), which is the combination of both case study and quantitative method, is the basic design of the research upon accomplishing the objectives. According to Vicky, the approach has now widely used on various accounting, finance and economic related research. The research is design to first capture pure composite information from case studies on the specific region. This initial move would later derive expectedly better suggestions of variables. By doing this, the research anticipates to obtain variables in three (3) different forms as emphasized below:

1. Determinants of FDI which are the reasons influencing MNCs in investment decision making process
2. Indicators to ascertain the accepted minimum threshold among the selected regions
3. Specific areas of which MNCs would keen on working together with the host government to ensure the spillover to take effect

The earlier step taken to ascertain the related variables allows the research to first generate the hypothetical statement between the determining factors and FDI decision making process. By acknowledging the relationship between those independent and dependant variables, the research sets to understand even more on how MNCs react in various situation in several different regions. The findings from here are predictably useful to further discover the quality of the investment when it is integrated with the other quantitative measures taken at the end of the research methodology.

As explain earlier, at the same time, this research would employ the associated variables to ascertain the minimum threshold indicators of the selected regions. Having this being performed, the research sets to compare the “developmental quality” of the hosting regions as compare to the home where the FDI originated from. The developmental quality is basically the socio economic status of the host nations that allow them to have their best absorptive capacity in exploiting the foreign investment available locally. From here, the research is to test another hypothesis of the comparing indicators between the host and home countries over a time series analysis. The result would yield comprehensive understanding on their relationship that explains the connection between the compared variables of the origins and destinations of FDI.

The final destination of the research is to finally discover specific areas that MNCs are willing to be responsible to ensure the spillover effect to take place. This should be the major focus of the study as it reveals the willingness among the foreign investors thus distinguishes their different in quality. Understandably, higher level of motivation for them to work on ensuring the positive impact to be realized portrays the higher quality they have in their investment. The concluding hypothetical testing should take place here, connecting their level of willingness and the determining factors explained earlier. A straightforward draft of this research methodology is structured in this proposed research framework:



The design and methodology details are however are the subject of a serious discussion with the future advisor.

DEFINITIONS OF TERMS

Foreign direct investment (FDI)

FDI is basically a settlement of investment from companies originated from outside the country being invested. The settlement, mostly arrived via mergers and acquisition, could take place in the form of business premises or acquisition of assets.

Multinational corporations (MNCs)

MNCs are corporation that having their investment outside border from their home. They are the engine of the FDI doing abroad

Host country

Host is the country receiving FDI from the corporations. For the research, host country refers to the developing counties in the investigation

Home country

Home is where the MNCs originated from. This is where the company being corporatized

Spillover effect

This is the term used to portrays the economic benefits expected from FDI that a host country expectedly to enjoy

RESEARCH SIGNIFICANT

1. The research has a great potential in discovering the alarming factors influencing FDI flow into the selected region. In other words, the research may help out many organizations to identify contributing features in attracting FDI at large. The knowledge is surely significant for the hosting government to specify new ideas or policy relating to inviting FDI in order to pursue the country's development
2. The research also provides an improved guide for other interested MNCs and the government of the home countries to acknowledge the real investing experience took place in the selected regions. Both MNCs and their parent countries would learn to prepare even better upon settling an FDI abroad
3. It is also should be a good benefiting knowledge for many other scholars and future researchers around the globe to understand the nature of the study on quality FDI even better. Knowledge from this research hopefully could assist them to take the remodeling process further. As expected, there should be some other potential areas to be incorporated in order to ensure the reassessment of the current model go through a higher standard of practice
4. In contributing to the body of knowledge even more, the research is pleased to share the process and evaluation of the FDI quality which explained in many literatures are not easily to be done. This does not only allow readers of academia to distinguish the quality features of FDI but further allow them improve the approach in the future. The knowledge reflecting FDI quality is simply significant for many institutions especially local authorities that certainly need to ensure that the flowing foreign investment featured the desirable quality

RESEARCH LIMITATION

1. Data collected may not represent the whole picture due the strategy of getting the data from only the existing MNCs. The samples excludes several MNCs that have moved out to invest in other venues
2. Companies' representatives, even they are the top officers, may not present inaccurate data due to human factor. They are the only source of information from the company therefore their respond in the survey is exactly equals to the companies' respond either they are actually not
3. Process of defining and understanding public policy into quantitative data through case study may find several difficulties due to different execution of policy implemented by several government agents within the same government body

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CQ(03)

THE EFFECT OF SOWING DATE AND ROW SPACING ON YIELD AND YIELD COMPONENTS ON HASHEM CHICKPEA VARIETY UNDER RAINFED CONDITION

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ABSTRACT

In order to investigate the impacts of sowing date and row spacing on yield and yield components of Hashem chickpea variety, a field experiment was conducted in 2005 at a farm of Dorood Faraman (Kermanshah-Iran). In this study, the sowing date in three levels (6, 23 November and 6 December) and the row spacing in three levels on rows (20, 30 and 40cm) were evaluated with complete randomized block design in factorial arrangement. Results of the experiment showed that there are significant differences for planting date and planting density effects of plant height, number of branch per plant, distance between 1st pod to soil, number of pod per plant, number of grain per plant, biological yield and grain yield. There is also maximum grain yield that belongs to sowing date 6 November and row spacing 30 cm. However maximum number of pod per plant and grain per plant belongs to 40 cm row spacing but higher number of pod and grain per unit area in 20 cm row spacing resulted in the increasing of grain yield in this row spacing. The result shows that the increasing of planting density resulted in decreased yield components but increased plant number compensates decrease of yield components. We also found that planting at 6th December had a higher distance of pod from soil surface and thus easier mechanized harvesting.

Keywords: chickpea, sowing date, row spacing, grain yield, yield components

INTRODUCTION

Among pulse, chickpea (*cicer arietinum* L.) is the most important crop having a high percentage of protein. Chickpea's nutritional value, on one hand, and its ecological properties, on the other have put it at the second place at the world level, and at the first place in Iran and some arid and semi-arid countries (Dehnavi, 1999). Chickpea is an important crop in western Asia and northern Africa. It is of special importance in dry farming in western areas of Iran so that the dominant rotation on non-irrigated lands of these areas is in the form of rainfed chickpea – rainfed cereals (wheat and barley) (Rastegar, 1998).

Considering that the area under non-irrigated chickpea cultivation in Kermanshah province reaches 200,000 ha (2004) a year, and given that farmers of this region plant chickpea in spring, and with respect to low level of average yield of chickpea in spring plantings due to the shortness of the plant growing phase and susceptibility of local Bivenij mass chickpea to ascochyta blight disease and difficulties with its traditional harvest, the yield of non – irrigated chickpea in Kermanshah can be improved considerably by planting autumn varieties resistant to ascochyta blight disease and suitable for mechanized harvesting. In Kermanshah region, this research was done to study the interaction of planting density and planting date on the yield and yield components of Hashem variety of chickpea

(with the type of erect plant, resistant to ascochyta blight disease and suitable for mechanized harvesting) and to determine proper autumn planting date as well as to introduce the best density.

In their experiment on five varieties of non – irrigated chickpea Hashem ILC – 482 Arman, FLIP 93 – 93 and local Grit mass on 3 planting dates of March 18 (first planting date), January 5 (second planting date), and April 17 (third planting date) pezeskpur et al (2005) concluded that grain yield is higher on the first and second dates than the third one.

Having tested Hashem variety of chickpea on 3 planting dates of December 6, January 21 and March 6 with different planting densities (16, 32,48,64 plants) , Mohammadnejad et al (2005) concluded that the number of fertile pods on primary branch, grains per pod, the weight of 100 grains, and grain yield per unit area were affected by planting date. In examining the most appropriate plant density and planting date for a new variety of Hashem chickpea in Golestan province, Sabbaghpur (2002) studied 4 planting dates (October 23, November 6, November 23, December 6) on 4 plant densities (13.3 , 20, 29, 40 plants per m²) and stated that planting date of November 23 with 29 plants m⁻² produced the highest yield .

During their study on the trend of grain filling, yield, and yield components affected by density for 3 varieties of non – irrigated chickpea in Kermanshah climate, Shams et al (2005) concluded that variety and density had a significant effect on grain yield and that the highest grain yield was produced by variety 12 – 60 – 31 with 28 plants m⁻² . Pezeskpur et al. (2005) showed that the increasing of plant density from 54 plants m⁻² to 66 had a positive effect on yield increase.

During a research under heading of "Assessing the possibility of fall – or autumn planting of chickpea in Mashhad", Goldani et al (1997) concluded that among 4 planting dates of November 29, March 14, April 14 and May 22, the first planting date (November 29) had high one – plant yield due to the increase in duration of vegetative and germinative growing period increase in dry weight of organs, number of pods ($r = 95\%$) and number of grains ($r = 96\%$).

Singh et al (1988) reported that the number of grains per plant decreases as the plant density increases but the number of grains per unit area is higher in high densities than that in low ones.

Harper (1993) considers grain's weight as one of invariable components in grain yield which is rarely affected by planting density.

In a study they performed on chickpea varieties affected by different planting density, Shams et al (2005) argued that the number of sub-branches under the effect of density, the number of nodes on main stem, and harvest index all were affected by variety.

Materials and Methods

This research was carried out at Dorood – Faraman jihad agriculture service center (Kermanshah) - Iran (47°20 ' E, 34°20 ' N), with the climate of cold, semi – arid at the elevation of 1362 m in from sea level with annual mean precipitation of 435 mm in farming year of 2004 -2005 (table 1).

Table 1: Means of precipitation and temperature in dorood – faraman region in farming year of 2004 – 2005

Months	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr	May	June	July	Aug	Sept.
Precipitation (mm)	0	66.8	22.9	74.3	75	135.5	10.1	30.8	3.7	0	0	0
Temperature (C)	20.2	13	5.5	0.9	0.6	7.7	12.2	17.4	23.5	28.3	30.3	25.1

The experiment was done as a factorial one in the form of basic complete randomized design with 4 replications; row spacing factor included row spacings of 10 (T 1), 30 (T 2), 40 (T 3) cm at 3 levels, and planting date factor included February 6 (D1), November 22 (D2), December 6 (D3) at 3 levels. prior to the field preparation, soil sampling was done from several points of the field randomly from the depth of zero cm to 30 cm; and soil analysis was performed at the laboratory of Kermanshah water and soil research department (table 2).

Table 2: chemical and physical characteristics of the soil of experiment

Texture	Sand %	Clay %	Silt %	K ppm	P ppm	N %	C %	EC mmohs/cm	PH	Depth (cm)
Silty clay	9	37.7	52	300	8	0.12	1.1	0.49	7.4	0.30

On the basis of soil analysis, 40 kg urea fertilizer per ha were evenly spread on the field before planting. This experiment consisted of 9 treatments and 36 test plots each of which with the length of 4m and width of 0.8 -1.6 m. Each plot included 4 planting lines and a 0.5 m space was intended between any 2 neighboring plots. Replications were spaced apart 1 m from each other.

Hashem variety of chickpea with kaboli type is the first variety resistant to ascochyta blight disease; it has type of erect plant; it is suitable for mechanized harvesting and its planting was performed on intended dates. To avoid the loss from terrestrial fungi, seeds were disinfected by fungicide Mancozeb toxin at the ratio of 1.5:1000.

Perennial and annual weeds were weeded out in 2 turns manually during vegetative and generative periods. To control the loss from pod borer (*helicoverpa viriplace*) of chickpea, spraying was done with swin toxin by back pump sprayer at the ratio of 3 kg ha⁻¹. Ten plants from each plot were used to determine yield components and morphological properties of plant. Measurement properties included the number of pods per plant, the number of grains per plant, weight of 1000 grains, the number of sub – branches, the height of the first pod to soil surface, harvest index, and biological yield. Grain yield was taken and noted after eliminating 2 sidelines and 0.5 m from both ends of middle line.

RESULTS AND DISCUSSION

Results showed that there was a significant difference ($p=1\%$) between density and different planting dates in terms of plant height (Table 3).

Table 3: analysis variance of some agronomical characteristics

SOV	MS df	Plant height	Distance the first pod to soil surface	No. sub branch	No. pod per plant	No. seed per plant	100 weight seed	Seed yield	Biological yield	Harvest index
Rep	3	12.439	0.639	0.180	0.546	1.554	1.257	10.113	541.730	2.821
D	2	110.514**	68.830**	12.202**	56.504**	100.275**	1.837 ^{ns}	2819.498**	14176.481**	9.380 ^{ns}
T	2	38.935**	78.048**	9.970**	14.912**	25.710**	2.165 ^{ns}	12657.617**	44873.322**	8.347 ^{ns}
D x T	4	5.906 ^{ns}	0.930 ^{ns}	0.359 ^{ns}	4.397*	10.103**	5.911 ^{ns}	571.531*	2851.294**	2.247 ^{ns}
Error	24	5.573	0.463	0.136	5.573	0.905	5.328	202.252	402.961	7.983
C.V(%)	-	7.25	9.35	11.60	12.10	8.05	7.64	12.35	8.53	6.07

NS, *and**: Non-significant at $p < 0.05$, significant at 5% and 1% level of probability, respectively. D, T and D×T: sowing date, row spacing and sowing date × row spacing, respectively.

Among varied densities, row 20 cm space with the height of 35.63 cm had the highest height followed by row 30 and 40 spaces with the height of 32.24 and 29.57 cm, respectively (Table 4).

Table 4: comparison of means some agronomical characteristics

Treatments	Plant Height (cm)	Distance the first pod to soil surface (cm)	No. sub branch	No. pod per plant	No. seed per plant	100 weight seed (g)	Seed yield (kg/h)	Biological yield (kg/h)	Harvest index (%)
D1	35.63A	225/9A	4.258A	11.02A	15.04A	30.09A	1320A	2748A	45.65A
D2	32.44B	7.992B	3.33B	8.367B	11.00B	29.88A	1113B	21.82B	46.49A
D3	29.57C	4.600C	2.258C	6.725C	9.425C	30.64A	1021B	2127B	47.42A
T1	33.85A	9.800A	2.20C	7.492C	10.32C	29.72A	1421A	2857A	47.09A
T2	33.30A	7.317B	3.35B	8.942A	11.89B	30.39A	1242B	2528B	46.90A
T3	30.49B	4.700C	4.00A	6.683A	13.25A	30.50A	790C	1673C	45.56A
D1T1	35.67A	12.27A	3.225C	10.75AB	11.98C	31.13A	1721A	3495A	46.89A
D1T2	37.78A	9.100BC	4.150B	10.80AB	15.98A	29.82A	1415B	3014B	45.59A
D1T3	33.45BCD	6.300 DE	5.400A	11.52A	17.17A	29.31A	825E	1735E	44.47A
D2T1	34.40ABC	9.975B	2.125D	7.55D	11.50B	28.40A	1345BC	2620C	46.82A
D2T2	42.88BCD	8.375C	3.175C	8.20CD	9.85C	30.18A	1211BCD	2336CD	47.58A
D2T3	30.05DEF	5.625E	3.800B	9.35BC	11.65B	31.07A	783E	1591E	45.04A
D3T1	31.48CDE	7.150D	1.250E	4.175E	7.50D	29.63A	1198CD	2457CD	47.54A
D3T2	29.25EF	4.475F	2.725C	7.825CD	9.85C	31.17A	1099D	2234D	47.54A
D3T3	27.98F	2.175G	2.800C	8.175CD	10.93BC	31.12A	764E	1691E	47.17A

In each column with similar letter(s) are not significantly different at the 5% level of probability(DMRT) D, T and D×T: sowing date, row spacing and sowing date × row spacing, respectively.

Singh and Sharma (1988) reported that there was a positive correlation between plant height and the number of plants per unit area due to more competition for light. Comparing various planting dates showed that planting date of November 6 had the highest plant height because of the increase in duration of the period of plant growth. Rezvani and Sadeghi;(2005) had stated that plant height increases as the duration of growth period increases. In this connection, Rahemi and Soltani (2005);

Rezvani and Sadeghi (2005); and Goldani et al (2000) observed plant height increase with high densities and early planting dates in their experiments.

There was a significant difference ($p=1\%$) between density and various planting dates in terms of the distance of forming the first pod to soil surface. Among densities, row 20cm space and row 40cm space had respectively the highest (9.22 cm) and the lowest (4.6 cm) distances in terms of forming the first pod to soil surface. Among varied planting dates, November 6 and December 6 had respectively the highest and lowest distances of forming the first pod to soil surface.

According to Rahemi and Soltani (2005), the height of the first pod to soil surface increases with earlier planting dates as well as with the increase in density. There was a significant difference ($p=1\%$) between density and different planting dates in terms of the number of sub – branches, but not between interaction of density \times planting dates in this respect. The maximum number of sub – branches was related to row 40 cm space and the minimum of it was related to row 20 cm space (table 4).

The highest number of sub – branches (4.2) was also associated with planting dates of November 6 and the lowest one (2.2) was associated with December 6 increases. Goidani et al (2000); Jalilian et al (2005); Shams et al (2005); and Singh et al (1988) have examined the effects of density and planting date on the number of sub – branches and stated that the number of sub – branches decreases with the increase in density and with delayed planting. For the number of pods per plant, a statistically significant difference ($p=1\%$) was observed between density and different planting dates. Results showed that there was also a significant difference ($p=5\%$) in terms of the interaction of planting date \times density on the number of pods per plant. Row 40 cm spacing had the highest number of pods per plant (9.68) and the lowest (7.49) was related to row 20 cm spacing.

The highest and lowest number of plant per plant were respectively pertained to planting dates of November 6 and December 6; interaction of planting date \times density shows that planting date of November 6 \times row 20 cm spacing had the maximum number of pods per plant (11.52) and the minimum number (4.17) belonged to the planting date of December 6 \times row 40 cm spacing. The number of pods per chickpea plant is among the qualities highly affected by density and planting date which decreases with the increasing of density and delayed planting (pezeshkpur et al (2005); Goldani (1997) and Mohammadnejad and Soltani (2005). There was a significant difference ($p=1\%$) between density and various planting dates in terms of the number of grains per plant, so was for interaction of planting date \times density. For the number of grains per plant, planting date of November 6 had the highest value followed by planting dates of November 22 and December 6 (table 4). The number of grains per plant increases as the density decreases (Sing and Sharma, 1988). The treatment of planting date of November 6 in row 40 cm spacing had the highest number of grains per plant (17.17) and the lowest one (11.65) was related to the treatment of planting date of December 6 in row 20 cm spacing. Singh (1989) reported that the increase in density affects the number of grains per plant, causing it to decrease; but the number of grains per unit area is higher in high density than low ones. Many researchers believe that the increase in yield is due to the increase in the number of grains (Bagheri et

al; 1997), (Pezeshkpur; 2002), (Pezeshkpur and Marzai Heidri; 2002), (Hejazi; 1994) and (Koochaki and Banyanaval; 1998).

Planting date, density, and their mutual effect had no significant impact on the weight of 100 grains. Hernandez and Hill (1983) reported that plant density couldn't produce any significant difference to the weight of chickpea 100 grains. For grain yield, there was a significant difference ($p = 1\%$) between planting date and density; so was for interaction of planting date and density ($p = 5\%$). The highest and lowest yields were pertained respectively to planting dates of November 6 (1320 kg ha⁻¹) and December 6 (1021 kg ha⁻¹). Many researchers agree that early planting dates have higher yields (Pezeshkpur et al; 2005), (Rezvanimoghaddam and Sadeghi Samarjan, 2005), (Subbaghpur; 2002), (Ghollour and Soltani, 2005) and (Mohammadnejad and Soltani, 2005). Row 20 cm spacing had higher yield (1421 kg ha⁻¹) than 2 following row spacings, that is, 30 and 40 cm (1242 and 790 kg ha⁻¹, respectively).

In this relation, Singh et al (1988) declared that yield increased significantly with the increase in density of erect and tall genotypes from 33 to 50 plants m⁻² by decreasing the row spacing from 30 to 20cm (Pezeshkpur et al; 2005); (Shams et al, 2005); and (Ahmadian et al, 2005) believe that yield of chickpea increases with the increasing of density from 33 to 54 plants m⁻².

There was a significant difference ($p=1\%$) between varied dates and densities of planting and their interaction in terms of biological yield.

Among planting dates, date of November 6 with 2748 kg ha⁻¹ had the highest biological yield, and dates of November 22 and December 6 with 2182 and 2127 kg ha⁻¹, respectively, were placed at the second rank. Among different planting densities, row 20 cm spacing had the highest biological yield (2857 kg ha⁻¹) followed by row 30 and 40 cm spacings (2582 and 1673 kg ha⁻¹, respectively).

Among various treatments, the highest and lowest biological yields were respectively pertained to planting date of November 6 × row 20 cm spacing and planting date of December 6 × row 40 cm spacing.

Experimental results showed that although one – plant weight decreased with high densities, this weight reduction was made up by increasing the number of plant per unit area; and biological yield per unit area was higher in high densities than low ones.

In their experiment, Rastegar et al (1998) reported similar results in this reaction. According to the results of this research, planting date and density as well as their mutual effects had no significant impact on harvest index. Bagheri et al (1997) argued chickpea harvest index was obtained at a spectrum from 20 to 47%, having a positive, direct relation with grain yield.

Katiyar (1980) proclaimed in his report that harvest index decreases with high densities because of delayed formation of sub – branches which have high share of plant dry weight per unit area.

CONCLUSION

Results of present research showed that maximum yield of grain was observed with planting date of November 6 and related to row 20 cm spacing. Although the highest numbers of pods and grains per plant was associated with row 40 cm spacing. Higher numbers of pods and grains per unit area (at row 20 cm spacing) caused this density to have maximum yield so that results showed although the increase in density decreased one – plant yield components, this reduction was compensated by increasing the number of plants per unit area; therefore, the yield was made up. On the other hand, planting date of November 6 had the maximum distance of forming the first pod to soil surface, facilitating its mechanized harvest.

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CQ(04)

EXAMINING ELEMENTS THAT MOTIVATE SMEs TO COLLABORATE WITH UNIVERSITIES TO GAIN COMPETITIVE ADVANTAGE

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ABSTRACT

This paper intends to examine the elements that motivate small and medium size enterprises (SMEs) to collaborate with universities as a strategic move to compete in a globalized market. Empirical study indicated that Malaysian SMEs account for 99.2% of total establishments in key economic sectors, with its contribution of output of RM405 million (as cited in Aris, 2007). Despite many past studies conducted on the sources of competitive advantage, namely innovative product (Lee & Park, 2006; Nakata, Im, Park, & Ha, 2006), technology (Bull & Ferguson, 2006; Butler, Turner, Coates, Pike, & Price, 1993), competent human resource (Alam, Gale, Brown, & Kidd, 2008; Chien & Chen, 2008), and lead-time (Sheu & Wacker, 1997), there is lack of integrated framework especially in the context of University-Industry Collaboration (UIC). In this study, the researchers intend to test the integrated framework in Malaysia using Resource-Based Theory as the underpinning theoretical framework. Questionnaire has been sent to 672 SMEs listed on the Malaysia SME Business Directory 2008 by means of e-mail, fax and phone interview. Researchers also select and carry out 4 face-to-face interviews with the identified respondents that are listed in the online MOSTI TechnoFund listing. This paper intends to identify elements that motivate collaborative effort, hopes to share success stories and best practices to enhance more collaboration between SMEs and local universities in Malaysia in future.

Keywords: UIC, motivation, SME, competitive advantage, collaboration.

COLLABORATION AS STRATEGY FOR COMPETITIVE ADVANTAGE

In spite of globalisation, older competitive advantages erode and older opportunities fritter away and hence it is of much importance that individuals and organizations continually identify new opportunities and adapt to this rapidly changing world to maintain their competitiveness and on-going development (Krueger, 1996). Competitive advantage is the condition where firms are able to operate in an efficient and/or high quality manner than its competitor, which results in generating larger benefits by either being an expert in its market or being different from its competitor (Lewis, 2000). Furthermore, the firms' attributes and resources allow the firm to outperform other companies in the same industry or product market (Christensen & Fahey, 1984; Kay, 1994; Porter, 1980). As a result, industry has sought for collaboration with universities as a strategy to explore innovative opportunities to gain competitive advantage to survive and sustain in the competitive business environment.

Universities and industries collaborations increase strategically post-1970s as the national funding diminishes and difficulty for an organisation to encompass all resources and capability (Blumenthal, 1994; Nelkin, Nelson, & Kiernan, 1987; Prager & Omenn, 1980). Small and Medium Enterprises (SMEs) have also involved in collaborative efforts to enhance their competitiveness in marketplace. A study carried out by Owen-Smith, Riccaboni, Pammoll and Powell (2005) indicated that collaborations with universities mainly contributed by small and medium size companies in United States. Another

study indicated that Japanese Small and Medium Enterprises (SMEs) realise the importance to be different from its competitors by continuous embarking on new innovations and capability building (Motohashi, 2007).

Empirical study conducted by the Department of Statistics Malaysia indicated that SMEs in Malaysia account for 99.2 percent or 518,996 of total establishments in the three (3) key economic sectors, namely manufacturing, services and agriculture while large establishments numbering 4,136 accounted for the remaining 0.8 percent (Aris, 2007). SMEs predominate in the services sector, accounting for 86.5 percent of the total establishments. Besides that, manufacturing and agriculture sectors are only 7.3 percent and 6.2 percent respectively.

Table: Output and value added by sector, 2003

	Output			Value added		
	(RM billion)			(RM billion)		
Sector	Total	SMEs	%	Total	SMEs	%
Manufacturing	549.1	191.6	34.9	128.1	47.5	37.1
Services	361.7	204.9	56.7	187.6	102.7	54.7
Agriculture	20.6	8.7	42.1	9.1	3.6	39.7
Total	931.4	405.2	43.5	324.7	153.7	47.3

Source: Aris, 2007

SMEs in the Malaysian economy demonstrated by their contribution to output and value added, RM405 million and RM154 million respectively in the year 2003 (see Table 1). In terms of share contribution, SMEs accounted for 43.5 percent of total output and 47.3 percent of value added (Aris, 2007). Malaysian SMEs are generally defined into two broad categories as per Small and Medium Industries Development Corporation (SMIDEC) of Malaysia:

1. Manufacturing, Manufacturing-Related Services and Agro-Based Industries
2. Services, Primary Agriculture and information & Communication Technology (ICT)

According to SMIDEC (2008), SMEs in the manufacturing or manufacturing related services and agro-based industries are enterprises with full-time employees not more than 150 or with annual sales turnover not exceeding RM25 million. In contrast, SMEs in the services, primary agriculture and information, communication and technology (ICT) sectors are enterprises with full-time employee not exceeding 50 or with annual sales turnover not exceeding RM5 million. Despite the huge dominant of SMEs in marketplace, Malaysian SMEs' collaboration with universities as a strategy to gain competitive advantage is at the infant stage. This paper outlines the elements that motivate SMEs to collaborate with universities as a strategic move to compete in a globalized market.

MOTIVATIONS OF STRATEGIC COLLABORATION

Motivations of companies to collaborate with universities are dependant on the availability and accessibility to sources of competitive advantage namely innovative products, new emerging

technology, competent human resources and ability to reduce the lead time to market, entrepreneurial apprehension of innovation and governmental support (refer to Figure 1).

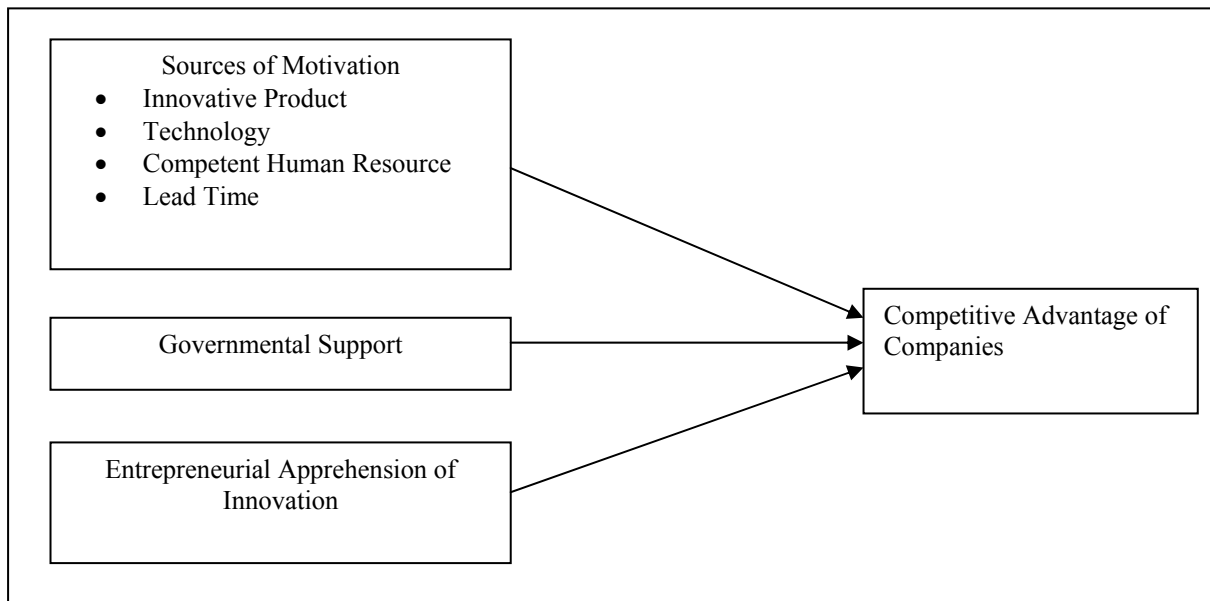


Figure 1: Elements that motivate SMEs to collaborate with universities to gain competitive advantage

The Research-Based Theory is used as the underpinning theory in development of this conceptual framework (Hoskinsson, Hitt, Wan, & Yiu, 1999; Kor & Mahoney, 2004; Rugman & Verbeke, 2002; Wernerfelt, 1984). Tangible resources include innovative products and governmental financial support (Grant, 1991) while intangible resources include new emerging technology, competent human resources/ expertise and entrepreneurial apprehension of innovation/ skills (Atzei, Groepper, & Novara, 1999; Grant, 1991; Hall, 1993).

METHODOLOGY

Questionnaire has been sent to 1,082 SMEs listed on the Malaysia SME Business Directory 2008. Researchers call, email or fax the questionnaire to the study respondents. Researchers also select and carry out 4 face-to-face interviews with the identified respondents that are listed in the online MOSTI TechnoFund listing. The study respondents are of leadership role which are the management personnel of the company. The project leader and the management are of the same personnel due to its small and medium size setup and they are the decision maker of the company. The respondents voluntarily participated in the study.

Table 2: Summary of mode of questionnaires distribution

	Sent/ Called	%	Active/ Contactable	%	Bounced/ Not Contactable	%	Responded	%
E-mail	704	65%	467	66%	237	34%	27	6%
Fax	313	29%	188	60%	125	40%	6	3%
Phone	65	6%	17	26%	48	74%	10	59%
Total	1,082	100%	672	62%	410	38%	43	6%

Source: Authors, 2008

Table 2 shows the summary of the mode of questionnaires distributions. Despite the response rate of 6% from the active/ contactable database, there are only 4 respondents that indicate that they have experience in collaborative efforts with universities (refer to Figure 2 and Table 3). Respondents that indicate no collaboration experience currently or in the past are not analysed because the results will not reflect the reality of the research subject.

Table 3: Summary of SMEs collaborative experience with universities in Malaysia

Collaborative Experience with Universities	No of Respondents
Have Collaboration Experience	4
No Collaboration Experience	39
Total	43

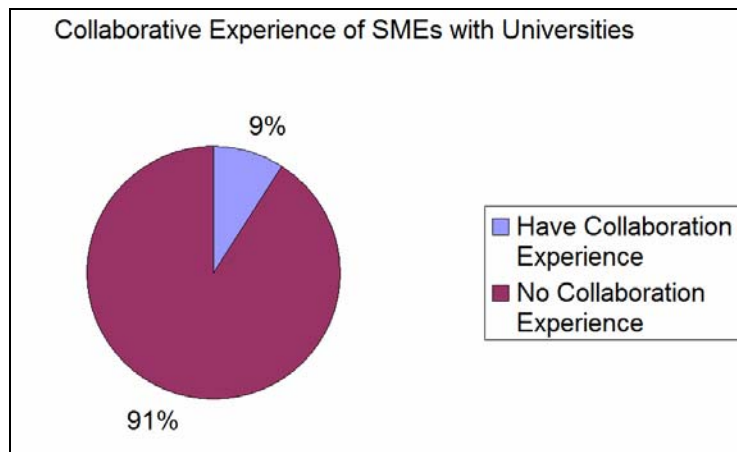


Figure 2: Collaborative experience of SMEs with universities

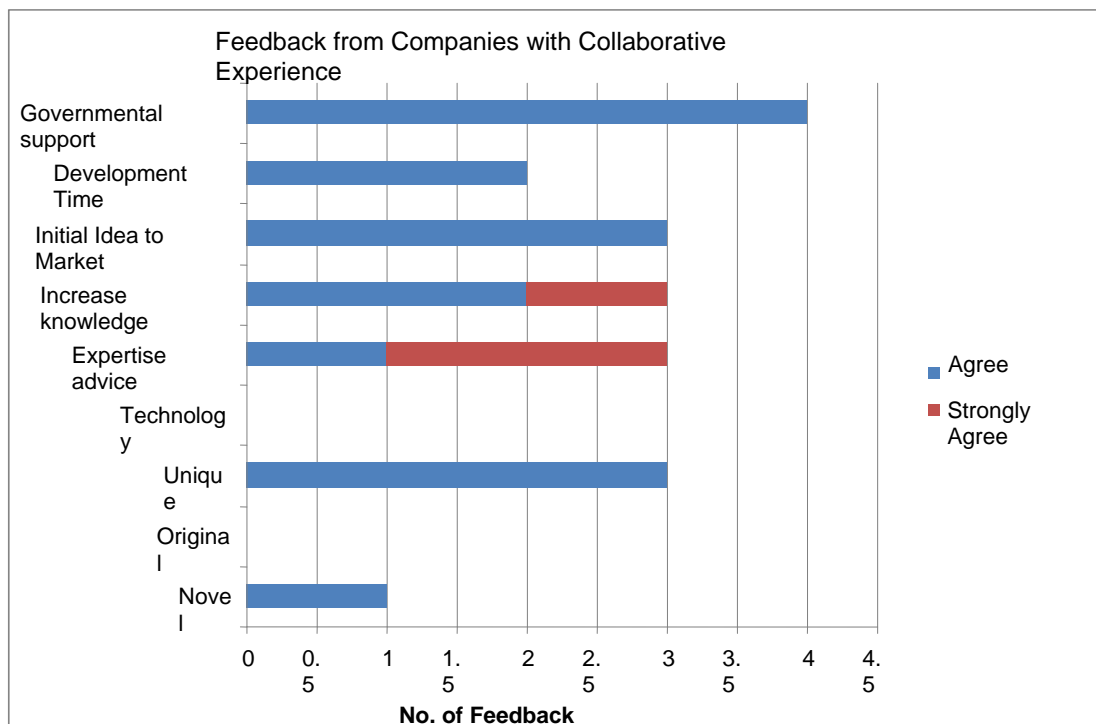


Figure 3: Survey results from companies with collaborative experience

The questionnaires received are analysed using Excel instead of SPSS because SPSS software requires at least 30 questionnaire results to enable running of the analysis accurately. The interviews are audio-taped, transcribed and analysed using thematic coding (Lincoln & Guba, 1985; Miles & Huberman, 1994; Yin, 2003). Tables and figures are later designed to allow for descriptive and comparative manner. Figure 3 shows the cumulative of the feedback received from the 4 questionnaires collected from respondents with collaborative experience with universities.

Table 4: Comparison of the elements that motivate collaborative efforts from interviews conducted

	R1	R2	R3	R4
Innovative Product	Indirectly but not specific	Indirectly but not specific	Disagree	Indirectly but not specific
Technology	Indirectly but not specific	Disagree	Disagree	Indirectly but not specific
Competent Human Resource	Agree	Agree with reservation	Agree with reservation	Agree with reservation
Lead Time	Indirectly but not specific	Agree	Indirectly but not specific	Indirectly but not specific
Governmental Support	Indirectly but not specific	Agree with reservation	Agree	Agree
Entrepreneurial Apprehension Of Innovation	Agree	Agree	Agree	Agree

Source: Authors, 2008

Table 4 shows the comparison of the interviews data analysed on the elements that motivate SMEs to collaborate with universities to gain competitive advantage from the 4 respondents' interviews conducted (R1 to R4). The three motivational elements will be the underpinning discussion for the presentation of the following results.

SOURCES OF COMPETITIVE ADVANTAGE

Many past studies were conducted on the sources of competitive advantage, namely innovative product (Lee & Park, 2006; Nakata et al., 2006), technology (Bull & Ferguson, 2006; Butler et al., 1993), competent human resource (Alam et al., 2008; Chien & Chen, 2008), and lead-time to market (Sheu & Wacker, 1997). In this study, the perceived of importance of the sources and its availability within universities are analysed in the following paragraphs.

Innovative product

Innovative product is often perceived as a new, novel or unique product that comes from an original idea with ability to attain superiority and be cutting-edge in product innovation (Henard & Szymanski, 2001; Prokesh, 1993; Song & Montoya-Weiss, 2001). A study has shown that introduction of innovative products ahead of competitors can assist a firm to be at an advantageous position in the market (McAdam & McClelland, 2002). Arguably, it is difficult for small companies to rely solely on their internal resources to develop new products that enable them to remain competitive in the market (Reed, Walsh, & Grice, 2002; Trumbach, Payne, & Kongthon, 2006). As a result, George, Zahra and

Wood (2002) recommended that SMEs can strengthen their competitive position and financial performance by collaborating with universities to stimulate development of innovative products.

Survey results showed that a respondent agrees that innovative products developed by the universities are novel while 3 respondents agree that products developed by universities are unique. However, 4 respondents state that the innovative idea given by the scientist is not original.

In contrast, R3 indicates that research outcomes from universities are not cutting-edge and forefront in nature from interview conducted. Respondent further adds on by commenting it is difficult for innovative products to be introduced into local market and lack of support from government in boosting local innovative products from lab to market.

New and emerging technology

Innovation of new and emerging technologies are the key factors supporting industrial competitiveness (Cooper & Park, 2008). These technologies have to be leading and cutting-edge. A study carried out by Butler, Turner, Coates and Price (1993) has proven that new technology that successfully implemented into firms can lead to the realization of competitive advantage. An empirical study found that SMEs, due to their absolute size and resource limitations have to acquire or transfer of technologies through collaboration with universities (Narula, 2004).

All survey respondents are in the opinion that universities do not have the new technology which can motivate them to collaborate. Interviews result is consistent with the survey result where respondents comment that universities in Malaysia neither possess nor develop new, emerging, leading and cutting-edge technology. R2 and R3 further add on by indicating technologies in university are not high-tech and they acquired the new technology from the overseas.

Competent human resource

Past researchers commented that the attributes of competence of an individual inclusive of knowledge, high technical skills, abilities, experience, and personality that employee has or acquires will contribute to an organizational success (Kennedy & Dresser, 2005). According to Luthans and Youssef (2004), there is growing evidence that an organization's success weights highly on human resource which has become an indispensable asset that gives the best returns as an investment for attaining competitive advantage. A study has shown that universities are known as suppliers for talent, prime knowledge and research for industries (Bloedon, Robert, Stokes, & Deborah, 1994). SMEs highly rely on universities as the source for competent manpower, training and life-long learning of its workforce to allow the companies to compete in marketplace.

Interviews and survey reveal that competent human resource is the most salient element in motivating SMEs to collaborate with university to gain competitive advantage in Malaysia. 75% of respondents agree that collaborating with universities to get expertise advice will increase the competitive advantage of company. Furthermore, 3 respondents agree that by collaborating with universities will increase their knowledge.

In the interviews of R1, R2, R3 and R4, respondents indicate that expertise of professor and recruitment of competent manpower are the key elements that motivate them to collaborate with university. R1 supports the above mentioned and further comments that in his situation, it is costly for the company to hire an expertise from overseas. Such limitation of resources results in SMEs choosing to collaborate with universities for its human and infrastructure resources (e.g. expertise consultancy, laboratory facilities) in order to carry out R&D at competitive cost as compared to in-house facilities. Besides expertise, SMEs are also looking for the professor which has good team to assist the company in the specific research area (R1). R2, R3 and R4 advocate that professors have the knowledge in the specific expertise area but they are more theoretical and do not understand the market and customers' needs.

Lead time to market

Lead time, also known as development time is the length of the time between initial ideas generation until new product is ready for introduction into the market which transpire that the shorter the development time, the higher the competitive value of the new product (Tersine & Hummingbird, 1995). Empirical studies have shown that reducing lead time enhances competitive advantage of a firm (Berry, Tallon, & Boe, 1992; Maskell, 1991; McDermott & Stock, 1994). In many occasions, the length of lead time has been frequently used to measure firms' ability to gain competitive advantage (Sheu, Kansas, & Wacker, 1997).

2 survey respondents agree that collaboration has shorten the product development time and the length of time between initial idea generations until new product is ready for introduction to the market (refer to Figure 3). However, R2 asserts that university's research and development time cannot be too lengthy as time factor to market the product as compared to its competitor is crucial. Other respondents do not specify in interviews that lead time will motivate company to gain competitive advantage.

GOVERNMENTAL SUPPORT

Previous studies have discussed that financial deficiencies are the major growth constraints of SMEs (Beck, Demirgüç, -Kunt, & Maksimovic, 2005; Mambula, 2002). A study carried out by Chang and Chen (2004), proved that national subsidies such as interest-free loans and grants had a stimulating impact on SMEs performance towards R&D contribution to national innovation growth. The results of the study showed that SMEs with national support have more successful market introduction and sales of new products (Chang & Chen, 2004). The Malaysian Government is in its effort enhancing the global competitiveness and R&D culture among Malaysian enterprises. As such, governmental funds namely Techno-Fund from Ministry of Science, Technology and Innovation (MOSTI) has been introduced and aiming at foster greater degree of collaboration between universities and industries (MOSTI, 2007).

Governmental support is another critical element to motivate SMEs collaboration with universities. All survey respondents advocate that ability to access to governmental funding through collaboration with universities is an important element to boost and encourage involvement of SMEs in R&D collaborative efforts.

Through interviews, R3 and R4 state that without governmental support such as TechnoFund from MOSTI, companies will not consider collaborating with universities. TechnoFund requires collaboration between companies and universities to boost national innovation and to assist SMEs in providing resources to embark in R&D efforts. In contrast, R2 asserts that without the governmental support, the collaboration with university will still flourish due to the close relationship with the university. Respondent further mentions that funding from the government acts as an enabler to allow the company to diversify the product streams, to embark on new innovation and increase in capacity building.

ENTREPRENEURIAL APPREHENSION OF INNOVATION

Entrepreneurs are critical of self-renewing and possess a resilient and self-efficacy attitude towards realization of an entrepreneurial opportunity (Bandura, 1986; Shapero, 1981). Entrepreneurs have strong personal motivation to be innovative in order to improve efficiency, productivity and performance (Bagchi-Sen, 2001). In a study carried out by Drakopoulou-Dodd and Anderson (2007) has shown that entrepreneurship is purely an individualistic practice, which captures the manifestation of change derived from socio-economic but entrepreneurial networks will contribute to facilitation of opportunity acknowledgment, resource acquisition and the development of regional entrepreneurial environment.

R2 and R3 state that entrepreneurship plays an important role in the collaboration where entrepreneurs that have specific knowledge or background of the research area are more willing to collaborate with universities. R1 and R4 also agree with the aforementioned. R1 further comments that entrepreneur will normally lead the collaborative effort and will be more active in participating in the R&D process as compared to a multinational company (MNC) Chief Operating Officer (CEO). All the respondents either have a doctoral academic degree (R3) and/ or have done some research as part of the business' needs (R1, R2, R3 and R4). SME entrepreneurs also realise the importance of identifying the niche market and embarking on innovative products to allow them to compete competitively in marketplace in terms of differentiation marketing strategy as compared to the MNCs.

CONCLUSION AND RECOMMENDATIONS

This paper has outlined the framework and results from both questionnaires and face-to-face interviews on the collaborative experience of the SMEs in collaborating with universities to gain competitive advantage. Few respondents have commented that even though the companies do not collaborate with universities in R&D process currently, they are willing to consider collaboration with universities. However, respondents mention that they are unaware of the proper channel of approach with the perception of bureaucracies in institutions as deterrence. General comments from industry

advocate that universities in Malaysia do not understand the market needs and the scientists are not practical and not fore-front in innovation as compared to overseas even though Malaysia has competent people who are proficient of taking up demanding research. Many good researchers end up in administrative position which is a lost of asset to the nation as a whole.

Collaboration between SMEs and universities is important in developing and transferring of new technology and information about new knowledge as well as the creation of new products and goods. Moreover, it can improve a firm's reputation and increase its access to key sources of innovation (George et al., 2002). Both SME and university may benefit from collaboration on "win-win" basis if the right models are introduced with the intervention of government bodies as well as the entrepreneurs themselves. This transformation will require adaptation from both academic and entrepreneurs.

In order to create a successful collaboration of SME-university, participation of decision maker in negotiation process is crucial (level talk) as commented by interview respondents. Other factors are mutual trust, rewards and benefits, commitment of top management and communication between both parties with transparency and openness (Yee, Abas, & Chong, 2008). Both universities and industry need to realize that successful and sustainable collaboration is grounded on relational interaction of individuals and not organizations or institutions.

As a conclusion, SMEs in Malaysia are moving on slowly towards this new phenomenon with globalize competition. Through SMEs collaborative effort with universities and the support of governmental funding, added with the push of motivation, the real understanding and passion towards research work, no doubt there is room for growth and improvements.

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MORAL PHILOSOPHIES UNDERLYING FUTURE MARKETERS' ETHICAL JUDGMENT

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ABSTRACT

The increasing number of unethical behavior resulted from unethical judgment has spurred the need for studies on ethics. Although this topic has been of interest to many scholars and practitioners abroad, local studies continue to remain scarce. There are many established ethical judgment models being proposed that include varieties of variables, which are assumed to be the factors that influence the ethical judgment. Hence, an understanding of these factors is important in cultivating ethical judgments. This paper attempts to examine the influence of two moral philosophies namely deontology and teleology as being proposed by Hunt & Vitell General Theory of Marketing Ethics (1993) on future marketers' ethical judgment. Deontology evaluation refers to the judgment formed based on a set of predetermined rules and guidelines. On the other hand, teleology evaluation refers to the judgment formed after considering the consequences of the actions to the stakeholders. A total of 980 sets of questionnaires were sent to marketing students of Public Universities in East Coast of Malaysia. Returned questionnaires received were 250 while 209 were usable. By using a structural analysis of AMOS 6, the study found that there were significant relationships between these two philosophies namely deontology and teleology on future marketer's ethical judgment. Hence, the findings of this study will be useful for the private and public sectors in their effort to improve the ethicality which can uphold the credibility and viability of the marketing profession.

Keywords: *deontology, teleology, marketer, ethical judgment*

INTRODUCTION

During the last two decades, phenomenal growth in the globalization of business has increased conflicts faced by multinational firms such as a giant food producer, Nestle was facing controversy in their infant food formula while the largest fast food company, McDonalds was blamed for exploitation of workers and human health. The society expects the company to act morally, at least in certain instances within certain limits. However these controversies faced by the company were due to human actions and judgments and it can be evaluated from ethical point of view. Human run the business, in particular marketers, they are on front lines and often in the public eye. Therefore, they need to be careful about the morality of their actions and judgment.

According to Lazniack & Murphy (1991), an unethical judgment in marketing will be highly visible and to the worst extent it can be a public embarrassment. The results from Gallop poll carried out in the US in 1983 indicated that salespeople and advertising practitioners were ranked at the bottom in terms of the honesty and ethical standards as compared to other occupations (Lazniack & Murphy, 1991). This has shown, public were skeptical with marketers actions and judgments. They may accuse marketers do not telling the truth of their product, sell product to unaffordable customers, force selling thus are not ethical in their judgment. As such, business has a moral dimension, which results in ethical

dilemmas for individual marketers. Meaning that marketers need help with ethical judgments and these have spurred research interest in marketing ethics, at both the conceptual and empirical levels on examining factors that underlying ethical judgment.

Moral philosophies are factors underlying ethical judgments, which consist of two philosophies namely deontology and teleology evaluation (Hunt & Vitell, 1993; 1986). Deontology evaluation refers to the judgment formed based on a set of predetermined rules and guidelines. On the other hand, teleology evaluation refers to the judgment formed after considering the consequences of the actions to the stakeholders. Thus, both of these evaluations are essential factors of ethical judgment. Hence, marketers must ensure that their judgments are in accordance to rules and regulations of deontology philosophy as well as for the benefits of majority stakeholders of teleology philosophy.

As at to date, many studies in the field of marketing have been conducted to investigate the influence of two variables namely deontology and teleology evaluations in ethical judgment (Donoho & Herche, 2006; Cherry & Fraedrick, 2002; Marta, 1999; Rallapali, Vitell & Barnes, 1998; Mayo & Marks, 1990). However, these studies were carried out under the US context, not under our local context. Apparently, the US and Malaysians business culture are different particularly in dealing with consumers and business, therefore the result could not be similar. Hence, this study attempts to fill this gap by examining the influence of two moral philosophies of deontology and teleology in the process of forming ethical judgment by Malaysian future marketers.

As such, this study addresses the following questions: What is the level of future marketer's deontology evaluation? What is the level of future marketer's teleology evaluation? What is the level of marketer's ethical judgment? Does deontology influence ethical judgment? Does teleology influence ethical judgment? Does higher in deontology evaluation as opposed to teleology evaluation lead to ethical judgment?

In pursuit of these questions, this paper will review the literature on moral and ethical theories and previous empirical studies pertaining to moral philosophy. Then the proposed model with the hypotheses will be developed. Next, the findings are highlighted follows with a discussion of implications, limitations and suggestion for future research and conclusion.

LITERATURE REVIEW

The literature will be reviewed in two sections. The first section will discuss the moral and ethics theories, while the second section will discuss on previous empirical studies with regard to the variables of the interest.

Moral and Ethical Theories

Hunt & Vitell Theory of Ethics (1986, 1993), had proposed that an individual ethical judgment will be influenced by two moral philosophies namely deontology and teleology evaluation. The theory also stated that it is important for a person to evaluate on the right moral philosophies of deontology and teleology in forming ethical judgment. According to Hunt & Vitell (1986, 1993), most people in

most ethical judgment situations, would rely on both deontological and teleological evaluations. However people will differ in their ethical judgment (EJ) due to differences in deontological evaluation (DE) and teleological evaluation (TE). Therefore ethical judgment (EJ) made by individuals is a result of their DE and TE. $EJ = f [DE, TE]$ (Marta, 1999)

Deontology

Deontology refers to a set of predetermined rules and guidelines (Singhapakdi & Vitell, 1991). Deontology evaluation refers to a person who analyses an act by referring to a set of predetermined rules and guidelines that cannot be gathered from its consequences (Macdonald & Back-Dudley, 1994). The deontology philosophy emphasizes on the individuals' specific actions or behaviors and presents normative ethics as a system of rules. This term emerges from the Greek *deon*, referring to necessary or obligatory. Deontological is a theory of duty or moral obligation, which focuses on the inherent righteousness of a behavior of an individual, not on society (Freeman et al, 2004; Robin & Reidenbach, 1987). It also refers as a non-consequential approach.

Deontologist believes that a behavior is right if the features of the act itself are right, irrespective of the consequences of the act brings about (Jung, 2002). In other words, individuals shouldn't break the rules simply because it is wrong to break them. Marta (1999) stated that deontology has been established in western moral philosophy, through the Judeo-Christian tradition, besides the influence of prominent Greek moral philosophers such as Socrates and Plato, and the very influential German philosopher, Immanuel Kant (1724-1804).

Deontology states that the rightness of an act arises from the premise that certain actions are correct because they stem from established rules, fundamental obligations or duties (Ashmore 1987; Reidenbach & Robin, 1990; Laciak & Murphy, 1993; Cherry & Fraedrich, 2000). However, individuals may possess different deontology evaluations, due to differences in perceiving importance of particular norms, applying rules for resolving conflicts and interpreting the rules for applicability of norms.

Teleology

Teleology is a philosophy that deals with the moral worth of behavior determined totally by the consequences of an action (Ferrel & Gresham, 1985). Teleology evaluation refers to a person who analyzes an act by seeking the best set of consequences from an act, law, rules, policy, rational and justification where the rightness and wrongness is judged with respect to net goodness or badness of the consequences it effectuates that give greatest good for greatest number (Tores, 2001).

Teleology is a Greek term *telos*, which emphasizes on the consequence; an action is considered right or wrong depending on the intended outcomes. It also refers as a consequential approach. A philosophical teleology theory of ethics evaluates actions in terms of their contribution and consequences, rather than their conforming to rules or commandment. It focuses on the results of the actions, for instance, happiness, friendship, economic outcome and the tradition notion of the common good (Finnis, 1998). The most common application of teleology is in the theory of utilitarianism and

egoism. The utilitarianism states that an action is considered right from an ethical point of view if the total sum of goodness produced by that act is greater than the total sum of badness produced by any other act the agent could have performed in its place (Frankena, 1963; Velasquez, 1992). Whilst, egoism stresses that the individuals should make ethical judgment based on the maximum the good judgment can provide for themselves (Marta, 1999).

Teleologist believes that individuals should assess the relative merits of all consequences of a particular behavior, where the rightness or wrongness of a behavior is judged with respect to the net goodness or badness of the consequences it effectuates, not on the features of that behavior. Breaking rules could be good in some situations and bad in others, as judgment on morality is established by consequences not by motive (Marta, 1999). Individuals may also exhibit differences in their teleological evaluation that could be due to the following reasons: different in perceiving positive consequences for particular stakeholders, different in perceiving negative consequences for particular stakeholders, different in assigning importance weights to particular stakeholders and different probabilities of positive and negative consequences given to particular stakeholders.

The fundamental difference between the two theories lies that deontological theory focuses on the ethical character of an act, not the consequences. An act is considered unethical if it violates rules and procedures, irrespective of producing good consequences. Teleology, on the other hand, stresses on the consequences, where unethical action is sometimes considered good if it provides the greatest good over evil, regardless of rules compliance.

Ethical Judgment

Ethical judgment is a process, by which a person identifies ethical problem, considers alternatives and chooses an alternative that best solves the problem to attain the most beneficial outcome (Fang, 2006). The judgment is made by taking all the consideration of what is morally right and wrong in the context of socially acceptable standards (Guralink, 1982).

Ethical judgment should be made by means of ethical evaluation and justification, which flow from the philosophical moral theory of deontology and teleology (Hunt & Vitell, 1993; Ferrel et al., 1989). These two moral philosophies are cognitive style applied by an individual as an evaluation, after they perceive an ethical issue before making ethical judgment. Study of moral philosophy can serve as a basis for understanding the process of ethical judgment. Geisler (1990) supports, in which he stated that all ethical systems can be evaluated in two ways, one is deontological and the other is teleological. Kohlberg also acknowledged the existence of deontology and teleology in ethical judgment. He suggested that deontological principles reflected the highest stage in the six of cognitive moral development, whereas teleological principles are in the lesser stages (Kohlberg, 1984).

Empirical studies of deontology and teleology philosophy and ethical judgment

Several studies have been carried in the marketing ethics to investigate the influence of these two moral philosophies on ethical judgment (Cherry & Fraedrich, 2000; Marta, 1999; Donoho et al., 1999; Arnett, 1998; Rallapalli, Vitell & Barnes, 1998). The empirical studies conducted these researches

indicated mixed findings. Several studies (Cherry & Fraedrich, 2000; Donoho et al., 1999; Marta, 1999; Rallapalli, Vitell & Barnes, 1998) indicated that individuals tend to apply both of the philosophies (deontology and teleology) in forming ethical judgments. The studies also revealed the degree of deontology evaluation was greater than the teleology evaluation. However, one study (Arnett, 1998) found that there was no relationship between deontology and teleology applications and ethical judgment.

Cherry & Fraedrich (2000) conducted a research in ethical judgment and adopted Hunt & Vitell (1986) model. They investigated the influence of perceived risk to the non-consequential (deontology) and consequential (teleology), ethical judgment and ethical intention among sales managers. The results indicated that both of the moral philosophies were significantly influenced the ethical judgment. The results also revealed that deontology applied by respondents contributed more to ethical judgments than teleology.

By using path analysis and core relationships, Donoho et al., (1999) replicated Mayo & Marks (1990) studies based on Hunt Vitell's theory of ethics (1986). They conducted a survey over 1500 students from seven universities in the US, Canada, Netherlands and Australia. The findings also showed that the deontology and teleology influenced the ethical judgment. Furthermore the study revealed that future managers or the universities' students applied more deontological than teleological evaluation in forming ethical judgment.

The results were consistent with another empirical study by Marta (1999) which investigated significant factors of moral reasoning and their influence on ethical judgment and intentions. The study was conducted among American Marketing Association (AMA) practitioner members. The results also indicated that the marketers applied both deontology and teleology evaluation. Similarly with the previous research, she discovered the marketers tend to rely more on deontology evaluation in forming ethical judgments.

Another research carried by Rallapalli et. al, (1998) examined the influence deontology and teleology evaluations on marketers' ethical judgment. The results supported the Hunt & Vitell (1986) theory, that marketers' ethical judgment and intentions were jointly influenced by their deontological and teleological norms. However the result was inconsistent with the study conducted by Arnett (1998) on the influence of cognitive moral development and cognitive style on the strategic and ethical judgment. He found that there was no relationship between deontology and teleology philosophies of an individual with the strategic and ethical judgment.

HYPOTHESES AND THEORETICAL MODEL

Based on the result of a few previous empirical studies and the Hunt and Vitell (1986, 1993) theory of ethics, it is predicted that the moral philosophies of deontology and teleology. As such, this study will examine the relationship between two exogenous variables; deontology and teleology with the endogenous variable namely ethical judgment.

Thus, the following theoretical model and hypotheses are formulated based on the relationships proposed in the theoretical works and findings from earlier studies.

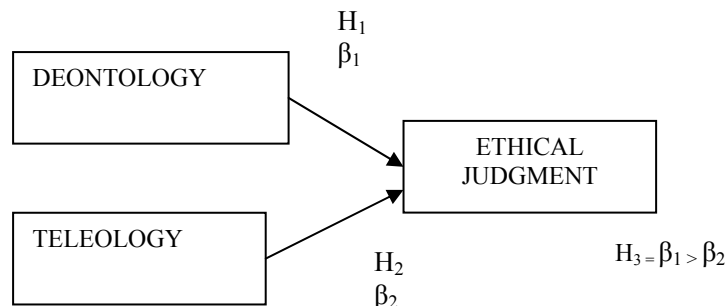


Figure1. Theoretical model

H1: Deontology evaluation has significantly influenced the ethical judgment.

H2: Teleology evaluation has significantly influenced the ethical judgment.

H3: Marketers tends to rely more on deontology evaluation as opposed to teleology evaluation in forming ethical judgment.

METHODOLOGY AND PROCEDURES

The study of ethical judgment in social science research in particular the public accounting, presents significant challenges. Gaining access to respondents is often difficult due to time constraint and when there are opportunities, they are under less than ideal conditions. Thus, scenarios are widely used, specifically in the accounting ethics research to overcome this limitation. Use of scenarios have been tested in prior researches and offers several advantages, including the ability to access cognitive thinking over a wide variety of respondents and fields and to assess the relevance of issues within a research scope. However there is drawback from the used of scenarios in which the respondents may not be familiar with the selected scenarios. Therefore, careful selection of the scenarios is important for the research design, to ensure that the scenarios are common unethical practices faced by the respondents.

Ethical judgment, deontology and teleology philosophies are all measured based on the respondents respond to the ethical scenarios based on the three ethical scenarios. The method of measurement of these three variables is similar to the study carried by Marta (1999) of unethical practices faced by the marketer.

Exogenous Variable - Deontology and Teleology Moral Philosophies

This study operationalized deontology and teleology in the same manner with the study by Marta (1999) but with a few modifications to fit to auditors' context. Hunt (1990) believes that deontology and teleology are processes. The measurement, therefore, should be inferred from measures of deontological and teleological norms applied to each judgment (Hunt 1990, p.175). The measurement involves of how to determine to what extent respondents evaluate based on deontology as opposed to teleology. This study will measure the effect of the deontology and teleology, which together account for usage of each philosophy in forming ethical judgment.

The current operationalized attempts to deal with the evaluations as a process and to weigh them against each other. Respondents read the scenarios and then respond as to whether they perceive an ethical problem. If their answer to the latter question indicated that they think the action was unethical to any extent at all, they then evaluate six statements, three of which represent applicable deontological norms and the other three represent the teleological norms. The respondents are instructed to rank the 6 statements, by giving the highest score of 100 to the statement that they think provide the most important reason. Next, they are required to allocate the score to the five remaining statements of less than 100 in reducing values depending on the importance of the reasons to the each particular statement. The score of each item will be added to get the mean value of the usage of deontology and teleology.

Endogenous Variable - Ethical Judgment

This study also measured ethical judgment through one item based on the same scenarios that measured deontology and teleology. The respondents were asked to state their degree of agreement with the action described in the scenarios (Please rate the auditor's action as to how ethical you believe it was), measured on a nine-point Likert-type scale (1 = very ethical, 9 = very unethical). Each score from three vignettes will be added and divided to get the mean value. This operationalization is similar with previous studies in the measurement of this variable (e.g., Mayo & Marks, 1990; Hunt & Vasquez-Parraga, 1993; Singhapakdi & Vitell, 1993, Singhapakdi et al. 1994, Marta, 1999).

Sample

The study examines the future marketers' ethical judgment. Therefore, the population that the findings are generalized consists of business students from public universities in East Coast of Malaysia. About 980 questionnaires were distributed and 250 responded with the response rate of 25 %. However, only 209 were usable for the analysis. The unit of analysis of this study is individual which are represented by the public universities' business students.

RESULTS AND DISCUSSION

The results and discussion will be analyzed in four sections. The first section will present the profile of respondents, result and analysis result in term of statistical and descriptive analysis using SPSS 14.0. The third section then will present the result of structural analysis by employing AMOS 6.0 program. Finally the fourth section will discuss on the hypotheses.

Profile of Respondents

The profile of respondents with the variable of interest requested in the questionnaire were gender, race, religion, level of education, type of qualification, position, duration as MIA member and as an auditor, working tenure. The respondents were also being asked whether they had ever encountered any unethical situation. All information was presented in actual figures and percentages to facilitate interpretation.

The results indicated the following information; more than half or about 68 or 67.5 % of the respondents were female. The respondents were represented by three major racial compositions namely Malay, Chinese and Indian which consisted of 50.7 %, 47.8 % and 1.4 % respectively. Mostly all Malays were Muslim and Indians were Hinduism which was represented by 50.7 % and 1.4 % respectively. However, the Chinese were represented by two religious namely Buddhism and Christianity with the majority were Buddhism and a small number were Christianity represented by 44.1 % and 3.8 % respectively.

All of the respondents under a business program with about more than half of the respondents were under a degree program (56.9 %), followed by professional (25 %), diploma (11.5 %), master (3.3 %) and Phd (3.3 %). Based on the educations, it indicated that all the respondents were enabled to answer the question.

Finally, about 30.1 % of the respondents had encountered unethical situations, in which it indicated that unethical situation were really practiced and encountered by future marketers..

Statistical Analysis

Firstly, the study analyzed data reliability and principal component factor analysis using SPSS 14.0. The reliability analysis of the variables indicated the cronbach's alpha for deontology, teleology and ethical judgment were 0.652, 0.852 and 0.666 respectively, in which it had exceeded the recommended value of 0.6 (Nunally, 1978). The data from the sample was appropriate for factoring (KMO=0.78), which was also exceeded the recommended value of 0.6 (Kaiser, 1974). Next, the results revealed that all of the nine items loaded had the factor loading scores of greater than 0.70. The items accounted for deontology, teleology and ethical judgment were 69.38 %, 77.25 % and 63.71 % respectively. The principal component analysis indicated only one component extracted for all the variables. No item therefore needed to be deleted and the data was submitted for further analysis.

Descriptive Analysis

The descriptive analysis was carried to measure the level of deontology, teleology and ethical judgment. The study also measured the skewness of data to ensure that it was within normal distribution.

The result indicated that the data was in the range between -.097 to -0.113, which was within the range of - 1.0 to 1.0, meaning that the data did not depart from normality. The result also revealed the level of deontology score for minimum, maximum and mean was 53.67, 300 and 232.22 respectively. On the other hand, the level of teleology score for minimum, maximum and mean was 42.67, 295.33 and 175.28 respectively. Finally the level of ethical judgment score for minimum, maximum and mean was 3.67, 9.0 and 6.68 respectively. The data then was submitted for structural analysis. The result was illustrated in Table 1.

Table 1. Descriptive Statistics

Variables	No. of sample	Minimum	Maximum	Mean	Skewness
Deontology	209	53.67	300.00	232.2204	-0.67
Teleology	209	42.67	295.33	175.2795	-0.113
Ethical Judgment	209	3.67	9.00	6.6794	-.097

Structural Analysis

The study adopted Structural Equation Modeling (SEM) using AMOS 6.0 program. The results of SEM structural analysis will be analyzed in two sections. The first section will measure the fitness of the model. Meanwhile the second section will present the model of the study produced by AMOS 6.0 program.

Model Fitness

Firstly, the study assessed the model fitness based on several fitness indexes produced by AMOS 6.0. The indexes used were Goodness of Fit Index (AGFI), Adjusted Goodness of Fit Index (AGFI), Parsimony Goodness of Fit Index (PGFI) and Root Mean Square Error Estimate (RMSEA).

The results showed the GFI and AGFI were 0.96 and 0.923 respectively, while the RMSEA was 0.077. According to Jorskog & Sorbom (1994) the GFI exceeds 0.9 indicated the model is a perfect fit to the data. Another criterion to indicate an adequate model fit was the AGFI should be greater than 0.9 and an RMSEA was less than 0 (Bentler & Bonet, 1980). Hence, this model was a perfect fit and could be proceed for further analysis. The results were shown in Table 2.

Table 2. Results of Model Fit Summary

Model	GFI	AGFI	RMSEA
Default model	.960	.923	0.077
Saturated model	1.000		
Independence model	.322	.171	.359

Model of the Study

Generally, the AMOS model consists of two models namely standardized and unstandardized. Both of the models consist of two components; a measurement model and a structural model. The measurement model specifies a structural model connecting latent variables to one or more observed variables (Bollen, 1989). Thus, the measurement model relates the observable measures with the latent variables. On the other hand, the structural equation model summarizes the relationships between the latent exogenous and endogenous variables through a set of linear structural equations (Bollen, 1989).

AMOS 6.0 program produces two types of fitted models namely the standardized and the unstandardized model.

Standardized Model

The standardized model presents the path diagram that measures the strength of magnitudes of association among constructs. The standardized model for this study was shown in Figure 2.

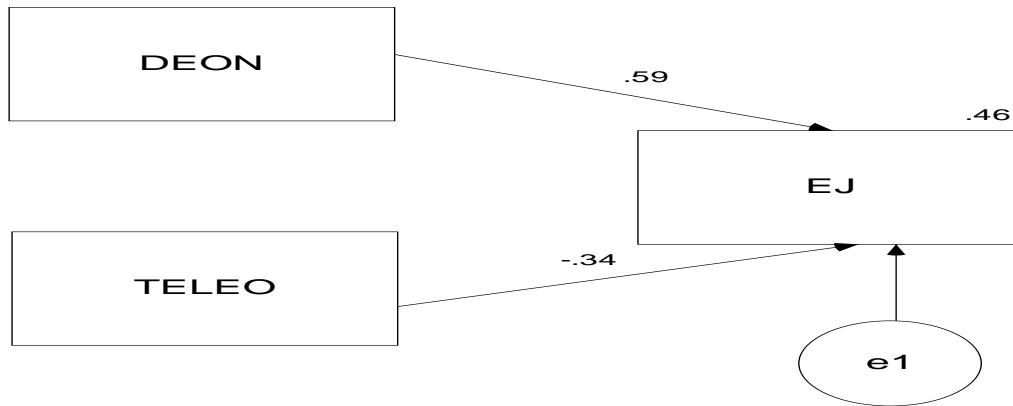


Figure 2. The Standardized Model

The detailed result of the measure of strength and magnitudes of association between variables was illustrated in Table 3.

Table 3. The Measure of Strength and Magnitudes of Association between Variables

Variable	Path	Variable	Estimation of Correlation
Ethical Judgment (EJ)	←	Deontology	.587
Ethical Judgment (EJ)	←	Teleology	-.340

The R² for Ethical Judgment was which was explained by the deontology and teleology variances were 46.1 %.

Unstandardized Model

The Unstandardized Model on the other hand presents the path diagram with the regression coefficients linking the endogenous and exogenous constructs. The unstandardized model for this study was presented in Figure 3.

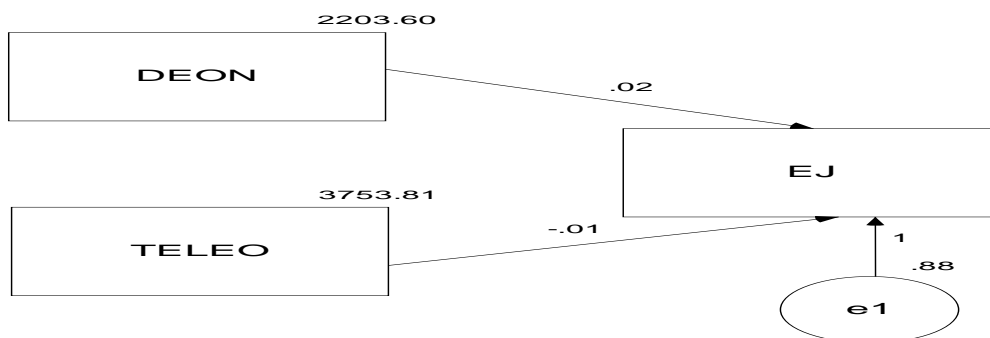


Figure 3. The Unstandardized Model – Path diagram for Regression Coefficients among the Constructs

The detailed of path analysis result for the constructs was illustrated in Table 4.

Table 4. Path Analysis for the Constructs

Variable	Path	Variable	Beta Estimate	Standard Error	Critical region	P-value
Ethical Judgment (EJ)	←	Deontology	.016	0.001	11.530	***
Ethical Judgment (EJ)	←	teleology	-.007	0.001	-6.683	***

*** Indicate highly significance, p-value < 0.001

The regression equation that can be derived from the main constructs was illustrated in Table 5.

Table 5. Regression Equation for the Main Constructs

Endogenous construct	Coefficient of the Exogenous Construct	Error term	Significance
Ethical Judgment	0.16*Deontology (DEON)	E1	***
Ethical Judgment	-.007*Teleology (TELEO)	E1	***

*** Indicate highly significance, p-value < 0.001

$$EJ = 0.16 DEON - 0.007 TELEO + e1$$

The detailed of the variance of the constructs was illustrated in table 6.

Table 6. Variance of the Constructs

	Estimate	Standard error	Critical region	P-value
Deontology	2203.599	216.081	10.198	***
Teleology	3753.813	368.092	10.198	***
E1	.885	.087	10.198	***

*** Indicate highly significance, p-value < 0.001

Hypotheses Testing

Hypothesis 1 (H1) was formulated to test the following statement. H1: Deontology evaluation has significantly influenced the ethical judgment. The result of path analysis produced by unstandardized model indicated the path that linking the deontology to ethical judgment had a P-value of less than the significance level value of 0.05 with a positive beta estimate value of 0.16. As such, the H1 was supported and the study concluded that deontology evaluation had significantly influenced the ethical judgment.

Next, the hypothesis 2 (H2) stated the following statement. H2: Teleology evaluation has significantly influenced the ethical judgment. Again, the result of path analysis indicated that the path that linking deontology variable to ethical judgment had a p-value of less than the significance value of 0.05. However it had a negative beta estimate value of -0.07. This indicated that teleology variable had also significantly influenced the ethical judgment, but in negative direction. Hence, H2 was also supported, that the teleology evaluation had significantly influence the ethical judgment. Finally the hypothesis 3 (H3) tested the following statement: Marketer tends to rely more on deontology evaluation as opposed to teleology evaluation in forming ethical judgment. The beta estimate value from the path analysis result indicated the scores for deontology and teleology were 0.016 and -0.007 respectively. The beta estimate value for deontology was higher than teleology and in the positive value. The results indicated that the more deontology evaluation was applied the more ethical will be the judgment. However the beta estimate value for the teleology was -0.007, which indicated the lesser the teleology evaluation applied the more will be the ethical judgment. Therefore, it could be

concluded that the future marketer tends to rely more on deontology evaluation as opposed to teleology evaluation in forming ethical judgment. Hence hypothesis 3 was also supported. The summary of the hypotheses is illustrated in Table 6.

Table 6. Summary of the Hypotheses

Hypotheses	Result
H1: Deontology evaluation has significantly influenced the ethical judgment.	Supported
H2: Teleology evaluation has significantly influenced the ethical judgment.	Supported
H3: Future marketer tends to rely more on deontology evaluation as opposed to teleology evaluation in forming ethical judgment.	Supported

DISCUSSION OF FINDINGS AND IMPLICATION

The discussion of the findings will answer the research questions of this study.

What is the level of future marketer's deontology evaluation?

The descriptive analysis provides an answer to this question. In this question, marketers were required to allocate point based on their perception of the importance of reasons that lead to unethical conduct of audit practitioner, with scores ranges from 0 to 300. The results indicated mean score was 231.46 with standard deviation of 46.70, which was above the average value of 150. The result was consistent with prior studies; eg. Palau (2006), conducted among 1567 Latin American accountants, in which she obtained a score of 4.64 out of maximum value of 7, Donoho & Herche (2006) conducted among 1500 business students from seven universities in the US, Canada, Netherlands and Australia indicated, whereby they had a mean score of 4.40, 4.14, 4.23 and 4.37 out of maximum value of 7 for each of the country respectively.

On the other hand, result of the study of Marta (1999) was inconsistent with this study, in which she obtained a mean score of 105.89 out of maximum value of 300 that was below than the average value. The difference in the result could be due to the study was conducted among two different professions, in which this study was conducted among the future marketers, on the other hand her study examined the marketers. The result of this study was consistent with a study by Palau (2006) carried among professional accountants. By professions, accountants in particular auditors are exposed, trained and carried their work according to acceptable accounting and auditing standards as well as adherence to act, statutory and others legislative requirements, that emphasized on rules based system or deontological norms. Thus rules and regulation are source of references in performing duties. This nature of work system may not be strictly practiced by marketers.

The result was also consistent with a study by Donoho & Hereche (2006) conducted among business students in 4 countries, in which its mean score was above average value. According to them, students were not exposed to real situations, therefore in earlier stage they cannot effectively evaluate consequences of actions and therefore rely on rules and norm or take a deontological viewpoint. However, they would take a teleological viewpoint as they gain experiences in their jobs before proceed to a more deontological stance as they gain more managerial experiences.

As the result of this study indicated mean score of deontology evaluations were above average value, which was consistent with a study conducted among business students (Donoho & Hereche, 2006) and accountants (Palau, 2006). Therefore, it can be concluded that future marketer's relied on deontology evaluations.

What is the level of future marketer's teleology evaluation?

To answer this question, auditors were also required to allocate the point based on their perception of the importance of reasons that lead to unethical conduct of audit practitioner, similar to the above question of deontology evaluations. The score was ranges from 0 to 300. The descriptive result indicated mean score was 175.28 above average value of 150. Again, score for teleology evaluations was higher than average value, which revealed auditors also relied on teleology evaluations.

The result was consistent with prior studies; e.g Marta (1999), whereby she obtained a mean score of 152.18, out of maximum value of 300, Donoho & Herche (2006), in which they obtained a mean score for the US, Netherlands, Australia and Canada of 4.12, 4.0, 3.4 and 3.68 respectively out of the maximum value of 7.0. However, the mean score obtained by Palau (2006) was 2.96 out of 7.0, below average value. According to her, in line with professional requirements, Latin American accountants relied more on rules but less on consequences in forming ethical judgments. As the mean score of deontology evaluation was above the average value and the result was consistent with other studies conducted under marketer context (Marta, 1999; Donoho & Herche, 2006), it can be concluded that future marketer's was also relied on teleology evaluation in forming ethical judgment.

What is the level of future marketer's ethical judgment?

The result of descriptive analysis provided an answer to this question. In this question, auditors were required to state their level of ethical judgments in three scenarios in which the value of score ranges from 1 to 9 (from the scale 1 = very ethical; 9 = very unethical). Higher score indicate respondents are more ethical in their judgments. The mean score of ethical judgment was 6.72 with standard deviation of 1.13. The mean score was above average value of 4.5, meaning that, auditors were ethical in their judgments. The result was consistent with prior studies; Marta (1999) who conducted it among 325 American Marketers, in which she obtained a mean score 5.41 for ethical judgment out of the maximum value of 7 (from the scale 1 = very ethical; 7 = very unethical), Palau (2006) carried it out among 1567 Latin American accountants, mean score was 4.64 out of the maximum value of 7 (from the scale 1 = very ethical; 7 = very unethical). However the result was inconsistent with the study conducted by Aw (2006) among 76 Malaysian auditors, whereby she had a mean score of 3.29, out of maximum value of 7. This value is below average value of 3.5 (from the scale 1 = very ethical; 7 = very unethical). She concluded that Malaysian auditors were less ethical in their judgment.

The difference result provided by Aw (2006), could be due to number of respondents participated in her study which was less than 100, whilst this study and previous studies (Palau, 2006; Marta, 99) had respondents of more than 100. According to Sekaran (2003), number of respondents determined

the reliability of results. As this study and previous studies (Palau, 2006; Marta, 99) examined more respondents, the results are more reliable. Since, results of this study revealed that future marketer's score for ethical judgments was above average value, therefore it can be concluded that future marketer was ethical in their judgments which was consistent with previous studies (Palau, 2006; Marta, 99).

Does deontology influence ethical judgment?

The path analysis of Sequential Equation Model indicated that deontology evaluations had a significant relationship with ethical judgments. The result was similar to prior researches conducted among marketers and sales managers using Hunt & Vitell (1993) theory of ethics (Donoho & Herche, 2006; Cherry & Fraedrich, 2002; Marta, 1999; Rallapalli et al., 1998). As such rules and regulations are vital for ethical judgments and confirmed across the marketing and business professions in the US as well as in Malaysia. Therefore, it can be concluded that marketers tended to rely on deontology evaluations in forming ethical judgment. The result also supported Hunt & Vitell theory of ethics (1993, 1986) that proposes deontology evaluations influence ethical judgment.

Evidences had shown that most of unethical judgments were formed by those who did not rely on deontology evaluation of rules based system. In the case of Nestle, the management did not adhere to standard content of infant food's formula. Similar to McDonalds, the management did not comply with labor Act that led to workers exploitation. This indicated that, if the management as well as marketers emphasized on deontology by complying with professional rules, standards and requirements these ethical controversies would not be happened. As such greater effort should be taken by marketing professions, firms as well as business curriculum to create rules awareness of deontology norms among members. Therefore based on the study analysis, supported by prior studies (Donoho & Herche, 2006; Cherry & Fraedrich, 2002; Marta, 1999; Rallapalli et al., 1998), Hunt & Vitell theory of ethics (1993, 1986) evidences from past controversies, it can be concluded that deontology evaluations influence future marketer's ethical judgment.

Does teleology influence ethical judgment?

The path analysis of Sequential Equation Model indicated that teleology evaluations had a significant relationship with ethical judgments. The result was similar to prior researches (Donoho et al., 2006; Cherry & Fraedrich, 2000; Marta, 1999; Rallapalli et al., 1998). However the beta coefficient of this study indicated a negative value between the relationship of teleology evaluations and ethical judgments. Meaning that the lesser teleology evaluations were used the more likely of formation of ethical judgment. The result was consistent with prior studies, in which teleology evaluations had an inversed relationship with ethical judgment (Cherry & Fraedrich, 2000; Marta, 1999; Rallapalli et al., 1998). Only a study conducted by Donoho et al., (2006) among junior business executives indicated that teleology evaluation was positively related to ethical judgment. According to them, the differences in the findings were due to the respondents were required to analyze different ethical situations in different studies for example the study of Donoho & Herche, (2006) examined the personal selling situations, meanwhile other studies (Cherry & Fraedrich, 2000; Marta, 1999; Rallapalli et al., 1998) examined marketing research situations. As a result respondents to respond differently

that led to variation in results. Apart from that, junior executives were less experience in their new jobs and focus on teleological sense before proceed to a more deontological sense as they reach higher level (managerial experience) (Donoho et al, 2006).

Teleology evaluates an ethical or unethical behavior based on the benefits derived from the behavior to the greatest number of people. In order words, a behavior is considered ethical or unethical based on its probability to achieve the majority stakeholders as well as personal goals. Therefore teleologist may act in a way that promotes the greater good for the majority stakeholders or for oneself. As such judgment could be form either for the majority stakeholders or own interest. This could create major problems, if the outcome is for a decision maker self interest. Apart from that, teleology concepts hold means justify ends. Meaning that, evil means is acceptable if it can justify ends. This has been proven in previous controversies of Nestle, whereby the management did not adhere to food content's standards and McDonalds exploited the workers. All these unethical judgments were committed with the expectation that they could contribute more profit to the company. These were a few examples that those who relied on teleology evaluations tend to form unethical judgments.

Despite a negative relationship, teleology evaluations are equally importance to deontology evaluations in formation of ethical judgments. They are considered threats to ethical judgments and marketers should also be able to recognize them. In relation to this, future marketers need to recognize possible ethical threats that could influence their ethical judgments. Moreover, Hunt & Vitell theory of ethics (1993, 1986) also predicted that teleology evaluations influence ethical judgment. Therefore it can be concluded that teleology evaluation had negatively influence future marketer's ethical judgment.

Does higher in deontology evaluation as opposed to teleology evaluation lead to ethical judgment?

The path analysis's result revealed the beta estimate value for deontology was positive, while the beta estimate value for teleology was negative. Moreover the descriptive analysis also stated the mean value's score for deontology was greater that the teleology evaluation. In other words, deontology evaluations outweigh the teleology in forming ethical judgments. Hence, this study supports several previous studies (Donoho & Herche, 2006; Cherry & Fraedrick, 2002; Marta, 1999; Rallapalli et al., 1998) which applied the Hunt & Vitell theory of ethics (1993; 1986). Thus, future marketer tends to be cautioned when dealing with ethical dilemmas in the process of forming ethical judgment by relying more on the rules and regulation (non-consequential or deontology evaluation) rather than on the consequences or teleology evaluation.

Implication of the Study

The study contributes two implications; theoretical and practical.

Theoretical Implication

The study supports the theory of ethics proposed by Hunt & Vitell (1993, 1986) that the deontology and teleology influence the ethical judgment. The study also supports previous studies (Donoho & Herche, 2006; Cherry & Fraedrick, 2002; Marta, 1999; Rallapalli et al, 1998) that deontology outweighs teleology evaluation in forming ethical judgment. As such, the results provided

support to theoretical works of ethics theory and literature thus enhancing the understanding of the ethical judgment process, which is important for practical implication.

Practical Implication

The findings suggest that marketer should emphasize more on rules and regulation than the consequences of the action to the stakeholders in forming ethical judgment. This will be a challenge for marketing professional bodies to establish rules and guidelines that operate effectively as a deterrent for unethical practices. As, clear defined and enforced penalties for any violation of the professional rules and regulation would help to shape the desired ethical behaviors. Besides, university curriculum also should emphasize on the usage of deontology evaluations among their students. Thus, future marketers who are more exposed to rules approach have greater tendency to use deontology evaluation when forming ethical judgment.

Apart from that, the interest of the stakeholders should also be upheld as long it does not violate rules and regulation. The marketer cannot merely satisfy their own self interest but forgoes the rules requirement, for example, selling defective products, cheating customers, hiding information besides other unethical practices. Thus effective rules, taking into consideration the interest of the majority stakeholders coupled with strict enforcement are the vital tools to control unethical practices arisen from unethical judgment.

Limitation and Suggestion for Future Research

Even though this study provides support for several theoretical works, there are certain limitations that need to be acknowledged. This study only examines a part from a few processes which are proposed by Hunt & Vitell Theory of Ethics (1993; 1986) that potentially affect the ethical judgment process. Therefore future study should be extended and examine a few variables suggested by the HV theory that include the professional and organizational environment, ethical sensitivity, cognitive moral development and personal trait.

The second limitation noted is respondents were required to form judgments based on limited information provided in the scenarios. However, in real working environments, respondents would normally require additional information that is available in three scenarios. Therefore caution needs to be exercised when generalizing to other marketing situations. As a result, findings of this study should be generalized in caution because the scenarios examined do not cover all ethical problems faced by auditors.

The third limitation noted is the use of self-reported questionnaires, whereby respondents tend to rate themselves more ethical than they actually are. This self-deception bias is a common phenomenon in studies related to ethics and was not fully controlled in this research. However this bias only becomes a constant factor and it is unlikely to affect the validity of the results.

CONCLUSION

The marketer appears to use a more deontology than teleology evaluation in forming ethical judgment. However, the major premise of the theory of both deontological and teleological philosophies jointly influence ethical judgment is confirmed. Although the theory and model was originally and extensively tested in the marketing ethics literature in the US (Donoho & Herche, 2006; Cherry & Fraedrick, 2002; Marta, 1999; Rallapalli et al, 1998), this study has shown that this theory to be consistent to the Malaysian context and perhaps generalized to individual ethical judgment.

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CQ(06)

DOES KNOWLEDGE SHARING HELP IMPROVES PUBLIC SECTOR SERVICE DELIVERY? A CASE STUDY OF THREE SELECTED GOVERNMENT AGENCIES

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ABSTRACT

Public sector service delivery has always been important issues in many countries including Malaysia. Complaints from the general public takes place almost everyday. Thus, the government of Malaysia has taken several steps to increase the quality of public sector service delivery. In this respect, knowledge sharing seems to play an important role. Study on knowledge sharing in public organizations particularly on the relationship between knowledge sharing and public sector service delivery in Malaysia is relatively at scarce. A survey of 48 government officers in three selected central agencies in Putrajaya was conducted using questionnaires as the instrument. The purpose of the study is to investigate the role of knowledge sharing among employees in improving their service to the public. The result reveals that there is a significant relationship between knowledge sharing and public sector service delivery.

Keywords: *knowledge sharing, public sector, service delivery, Malaysia.*

INTRODUCTION

Service delivery and policy making are always the main tasks of any government (OECD, 2003). The efficiency of any one government is determined by the quality of service it delivers which in turn marks its accountability and transparency in serving the nation. Thus, service delivery particularly in the public sector has always been important issues in many countries including Malaysia (Ali, 2006).

Complaints from general public take place almost everyday. Statistic (Public Complaint Bureau (PCB) (2008) and Ninth Malaysia Plan Report (2006) shows that a large number of complaints about the quality of public service delivery were received every year. Table 1 shows the number of complaints received by public sectors from 2000 to 2007.

Table 1 : Number of complaints received and solved from 2000 to 2007
(RMK9, 2006 & PCB, 2008)

Year	Received	Solved	Percentage solved
2000	3721	2695	72.4%
2001	2769	2549	92.0%
2002	3452	2753	79.7%
2003	3199	2591	80.9%
2004	2756	2252	81.7%
2005	2707	2247	83.0%
2006	3397	2936	86.4%
2007	2941	2731	92.8%

There were 3721 complaints received in the year 2000. The complaints decreased to 2707 in 2005 but increased again to 2941 in 2007. But there is improvement in the number of complaints solved. In year 2000, the percentage of complaints solved was 72.4%. This has increased to 83.0% in 2005 and finally 92.0% in 2007. The increased number of complaints solved reveals the capability of government organizations to respond to public complaints. Most complaints were on the failure in attending or delayed response to the complaints (PCB, 2008). This clearly shows that there ought to be improvement in public sector service delivery.

There are many factors contribute to poor service delivery in public sectors. One, low level of information and knowledge sharing among government agencies. Thus, Wiig (2002) beliefs that knowledge management could reverse the situation. In the Ninth Malaysia Plan, the government of Malaysia asserts that cooperation among government agencies to be improved so as to enable information sharing materialize (RMK9, 2006). Public complaints must be managed effectively and used to rectify weaknesses and repeated poor service delivery.

The Deputy Prime Minister of Malaysia, Dato' Seri Mohd Najib bin Abd. Razak in his keynote address at International Conference of Increasing e-Governance through Knowledge Management (EG2KM), asserted that knowledge management should be adopted as an effective tool to improve public sector service delivery. It is suggested that knowledge management model developed by the west ought to be adapted to the local culture and social norms (Razak, 2006). In relation to that, the Malaysian Administrative Modernization and Planning Unit (MAMPU) has implemented knowledge management initiatives in public sector to enable the government manages and restructure knowledge posses by various government agencies. In this project, MAMPU developed 'knowledge bank' structure in Public Sector Information Technology and Communication Framework to enable knowledge sharing among government agencies (Ismail, 2006). This initiative has carved a step forward towards effective and customer oriented service delivery.

Literature in knowledge management field shows that there are only limited studies on knowledge sharing in public sectors (McAdam & Reid, 2000; Syed Ikhsan & Rowland, 2004) particularly in Malaysia. Previous studies on Malaysia focused on antecedents on knowledge sharing or knowledge transfer (Ismail & Yusof, 2008; Syed Ikhsan & Rowland, 2004). The studies ignored the impact of knowledge sharing on organizational outcome. However, Syed Ikhsan and Rowland (2004) suggested that public or private sector need to manage knowledge whether tacit of explicit to ensure that the

organization can take full advantage of organizational knowledge. Based on knowledge-based theory of the firm (Grant, 1996; Spender, 1996) which consider knowledge as the most strategically significant resource of the firm to gain competitive advantage and superior performance, this study try to identify the relationship between knowledge sharing quality and public sector service delivery.

In the next section, we present some literature review related to the study. This is followed by presenting the research theoretical framework succeeded by research methodology and discussion about the results. In conclusion, we summarize the key findings and suggest direction for future research.

LITERATURE REVIEW

Defining the term 'service' draw great attention among writers and researchers in service delivery area. Different writers give different definitions (Fogli, 2006). For decades, researchers have called for the process related to service delivery but failed to develop an appropriate approach to study those problems (Mishra, 2004). According to Gronroos (2001), service is a process towards a result during the process of partly simultaneous production and consumption. Nakamura (1988) relates the definition of service with the concept of customer satisfaction. Service is a process to provide the customer what, when and how they want, expect and wish.

Lovelock (2006) argues that service delivery could be defined from two aspects: behavioural and economic. In terms of behavioural, a service means an act or performance provided by one side to another. In economic perspective, service is an economic activity that creates values and benefits to customer in a particular time and place as a result of change. Schneider and White (2004) differentiate between 'how' and 'what' components in service delivery. 'What' is a product like food served in a restaurant and 'how' is the reservation process, seating arrangement, serving and attention received and this is actually service delivery. Customer expectation of service delivery differs from one to another, a product to another product, a service to another service, a culture to another culture, a business to another business, an industry to another industry and a country to another country (Fogli, 2006).

Zeithmal et al.(1990) consider service delivery is part of service quality model as shown in Figure 2.

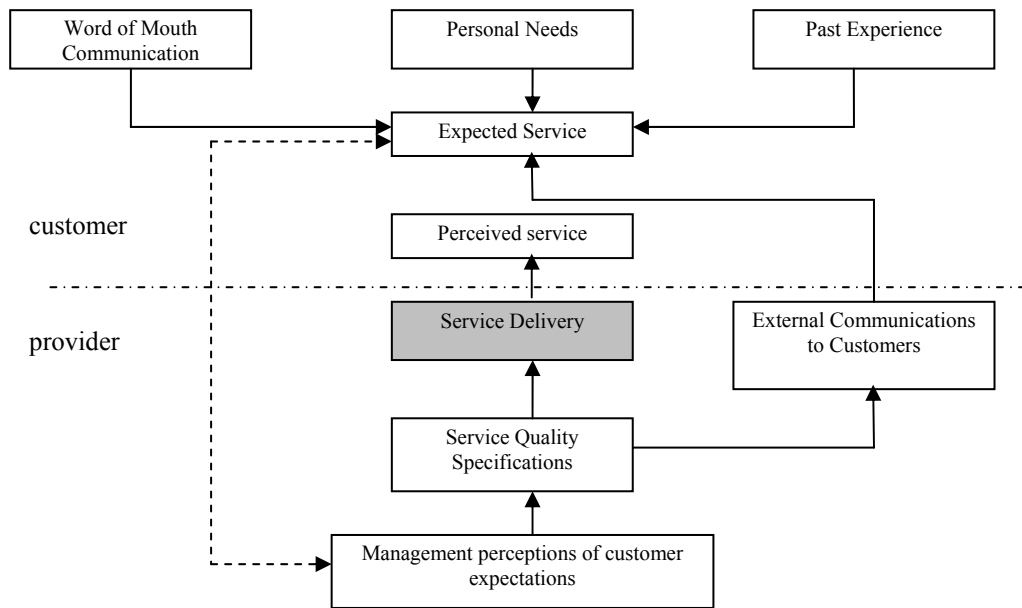


Figure 1 Service quality model by Ziethmal et a/. (1990)

In this model, Zeithmal et al. (1990) identified there is a gap between service delivery and service quality specification which is in the provider side. The gap between service specifications and actual service delivery is known as service-performance gap. The gap exists when employees are unable and/or unwilling to perform the service at the desired level. Factors that contribute to service-performance gap are role ambiguity, role conflict, poor employee job-fit, inappropriate supervisory control systems, lack of perceived control on the part of employees and lack of teamwork. Best people with best training and compensation, and also with best technology will deliver high-level efficiency and service.

Mahbar (2002) suggested a public sector service delivery system model as shown in Figure 2.

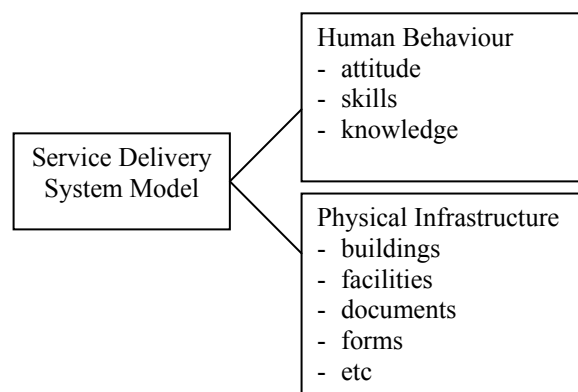


Figure 2 Public sector service delivery model (Mahbar, 2002)

According to Mahbar (2002) service delivery is a combination of two dimensions: Human behaviour and physical infrastructure. Human behaviour consists of attitude, skills and knowledge. Meanwhile physical infrastructure encompasses of buildings, facilities, documents, forms etcetera. The combination of these two factors will determine success of service delivery in public sector.

Service delivery related to system and process in providing services or products from provider to the customers (Lam, 1998). Lam (1998) advocates, it requires serious attention because of the following reasons:

The quality and quantity of services provided to the public will be directly affected by service delivery. Efficient and effective delivery systems could give good delivery to the public and create public trust, satisfaction and political loyalty. Inefficient and ineffective delivery systems will stop the original attention of the policy makers and finally deteriorates the relationship between government and people, and waste public fund.

The life chances such as education and housing could also be affected by service delivery because this is one of the ways how wealth is distributed among citizen.

The moral and satisfaction of employees also affected by service delivery. A good delivery system through appropriate training and evaluation could make employees feel appreciated, respected, given courage to increase productivity and commitment to organization.

Since service delivery is crucial to build public trust, life chances and employees' moral (Lam, 1998), it is important to create good relationship between service provider and service receiver in public sector (Pendelton, 1996). Kristiadi (1998) said that a good public service management has to be rational, fast, easy, cheap, transparent and customer satisfaction oriented. In public sector, customer satisfaction does not mean to ignore rules and regulation in order to satisfy the customer (Damanhuri, 2004). It is actually the ability to create and maintain good and lasting relationship with the customers. Damanhuri (2004) argued that service delivery means the service provided by public sector are fast, of quality and satisfy the customer.

Today, people expected that their problems should be solved at individual level (OECD, 2003). Customer's satisfaction has become an important indicator to quality and output in the future (Andreassen, 1994). Crosby et al. (1990) argued that customer's satisfaction in the past affect their decision to continue relationship with service provider. Public organizations are expected to be more proactive in delivering service to the customers (OECD, 2001). Hence, policy making and service delivery are getting more complex since public sector deals with a big number of customers. This creates pressure on government to capture and integrate personal knowledge to modify policies and service delivery (OECD, 2001). Apparently, one way to integrate personal knowledge is through knowledge sharing.

However, there is a typically question frequently arise in knowledge management, that is the quality of knowledge shared. Larsson & Ohlin (2002) report that it is difficult to define quality knowledge sharing. There are a variety of definitions on quality such as up to date, accurate, relevant and meaningful knowledge. Quality knowledge may become the main focus of a matured community (Chiu et al., 2006). Knowledge quality shared is measured in terms of relevancy, easy to understand, accuracy, completeness, reliability, and timeliness.

THEORETICAL FRAMEWORK AND HYPOTHESES

The framework outlined in this paper examines the relationship between knowledge sharing and public sector service delivery. It is adapted with some modification from Chiu et al. (2006) and Jones (2001).

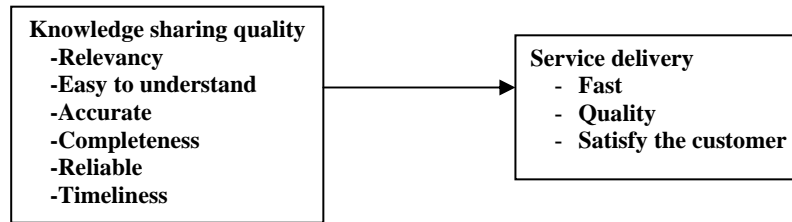


Figure 1. A model of relationship between knowledge sharing quality and service delivery
The framework is used as a guidance to formulate and test the main hypotheses and sub-hypotheses as listed below:

- H1: There is a positive relationship between knowledge sharing quality and public sector service delivery.
- H1a: The relevancy of knowledge shared is positively related to public sector service delivery.
- H1b: Easy to understand knowledge shared is positively related to public sector service delivery.
- H1c: The accuracy of knowledge shared is positively related to public sector service delivery.
- H1d: The completeness of knowledge shared is positively related to public sector service delivery.
- H1e: The reliability of knowledge shared is positively related to public sector service delivery.
- H1f: Timely knowledge shared is positively related to public sector service delivery.

METHOD

Sample and population

Three central agencies in Putrajaya have been selected in this study. The list of central agencies was obtained from Public Service Department booklet (JPA, 2007). The agencies were chosen due to their role in planning, coordinating and monitoring the implementation of national policies (Damanhuri, 2004). Policy making and business development are trusted by the knowledge-based activities of government agencies (Husted et al., 2005). The roles of the agencies are elaborated below:

- Agency A – public sector human resource management policies.
- Agency B – public sector financial management policies.
- Agency C – national socio-economic policies.

Questionnaires were sent to 60 respondents. 48 were returned and usable. The sample consists of officers from Management and Professional Group (MPG). This group are middle managers between top management (Premier Group) and support staff (Support Group). Stratified random sampling was used to select the sample. Officers from MPG were chosen because they are directly involved in policy making of the public sector human resource, financial management and socio-economic development of the country. According to Nonaka and Takeuchi (1995) knowledge are aspired and created by middle managers who are the leaders of a working group or task force that mediate the exchange process between top management and support staff. Moreover, knowledge is systematically generated at this level (McAdam & Reid, 2000).

Measurement

The questionnaire consists of three main parts: Part 1 consists of demographic information; Part 2 measured the respondent's attitude towards knowledge sharing quality and service delivery; Part 3 asked for comments from the respondents. Six items were used to evaluate the response towards knowledge sharing quality which was adapted from Chiu et al. (2006). Each item represents a construct of a dimension in knowledge sharing quality. Three items were used to measure the response towards service delivery which was adapted from Jones (2001) and Damanhuri (2004). The respondent were asked whether they agree to the statements related to six dimensions of knowledge sharing quality and three dimensions of service delivery using Likert scales with 1=strongly disagree and 5=strongly disagree. The Cronbach Alpha values for the variables in the questionnaires are above 0.70 meeting the acceptable value as suggested by Nunnally (1978).

FINDINGS AND DISCUSSION

Demographic profile of the respondents

The respondents' demographic characteristics are presented in the Table 1 below.

Table 1: Respondents' demographic characteristics (n=48)

Demographic Characteristics and Classification		Frequency	Percentage
Gender	Male	32	66.7
	Female	16	33.3
Age	<26 years old	2	4.2
	26 to <30 years old	12	25.0
	30 to <35 years old	10	20.8
	35 to <40 years old	9	18.8
	40 to <45 years old	6	12.5
	45 to <50 years old	3	6.3
	≥ 50 years old	6	12.5
Level of Education	PhD	0	0.0
	Masters	17	35.4
	First Degree	30	62.5
	Others	1	2.1
Position Grade	54	4	8.3
	52	11	22.9
	48	12	25.0
	44	7	14.6
	41	14	20.2
Years of service in public sector	<1	3	6.3
	1-5	17	35.4
	6-10	5	10.4
	11-15	11	22.9
	16-20	5	10.4
	>20	7	14.6

There were 32 male and 16 female respondents. This imbalance situation happened because there are more males than female in these three central agencies. Most of the respondents age ranged between 26 to 40 years old. There were only 8.3% of the respondents are in the position grade 54 which is the highest in the Management and Professional Group (MPG). Majority of the respondents have a first degree and been working more than 10 years in public sector.

Profile of knowledge sharing quality and service delivery

The distribution of responses is shown in Table 2 below.

Table 2 Descriptive statistics of knowledge sharing quality

Items	Mean	S.E	S.D	Var.
Knowledge Sharing Quality				
Relevant	4.10	0.080	0.555	0.308
Easy to understand	4.06	0.075	0.522	0.273
Accurate	3.71	0.084	0.582	0.339
Completeness	3.52	0.107	0.743	0.553
Reliability	4.00	0.067	0.461	0.213
Timeliness	3.88	0.064	0.444	0.197
Service Delivery				
Fast	4.23	0.061	0.425	0.180
Quality	4.25	0.063	0.438	0.191
Satisfy the customer	4.25	0.073	0.504	0.254

As exhibited in Table 2, the mean of distribution of knowledge sharing quality variables were more than 3.5. The relevant dimension had the highest mean with a statistical value of 4.10 and standard deviation = 0.555 followed by easy to understand dimension (mean 4.06, SD=0.522) and reliability (mean 4.00, SD=0.444). Most respondents believed that the knowledge they shared with their colleagues are relevant. They also believed that the knowledge shared are easy to understand and reliable. Based on the item mean scores shown in Table 2, respondents have reported relevancy as being the most important in their knowledge sharing quality. This was followed by easy to understand and reliability. The effectiveness of service delivery shows that to satisfy the customer as being the most important followed by quality service and fast service.

Relationship between knowledge sharing practice and service delivery

Table 3: Correlation analysis between knowledge sharing quality variables and service delivery dimensions

	Fast Service	Quality Service	Satisfy the customer	Overall Service Delivery
Relevancy	.438**	.416**	.346*	.425**
Easy to understand	.414**	.396**	.334*	.405**
Accuracy	.190	.125	.151	.166
Completeness	.220	.180	.097	.173
Reliability	.326*	.316*	.275	.325*
Timeliness	.155	.164	.167	.174
Overall Knowledge Sharing Quality	.389**	.353*	.297*	.368*

**p<0.01 (2-tailed)

*p<0.05 (2-tailed)

The correlation matrix of all scales of knowledge sharing quality showed significant correlation between relevant knowledge shared and 3 dimensions of service delivery. The relationship between relevant knowledge shared and fast service has strong significant correlation with $r=.438$ ($p<0.01$). Relevant knowledge shared also had significant results with quality service and satisfying the customer with $r=.416$ ($p<0.01$) and $r=.346$ ($p<0.05$) respectively. The results also indicate that easy to understand and reliability had a significant correlation with service delivery dimensions.

Of the 6 knowledge sharing quality components, relevancy showed the strongest correlation (0.438) with fast service, followed by a correlation of 0.416 between relevancy and quality service. Both correlation are significant at $p < 0.01$ level. Reliable knowledge shared showed a lesser correlation of 0.326 with fast service at $p < 0.05$ significant level. The other three components which are accurate, completeness and timeliness of knowledge shared have no significant relationship with any of the service delivery dimensions. However the overall there is a positive significant relationship between knowledge sharing quality and service delivery with $r = .368$ at 95 percent significant level. Hence, the main hypothesis of the study was supported. With regard to sub hypothesis, 3 hypothesis (H1a, H1b and H1e) were supported which are relevancy, easy to understand and reliability are positively related to service delivery. Whereas 3 hypothesis (H1c, H1d and H1f) which are the relationship between accuracy, completeness and timeliness between knowledge sharing quality and service delivery were not supported. These 3 dimensions of knowledge sharing quality had no significant relationship with service delivery.

The contribution of knowledge sharing towards service delivery.

The correlation of three measures of knowledge sharing quality namely relevancy, easy to understand and reliability were the most significant to the respondents in this study. Therefore a linear regression analysis was carried out between knowledge sharing quality variables (independent variable) and summated scales of service delivery (dependent variable).

Table 4 : Regression Analysis between knowledge sharing quality variables and service delivery dimensions

Independent Variable	Pearson r	R2	Adj. R2	F-value
Relevancy	.425**	.181	.163	10.146
Easy to understand	.405**	.164	.146	9.042
Accurate	.166	-	-	-
Completeness	.173	-	-	-
Reliability	.325*	.106	.086	5.449
Timeliness	.174	-	-	-
Overall KSQ	.368*	.135	.117	7.201

** $p < 0.01$ (2-tailed)

* $p < 0.05$ (2-tailed)

The results in Table 4 indicate that relevancy alone explains 18.1% of the variance in service delivery. Easy to understand and reliability explained 16.4% and 10.6% of the variance in service delivery respectively. However overall knowledge sharing quality explained only 13.5% of variance in service delivery ($R^2 = 0.135$; $F = 7.201$, $p < 0.01$). This shows that the other 86.5% of the variance is explained by other factors. It is assumed that the relationship between knowledge sharing quality and service delivery is mediated by employee performance. It is suggested that this intervening variable is taken into consideration in future research.

CONCLUSION

The main purpose of this study is to identify the relationship between knowledge sharing quality and public sector service delivery. The results of this study are preliminary in the sense that they are derived from a relatively small sample that should not be considered to be representative of the

Malaysia public sector. However, the objective of the study was supported by the results obtained. The relatively moderate correlation ($r=.386$) and R square value ($R^2=.135$) indicates that knowledge sharing quality is an important factor that influence the effectiveness of public sector service delivery. As anticipated, though only at moderate level, knowledge sharing quality has a positive significant relationship with public sector service delivery. Therefore, it is crucial for the government to encourage civil servants to share their knowledge in order to improve public sector service delivery. However, without a proper planning, it is difficult to implement knowledge sharing programme since it is actually 'unnatural' act.

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CQ(07)

UNDERSTANDING THE ROLE OF THE INSTITUTIONS TOWARDS CREATING A SUCCESS OF TRADE INTEGRATION AMONG ISLAMIC MEMBER STATES (D-8): THEIR POTENTIAL TOWARDS MALAYSIA'S ENTREPRENEUR SECTOR

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ABSTRACT

As known that, the organisation representing for Islamic countries is the Organisation of Islamic Conference (OIC), which it was participated by 57's member states. OIC itself has been established since 1969. Generally, this particular paper will be discussing the importance of the institution in OIC which it is called as Eight of Developing Countries (D8) as a case study and the role by the institution towards enhancing trade integration among the member states. On the other hand, the study for enlargement of the D8 perhaps the most important agent of change in contemporary and policy making in Islamic Developing Countries (D8).on the other hand, these paper sets the policy process of the D8 in its institutional context. Since D8 is part of, not separate from, the politics and policy processes of the member states, the institutions that are relevant include national institution, as well as those created by the D8 treaties. Hereby the features of the national process pervade D8, and differences between member states pervade D8 policies and the way that they are applied. The same member states take part in many other international and Islamic organisations, which shapes D8 policy-making; Hence globalisation and Islamic are intertwined. The institutional design of the D8 is explained, especially the Secretariat, the Summit, the Council and the Commission. In the meantime, new package include the emergence of quasi autonomous, such as the Rural Development, Trade, Human Resource Development, Communication & Information, Finance & Banking, Energy, Agriculture and Industry & Health. D8 and national institutions interact differently in different policy domains. There have several variants of the D8 policy process are indentified: a distinctive Community method; the D8 regulatory aspect; multilevel governance; policy coordination as well as intensive transgovernmentalism. However these papers strongly highlighted with the last three to active D8 trade policy development such as Free Trade Agreement. On the other hand, successful for trade integration come from negotiations among the D8 Intergovernmental Summit. Through the Summit has been held, there are several events will be negotiation agendas will be propose related with trade policy and trade integration as well. Hence, negotiations activities within D8 play an important role towards creating a strong and highly justification for the trade policy implementation and formulation process for the Trade Integration and Free Trade Agreement among the member states. Although, through bilateral process and negotiations within Intergovernmental Summit as well, it might be benefit to the local states entrepreneurship sectors to participate directly which it entrepreneur could gain in several business opportunity when D8 really implement with Single Free Trade Agreement for their member states in D8.

Keywords: organization of Islamic conference, trade integration, free Trade agreement, entrepreneur

INTRODUCTION

The new wave of regionalism has become an important feature of global political economy today. By late 1990's even East Asia, a region previously characterized by a near absence of formal free trade agreements (FTAs) and regional institutions was engaged in a remarkable number of negotiations towards inter-state cooperation in the areas of finance and trade. (Solis and Katada, 2007)

Generally, economic integration can be defined as the elimination of barriers between a group of countries and the introduction of common policies. Besides that, it can also be defined as the elimination of distinction between negative integration and positive integration (the removal of barriers) – the introduction of common policies, and building of common institutions (Tinbergen, 1954). Most of the Member of States in the Developing Eight Countries Group (D-8) in the Organisation of Islamic Conference have accepted several of the integration policies which are the major bilateral and multilateral relations for the next part of the decade called Road Map 2008-2018.

This particular project, quite new in scale, raises serious issues about how the Institution functions. How can they work, how can they make a decision when they are fully integrated? These are the questions that face the Institutions and there are a variety of responses by other actors in the various countries. This major and complex multilateral endeavour of integration which engages the group as a whole, in all its aspects and with all its resources: it will have an impact not only on the operation of its Institutions, but also on the way in which some are conducted and its new place in the world.

The Group will come out of this process transformed. It must not emerge from it weakened. Integration is plausible and beneficial, however a concerted effort must be made in promoting technological development, raise human capital and improve product diversification among Muslim countries while developing stable institutions and infrastructures. (Raimi and Mobolaji, 2008)

The D8 Secretariat is convinced that it is important to identify all the solutions that can be useful to the Summit Conference. This year (2008), the D8 Secretariat held the 6th D8 Group Summit Conference in Kuala Lumpur, which has approved a series of reports on the progress achieved by each member states applying for accession. The composite paper calls for a firm commitment to negotiate with all the participant countries so that they can freely join the trade group as soon as they are ready. Here, the Secretariat recommends that the Council and Commission conclude “the process of institutional reform must be oriented in such a way that the very substantial changes that are necessary as a condition for enlargement or integration will be in forces as soon as possible”. Besides that, the Secretariat also may work hand in hand with the Council “to commit itself to being able to decide from 2008 on the accession of candidates that fulfil all the necessary criteria in many aspects of integration especially in trade activities”. This particular recommendation is part of the changes which should be put into action for the last few years; the single Free Trade Agreement might become a reality where some of the participant member states have made progress. For instance, Malaysia and Pakistan have Free Trade Agreement (FTA) between both of the States and, on all sides, there is a strong desire for reassurance that the Group is preparing to receive the benefits from single or integrated FTA.

If this approach is adopted, as the Secretariat would like to see, then it will be important to recognise that the political parameters have changed and to draw the right conclusions; the Group must start preparing now rather than soon. This prospect will not allow the Group to postpone the necessary reforms especially in trade approach. What is more, further Summit Conferences on the heels of the first would only exacerbate the danger. The risk that any difficulties encountered during the first conference would be put off for the second; the risk that the second will itself be regarded as another prelude to enlargement of trade potential; and finally, the growing lack of understanding among the people in the member states for ongoing institutional instability on trade activities.

At the end of the 6th D8 Group Summit Conference 2008 held in Kuala Lumpur, the Group will not be able to deal with the same issues highlighted and rethink its institutional system at the same time. Hence, over almost eleven years now since it was established in 1997, the Group has been adjusting its main objective to be more integrated in many scopes and aspects of integration for example, in trade and free trade agreement as well. Now, it must prepare for the next reforms. However, the Group should also help to stabilise the community institutional trade policy framework on an ever lasting basis. It is vital, therefore, that the next D8 Group Summit Conference in Nigeria in 2010 should end by producing real reforms which may give enough time for the necessary ratification before a single free trade agreement begins in real application and implementation by all Member of States. Bear in mind that, it is vital too to carry through the institutional reforms needed for operating a very substantially wider Group. The Secretariat is convinced that vigorous institutional reforms such as to the Commission and The Council, one that is suited to Group's needs, can be completed before the end of 2018, if the multilateral relations are sufficiently strong.

WHAT IS THE LATEST WORKING PROGRESS OF THE D-8 GROUP SUMMIT CONFERENCE?

The 6th Developing 8 Group Summit Conference in Kuala Lumpur in brief covered the following topics:-

- To develop some fertilisers and pesticides for plants in D8 countries and apply Preferential Trade Agreement for exporting and importing the products to ease D8 farmers to produce more food products and increase the supply.
- To develop cooperation on animal feed factories with D8 countries and apply Preferential Trade Agreement for exporting and importing the products.
- To establish a Seeds Bank in D8 Group to increase food products within the countries.
- To establish D8 Food Fund to assist D8 countries to overcome food crisis.
- To set up R&D and technological cooperation or transfer in the agricultural sector.
- To cooperate for diversifying agricultural products (fishery, organic and animal husbandry)
- To establish public-private partnership through participations in programs organised by the private sector.

Besides that the Summit also discussed other necessary amendments to the Draft of the Agreements and Agreements arising with regards to the D-8 Group institution in connection with the above issues and in implementing the Preferential Trade Agreement among D-8 Member States. In view of this, the Secretariat and Council should recommend that the next Summit Conference which will be held in Nigeria must concentrate on issues of institutional nature. This means that full attention

must be focused on this issue if they are to find real and lasting solutions. Whereby, the fundamental thrust of the D-8 policy such as Preferential Trade Agreement, Multilateral Agreement and D-8 Road Map needs to be examined. The goal of the impending reform will not, therefore, be to amend the institutional balance or to widen spheres of competence with the key exception of the ongoing debate on a D-8 Group trade and economic policy, which is crucial to the Group political standing. These discussions may in fact have an institutional impact, which should be translated into appropriate amendments for the next Declaration when the time comes.

Consequently, the Commissions and Secretariat may also assume that now is the possible time to carry out all the institutional reforms which are needed. How can it be assumed that it will be easier, with almost eight member states, to achieve something that they were not able to achieve with seven at the Bali Declaration, or that the Group is unwilling to tackle with seven in the past? Hereby, it certainly is easier dealing with issues identified in Kuala Lumpur, however, some difficult topics have arisen, which are of the essence for the forthcoming summit in Nigeria, placed within a wider political and trade context: that of materially preparing the group for integration and adapting the Group Institutions accordingly. Its reforms is needed today because the Group must be capable, after integration, of deepening its vision and consolidating Developing Eights Group integration in concrete with those who will become its Free Trade Agreement partners. It is in their interest, as well as the Group's, to take these vital reforms without delay, extension and in an objective spirit. The Free Trade integration of the D-8 Group will have two key impacts on the way in which the Group operates - the impact of integration, since an integrated Group runs the risk of becoming less cohesive and hence becomes less robust. The institutional system must be prepared for both of these consequences.

The Role Of Member States When It Becomes Integrated

When the number of issues increased, this automatically complicates and slows down the decision making process. Because of that, the first response must be the correct application of the subsidiary principle, as laid down in the Agreement and Declaration. Whereby, when the Group has to act, it must be able to do so effectively. How can unanimity be reached with eight member states? How can the Agreements and Declaration be made sure to evolve and support the subsequent development of the Group? How can the Group's decision be made more representative of demographic balances? How can the other Institutions be organised to allow them to continue carrying out their work as best as possible despite the expansion in the implementation of Single Free Trade Agreement in the member states of D-8. How should the Institutions, more generally, adapt the way in which they operate efficiently?

Based on the Institutional framework approach, without entering the fruitless debate about the nature of the EC as an international or a domestic system, it is claimed here that the development of the EC cannot be adequately understood by resorting only to international relations theory. This is even more truly for the analysis of a single policy field. Actually, the European Community possesses a number of features which are usually found in domestic and not in international context. Also in any case, it is doubtful whether the strict separation of domestic and international politics as two arenas

characterised respectively as vertically and horizontally organised is still a useful distinction, if it has ever been one at all (Walker, 1987, p82).

Basically, some of these issues are interconnected. For instance, it will be easier to extend the scope of participation of other OIC members to join the Grouping Summit or Conference. Generally, not all of these issues entail changes to the declaration or agreements. However, the group must be examined as part of the same problems or issues concerned - how to ensure the smooth and practical functioning of the Institutions within a co-operative in trade as well as an enlarged D-8 Group. Maintaining crucial trade activities and co-operation in Free Trade Agreement among all the Member States must be part of these reforms in line with the original spirit of the agreements and declarations of achieving a Group of the Member States and of their people and communities.

How The Actors And Institutions Make Decision On Integration And Enlargement

The D-8 Group Secretariat in Istanbul, Turkey urged the future summits and conferences to consider a possible extension of other OIC member states to join as associate Member States in the Grouping Conference or Summit, as well as to introduce single Free Trade Agreement among the Member States in D-8 Group. The Kuala Lumpur Declaration enabled important advances to be made but the fact that the cooperation in Free Trade Agreement among the Member States still has a long way to go. The interest of the various members will soon be so diverse that the working of the Group could easily be blocked.

Generally, all decisions which still require unanimity must therefore be reviewed on the principle that the odds are against such decisions being taken after integrated and enlargement of the new Member States. The integration of Free Trade Agreement should therefore becomes the rule, apart from a very few exceptions for issues which are truly fundamental or felt to be extremely sensitive bilaterally and multilaterally. For example, application of this principle will create the negotiation process as following areas as well as integration among the member states:

- The 6th Kuala Lumpur Declaration provisions where the co-decision procedure coexist with unanimity should be changed to qualified majority to retain the advantages of co-decision;
- The Council should be taken of the desire of the Heads of State and Government to obtain rapid and concrete result in the field of trade, commerce and multilateral. They should therefore ask how the present Agreement of the Declaration meets this bilateral and multilateral objective, especially in regards to the area of trade freedom, commerce and multilateral;
- It should be possible to take a decision by qualified majority to extend the mechanism of the common trade policy and multilateral to international negotiations and agreements on trade and multilateral;

- Certain decision on trade policy which is essential to the smooth running of the internal market, economic policy, foreign direct investment, and could in future be taken by implemented in integration among the Member States as well as single Free Trade Agreement. This is likely in some cases to require some changes to the wording of certain Agreement and Declaration articles.

The Scenario Of The Declarations

Generally, through the 1st Developing Eight Countries (D-8) Summit Conference in Istanbul, Turkey in 1997, the Heads of States and Government found that the Declaration contained provisions of very varied levels of importance as a result of successive amendments. It felt that in the future “it should be possible to amend at least provisions that are not a constitutional nature by a procedure which imposes fewer constraints than the one currently in force.” The Declaration proposes that it might be split into two major parts - basic and acknowledgement of the Declaration on one hand and implementing Declaration on the other hand. The latter would include the less fundamental declaration and could be amended by the Council or Heads of States or Government through the Summit Conference as well as Council and Commission Meeting (by a reinforced qualified majority or unanimity) with assent of Member of the States.

It is worth noting that the D-8 Declaration already contains a simplified amendment procedure for certain non-fundamental declaration in certain circumstances with respect to economics and trade policy. Besides that, a single Free Trade Agreement inevitably leads the Group to speculate about the possibility of amending community trade policies without ratification by national cabinet or parliaments and, in certain cases, without the need for unanimity.

Hereby, the Heads of States or Council do not underestimate the technical, economical and political barriers of such an exercise which should be carried out without changing the regulations’ content and without producing any changes in the existing competencies of the Group. However, re-organising the Declarations, accompanied by revision procedures suited to the prospect of a single Free Trade Agreement would bring clear advantages in terms of the subsequent progress of Developing 8 Countries Group of Integration:

- It would concentrate the basic Declaration or Agreement on those regulations essential to the Group; clearer commitments and transparent tasks, making the text a better tool of democracy;
- It would allow the evolutionary nature of the Declaration or Agreement to be preserved. The present procedure, where the conclusions of the Summit Conference are approved unanimously and becomes subject to national ratification procedures, will be far too onerous after integration and it will be impossible to amend the most short term and non fundamental regulations of the Declaration or Agreement as needed.
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Generally, mostly for students of policy making, the main fields in which to search for helpful theories are international relations, comparative politics and policy analysis. Here, it is useful to note

that the intervention of Hix (1994) to advocate comparative politics as the best approach, and the riposte from Hurrell and Menon (1996), as well as Risse-Kappen's (1996) advocacy of bridge-building between international relations and comparative politics.

The Secretariat and Council should consider this to be a very interesting idea which is worth reflecting on. It therefore promotes closer study of it, on an exploratory basis, using work already carried out by academicians. Furthermore, it needs to begin by identifying existing rules and regulations in the Declaration or Agreements has been signed for which simplified revision procedures could justifiably be allowed. There are already some examples in the present Declaration or Agreements on the application of the common trade policy to other scopes of trade. The same process should be used for other non-fundamental issues.

Representation Of The Member States In The Council And Commission

While the Developing Eight Countries Group, in the words of the Declaration or Agreement, represents the people of the States brought together in the Group, the Council represents the democratically-elected governments of each Member States. The present balance between the Institutions presupposes that the Council's decision should be more representative of the relative weight of the various Member States. On this point of view, the initial thinking behind the founding Declaration should be respected and where necessary reinstated. According to the EC features (separation domestic an international distinction) on Institutional framework, the features with particular interest for the present study are its comprehensive scope, the existence of highly complex hierarchical legal system, are enormous density of interaction and the existence of a directly-elected parliament.

Generally, these particular features create the context for the international element of the European Community especially the negotiations of the states in the council. Hence, this kind of feature is also slightly similar to the D-8 element of integration process in the level of Council. Also, negotiations analysis, which is essentially a derivative of games theory (Sebenius, 1992, p 350), is only applicable with important caveats to this situation. Regarding Council negotiations as a drama and exchange of argument is instead the path which will be pursued here. Even for negotiations processes either in EC or D-8, it needs several times of depth issues highlighted during the meeting and discussion held in the Commission and Council Meeting.

To prepare for integration in Single Free Trade Agreement, therefore, they must:

- Facilitate decision making: among the three levels of decision makers, the main actor must be fully cooperative to ensure all matters of the issues highlighted should be agreed and concerned with themselves. For example, on trade matter, the actors are, in the level of the Head of Ministry in Trade and Economic Ministry each of the Member States as well as in the level of basic line such as Trade and Commerce Commissioner in which these two main levels play important roles to ensure that all the processes are more effective and functional.
- Strengthen the democratic representatives of Council decision: here, the decision maker from the Head of Member States and Council must be strong and capable to make a wider or

broader decision within specific reason to support every part of their own decision to ensure that the solution made is in line with the Head of Member States and the Secretary General of D-8 Group. Besides that, every single decision by the Head of Member States or Minister representing the other two levels which is related with technical and procedure part of the decision as mentioned above. Hence, Head of Member States will be presenting decisions from the whole nation that they belong to rather than personal decision making without consulting other expertise in the respective scope of area such as Trade and Commerce and Policy makers.

Reflections on all levels of decision makers must take into account these two aspects and also work towards the goal of simplicity and role of the actors in the nations and institutions.

Other Institutions And Consultative Bodies Of The Group

The Declaration and Agreement of the regulations on the Institutions need to adapt with a view of integration.

- D-8 Secretariat: The composition of the Secretariat is Secretary General, Director and Economist. Basically, they are based in Istanbul, Turkey.
- The Summit: which is the supreme organ of D-8, is composed of the Heads of State or Government of the Member States: It convenes once every two years. The latest Summit was held in Kuala Lumpur in 2008.
- The Council: is composed of the Minister of Foreign Affairs of Member States. Actually it is the political decision making organ of D-8 and acts as a forum or dialogue for thorough and comprehensive consideration of the issues at hand.
- The Commission: is the executive body of D-8. It is composed of Senior Officials appointed by their respective governments. Each Commissioner is responsible for the national coordination in their respective countries.

Hereby, the Commission the current way in which the Commission operates, with new project vested in its Head of Member States to give political orientation directives and decision making by the College on the basis of a simple majority of the Member States, even creates an important balance which is likely to be disturbed if the number of Commissioners is increased. In the context of integration, it will be essential to preserve the collective responsibility, efficiency and decision-making method of an institution whose job is to represent the public interest in a fully independent way and to arbitrate between different Declaration goals. The number of portfolios should also correspond to the realities of the Commission's task.

Finally, the Council's political responsibility, which is an important part of its legitimacy, will need to be amplified by some formalisation of the undertakings currently given by each Council to resign if the Head of Member States or Government orders them to do so. Apart from the exclusive right of initiative it has been given, the Council will have to put forward timely recommendation on its own way of operating, enabling it to strengthen the capacity for action and decision-making which is essential to the integration of Islamic states.

The Workings Of The Institutions

Apart from the consequences of amendments to the Declarations or Agreements, there also need to be important and significant changes in the ways the Institutions work. These reforms are already necessary now. They become absolutely essential in the context of integration.

- The Secretary General: like other Institutions, as the head for the institution, it should continue resolutely with its examination of its working methods. Actions must be taken under the Declaration and Agreement of the regulations on the status and general conditions governing the performance of the duties of its Members. Generally, the working methods of Secretary General ought to be re-examined in order to make them “as clear and transparent as possible”. Finally, it would naturally be desirable to complete rapidly the work on procedures for integration and enlargement.
- The Council: given its character and operating methods, the Council is likely to be the Institution most affected by the future integration and enhancement the integration activities as well as enlargement. Also, the Council’s own Secretary General may play an important role to produce a report in which this particular report may list all the current difficulties encountered and makes clear the need for reforms and transparency. The Council, which has a natural interest in improvements to the way the Commission operates, believes these reforms should be approved as soon as possible. The Commission will cooperate fully with the Council in implementing them.

Although a considerable number of reforms can be embarked on now, it is quite possible that some major changes will require adaptations to the Declaration or Agreement.

- The Commission: it has started to reform its internal structures - rationalisation of division, expertise and modernisation of its operating methods to bring them into line with transparent administration. These reforms, which are already producing results but probably take several years to carry through, are in particular being designed to take into account the trade policy integration.

However in European context, most of the policy makers who devise and operate EU rules and legislation are from the member states themselves. Most of their time spent as national policy makers which for whom the European dimension is extended policy arena. Although country-defined policy demands and policy capabilities are set in a shared European framework to generate collective’s regimes, most of which are then implemented back in the countries concerned. Hereby, this particular approach has some similarities with D-8 design which shows off the integrated environment learned from EU. Hence, it is just as important to understand the national institutional settings as to understand the EU level institutions in order to get a grip on the EU policy process as a whole (H. Wallace 1973, 1999a).

THE WAY TO REMAINING OF THE GROUP

Bear in mind that the Member States will show even more evident differences, if not to say disparities, after integration than they do now, a wider Group is likely to be less homogenous. This does not have to result in halting integration at the current level or in weakening the cohesion of the Group.

Integration Must Be Continuous And Innovative

The Kuala Lumpur Declaration allows certain forms of cooperation between Member States within the institutional framework which go beyond the level of integration already reached by the Group such as in Preferential Trade Agreement, Multilateral Agreement, Trade Cooperation and Free Trade Agreement. The character of the next integration justifies making these amended regulations as practicable as possible. In the Commission's view, these regulations should not be used to reduce the requirements on the trade policy integration matter. In some areas it will be necessary to agree on transition periods so that the new Single Free Trade Policy can gradually apply the full 'acquis' of the Group Member States. On the other hand, there can be no compromise on the content of this 'acquis'. Under no circumstances it should be regarded as a form of closer cooperation among the eight. To keep to the current definition and application of closer cooperation, Member States proposing to establish closer cooperation among themselves in trade and economic matters or in areas of Community policy are liable to risk a veto from the Council meeting at Heads of States and Government level. This veto possibility could induce Member States which wish to cooperate more deeply and precisely to depart from the institutional framework set out in the Declaration.

Another subject to be focused at in connection to the common foreign and trade policy is the mechanism of constructive abstention provided in the 6th Kuala Lumpur Summit 2008 and 24th Commission Meeting in Jogjakarta (November 2007), to see if they are effective actions ensuring that some actions can be planned and executed in the name of the Group.

The Coherence Of The Group Must Be Reinforced

The Group should not reduce its room for manoeuvre in relation to external partners. Today's process of globalisation is obliging the Islamic region to be more vigorous in affirming its cohesion, its particular style of economic and trade organisation, and its shared cultural and ethical background. Several changes need to be contemplated to reinforce the presence and weight of the Group. Speaking with one voice is no longer just one option, it is an absolute necessity. The issue of representation towards the outside in all relevant areas must be examined – in particular in trade and international foreign affairs. The matter of the Group as a legal entity should be addressed in this context.

Strengthening The Political Construction Of D-8 Group

In addition to the issue of institutional conclusions in direct preparation for integration, the Summit Conference will also have to draw institutional conclusions in due course from the work currently in progress on the common D-8 Group Trade and Economic policy, maintaining a coherent institutional

framework which is not detrimental to the Group's actions. At the meeting of the group Council in the Kuala Lumpur Summit, the Heads of State or Governments showed their willingness to develop a genuinely common policy in this field and to amplify and reinforce in this way the 'acquis' in the Kuala Lumpur Declaration regarding trade and economic framework with the Project of 10 Years Road Map as well as Single Free Trade Agreement. Any amendments needed to the Declaration will have to be taken into account by the Summit Conference so that the process of the political construction of the Group could be continuing. Finally, a draft of Single Free Trade Agreement for D-8 Group must be produced in time for the next Council and Commission meeting in which the issue of the relationship between this charter and the Declaration, in line with the conclusion of the D-8 Group Council meeting in Kuala Lumpur will arise.

NEXT STEP: WHAT SHOULD BE DONE?

The Negotiations Environment

The majority of the topics to be covered were discussed in detail at the previous 6th D-8 Group Summit Conference. To advance the work rapidly and meet the target of concluding the Summit Conference, several recommendation by the Kuala Lumpur Summit has been taken into account and some of the agendas were related to trade and economic integration such as:

- Recognising trade is a vital area of international activity equitable with global trading regime;
- Recognise international financial and trade system is an important component of international cooperation and should be fair;
- Reaffirm determination of the Member of States to preserve and promote socio economic cooperation, peace, solidarity, mutual respect and tolerance;
- Take into account the adverse effects of the current global economics crisis, agreed to enhancement efforts, coordination and negotiation processes to enhancement regional innovative cooperation;
- The efforts of the private sector to strengthen collaboration in the global Halal industry, biotechnology, energy as well as in Islamic banking and finance;
- Discussing the growth of intra D-8 trade and the potential view when the application of Preferential Trade Agreement;
- Review the potential of the global Halal industry and progress among D-8 member States such as in the area of standard certification, promotion, research and development and technical cooperation;
- Welcome the adoption of the Annex on the Rules of Origin (RoO) into Preferential Trade Agreement by six member states;
- Also, endorsement Road Map for Economic Cooperation (2008-2018) as a vision for multi industry and sector which is fully organised by the Commission and Secretariat especially in trade and foreign direct investment;
- Endorse the Statutory Document of the D-8 Secretariat and the Rules of Procedure to be effective on the 1st January 2009.

The Council Participation Into Dialogue/Forum With National Commission

The negotiating process at the Kuala Lumpur Declaration showed the value of associating grouping the work of the Summit Conference. There would be advantages in repeating and improving this approach. Actually, the preparatory phase onwards, the Commission and Council will be discussing their respective positions with the aim of bringing these as close together as possible in-

trade relations and agreement matters. Similarly, the Commission and the Council as well as the Secretariat will be contributing to the effort of explaining the issue and the necessary dialogue with national respective Ministry especially in Trade and Commerce Ministry at each of the Member States.

For the analysis of negotiations process in the Council, two other aspects are important which are often neglected by game theorists, namely negotiation as a drama and negotiation as an exchange of argument. The symbolic or dramatic element of Council negotiations or of the adoption of legal instrument has been taken into account by authors with a good familiarity with the EC system (H. Wallace, 1985, 1990; De- housse and Weiler, 1990, p 244)

Cooperation With The Applicant Member States

The reforms process which is now beginning is intended above all to strengthen the structures of a wider Group. Regular discussions should therefore be held with the applicant countries joining into the Group. Inline with this, D-8 Group desires to invite other members of the Organisation of Islamic Conference to participate in the grouping's meetings. Why need they? The reason they needed inside the Group because to share their expertise and complement each other in development initiatives. There might be countries which are doing its bit to complement each other to further boost the intra-trade among D-8 member countries. As result, D8 Group is well- known among the OIC member States as a great importance in areas of trade cooperation, so D-8 must initiate the assistance to other OIC countries to enhancement their intra trade with D-8 Member States as well, although D-8 member states had different political backgrounds, they did not hinder the grouping from pursuing its cooperation in the various fields. To approve this environment and cooperation, for example ASEAN among the Member States, are not competing but helping each other in many areas and sector as well as industries, so D-8 should complement for the betterment of all. Whenever possible, D-8 will try to suppress political issues and concentrate on trade, foreign direct investment, Islamic finance and banking as well as economic issues in the Islamic world.

The Possible Reformation For A New Decade

The next 7th Developing Eight Countries Summit Conference will be held in Nigeria in 2010 will only succeed - and its success is vital to accomplishing the forthcoming trade integration, cooperation in trade policy and enlargement- if the long term vision brought to it, primarily by the Heads of State and Government, prevails over more immediate concerns. The Council, as guardian of the Agreement and Declaration, is only playing its proper role when it asserts that these Agreement and Declaration must evolve today so that the integration Group and enlargement can also function tomorrow. The Council and Commission must hand in hand play its proper role in pointing out that the trade, businesses and economics in the street remain enhancement and want to see D8- Group becomes less impress from them and more productive and innovative. Also; this integration and institutional consequences will determine the trade shape of tomorrow's D-8 Group. The new era demands that genuine reforms are made. The preparation for and conduct of the Summit Conference and Council Meeting should therefore be accompanied by a wide ranging public debate with the people and their

respective national Ministry. The Group Institution, but also and more particularly the Member States, must commit themselves to this dialogue and forum. The Commission for its part will be contributing with a great effort of explaining and debating the issues arise.

TRADE INTEGRATION: WHAT COULD BE GAINED BY MALAYSIANS IN SMALL-MEDIUM ENTREPRENEURS (SMES) SECTOR?

The development of entrepreneurship, as both concept and activity, has been growing in importance in Malaysia. The perceived importance of entrepreneurship to the growth of Malaysia’s economy is evidenced by the sheer amount and variety of supporting mechanisms and policies that exist for entrepreneurs, including funding, physical infrastructure and business advisory services (Ariff and Abu Bakar,2006).

According to Branco (2003), definitions of SMEs vary significantly usually in line with the scale of the economy concerned, its degree of development and the economic structures that are present. Studies define SMEs according to the number of workers employed or according to the scale of operations of the firm. Taking the number of workers as the point of reference, two definitions of SMEs vary between a few and a few hundred workers. SMEs in Malaysia account for a large proportion of the total business in various sectors and contribute a considerable share in terms of GDP. As in many other countries, SMEs in Malaysia is involved in a diverse range of industries. In determining the importance of SMEs in the country, especially in terms of their economic contribution, it is important to classify or categorise the SMEs in Malaysia.

Malaysian SMEs are a vital component of the country’s economic development. The Malaysian Government’s commitment to, and concern for, the development of SMEs has been clearly evident since the early 1970s. The ‘New Economic Policy’ was introduced in 1971, which was aimed to improve the people’s welfare and restructure ethnic economic imbalances. An enterprise is considered to be an SME based on the annual sales turnover or the number of full-time employees, as indicated in Table 1, below. (Saleh & Ndubisi,2007)

Table 1: Definition of SMEs in Malaysia: Source SMIDEC 2007

Category	Micro-enterprise	Small enterprise	Medium enterprise
Manufacturing, manufacturing-related services and agro-based industries	Sales turnover of less than RM250,000 or fewer than five full-time employees.	Sales turnover between RM250,000 and RM10 million or between five and 50 full-time employees.	Sales turnover between RM10 million and RM25 million or between 51 and 150 full-time employees.
Services, primary agriculture and information and communication technology (ICT)	Sales turnover of less than RM200,000 or fewer than five full-time employees.	Sales turnover between RM200,000 and RM1 million or between five and 19 full-time employees.	Sales turnover between RM1 million and RM5 million or between 20 and 50 full-time employees.

Generally, the Malaysian Government had prepared to enhance specific sectors which are really valuable to Malaysia as well as give benefit to the D-8 Group. The preparation by Malaysia is that by introducing the Franchise Industry which it has planned from 2009 until 2020. This particular project will be conducted by the Ministry of Entrepreneurs and Cooperative Development (MECD) through Franchise Blue Print (Malaysian Franchise Blueprint). For that, MECD has been drafting a franchise dispute mechanism which it may tailor from the Malaysian market. The reason for franchising for the Malaysian Government is because the franchising industry possesses a huge potential for intra trade within the D-8 Group Member States. Besides that, the franchising sector is also part of the involvement by small medium enterprise (SMEs) and it was supported by the Secretary General of the D-8 Group, Dr Dipo Alam.

Tambunnan (2007) emphasized the impact of international trade and investment policy reforms on the Indonesian economy, focusing on economic growth and development of the domestic manufacturing industry. However, the implications of these trade and investment policy reforms on the growth of small and medium-sized enterprises (SMEs) remains an under-researched area of both the literature on SMEs in Indonesia and in general. This means that in the D-8 Group itself, among the organisation there should be cooperative activities related with SMEs, to develop the potential of franchising in D-8 regions that are populated by no less than 930 million population. To ensure this particular project is fully successful, the respective institution – MECD - drafted a franchise dispute mechanism that may contribute to a conducive business environment is expected to be ready soon. On the other hand, MECD reported that since July 2008 the companies registered into this project has risen from 311 to 342. Here it shown that, support from the local franchise is needed to ensure that the project will remain high then the purpose for blueprint in this manner is to facilitate efforts to expedite the franchise sector in a more systematic manner.

What Could Be Offered By Malaysian Smes In The Halal Industry For The Muslim World

Inline with MECD project, Malaysia wants the D-8 Group Member States countries to set up a task force to oversee the development of their Halal industry. Halal Industry Development Corporation has developed a task force that would spur and streamline activities in the industry. This means these particular task forces therefore, may facilitate collaboration among Member States countries which will enable them to leverage upon each other's expertise and advantages needed to drive the industry further. Through Business Forum during the D-8 6th Summit in Kuala Lumpur this year, indeed Malaysian SMEs may use this potential forum as a networking to spur joint ventures and collaboration to enhance their competitive advantages.

Be notified that the Halal market is developing, not only for Muslim demands and Islamic Member States to fully capitalise and utilise the expanding global Halal industry, currently it is dominated by non-Muslim countries such as Thailand, India, the Netherlands and others who have similar attention to expand their product and trading transaction. Nowadays, the Halal market is developing well especially in Malaysia, not just as a market is developing, not just as a market for Muslim consumers, but in having a massive cross-border potential to provide high quality product for the Muslim populations.

According to the CEO of Halal Industry Development Corporation (HDC), Dato Jamil Bidin, today, almost two billion Muslims have formed a strong consumer base with US\$610 billion spent annually on Halal food. This is a good response and opportunity for Malaysian SMEs to produce and develop this industry where it is estimated that the global Halal industry is worth about US\$2.70trillion and is growing rapidly at an average of 25 percent annually. It also anticipates an increase in demand from many non-Muslim countries with significant Muslim population and economics growth for example, in India, China, Russia as well as Europe. Whereby, the consumers in these countries have a higher purchasing power as compared to the Muslim countries and being health conscious, demand for quality products. This is truly an opportunity for Malaysian SMEs to grasp the challenges and as a leader in this industry, not only say but approve it!

Through the D-8 Group Summit in Kuala Lumpur, many events related to the Business Forum and Dialogue has been organised to ensure that Malaysian SMEs participate in actively and are well-planned to achieve as a Halal Hub for the Muslim World. In the meantime, the D-8 Business Forum in Kuala Lumpur, gives an opportunity to other industries to build their new era according to their expertise. For instance, Malaysia can focus on three industries such as Halal industry, biotechnology and renewable energy. Besides Malaysian SMEs only focusing on those particular industries, it also may give an opportunity to other D-8 Member States to sell and build their own expertise and build technical assistance to enhance SMEs cooperation between Malaysia and other D-8 SMEs Member States.

Hence, Bangladesh and Indonesia for example are absolutely keen to leverage on Malaysia's expertise in developing Halal standard and experiences in the industry to develop the industries in their countries. To this end, HDC representatives has met governments official from both countries to discuss ways to develop the industry. As known that, HDC play an important role oversees the development of the Halal industry in Malaysia also in D8 Group. Hence, each country in Member States, have different requirements and is looking at Malaysia to assist them in developing this particular industry.

HDC's initiative to develop this industry is not only in Malaysia but more so in large Muslim populace such as Indonesia which has about 240 million people and Bangladesh which has 154 million people. Bangladesh, for instance, is looking at developing its own Halal standards for the Halal Certification. Indonesia also has an abundant supply of raw materials which could be used to produce Halal food and products for exports. Here, Malaysian SMEs through HDC want to find ways to cooperate with Indonesia by using their raw materials and process them into Halal products by Malaysian SMEs.

Besides that, the Malaysian Government through several related agencies also organised a HALAL Malaysia Week in Member States countries such as Bangladesh. This event is to promote and popularise the Halal industry and product in Bangladesh. What could be gained by Malaysian entrepreneurs or SMEs through that particular event? Generally, a promotion and marketing agency for Malaysian entrepreneurs have been successful in co-operating at least with 50 Malaysian SMEs to

participate in the exhibition during the event in Dhaka. As known, Bangladesh demanded Halal products since its Halal market is huge and it is not just for food products but also includes pharmaceutical, cosmetics, services and logistic products as well. Higher impression through this event is that by creating a network between Malaysian entrepreneurs counterparts and Bangladeshi counterparts to develop the Halal market and resources and it is well known that Bangladesh's untapped market where the majority of its consumers are Muslims.

In domestic environment, HDC wants to strengthen the participation of local SMEs in the global Halal industry. Halal issues, not merely about certifying the most number of products possible but also ensuring strong infrastructure to achieve and process. Hence, the Halal training programmes by HDC are key efforts in turning Malaysia into a preferred global support and reference centre. Here, HDC will provide the trainers, training materials and aids for the trainees. In Malaysia, Mydin Mohamed Holdings Berhad have signed memorandum of understanding (MoU) with HDC where at least 300 trainees from Mydin's suppliers attended a course conducted by HDC. Actually, as a local company owned by Muslims, it is part of their responsibility to assist local SMEs to equip themselves with the right knowledge as well as confidence in managing and producing Halal products. Through this project, Mydin becomes the pioneer and leading provider of Halal products.

Finally, the Malaysian Government together with HDC play an important role in steering the development of the Halal industry in the country and its new role as issuer of Halal certification in domestic and international arena. Besides that, HDC may also include several tasks to assist other Member States of D-8 through Malaysia's position as an ideal Halal reference centre for certification, training and research and development as well as incentives for foreign investors.

The Malaysian Smes' Potential In The Halal Industry

Generally, the global Halal industry is huge and worth US\$500 billion to US\$2 trillion. Its potential can be gauged by the rising Muslim population, coupled with the surge in demand for Halal products and services worldwide. Realising the importance of the industry, the Government has embarked on various initiatives to transform Malaysia into a major global Halal hub. Halal products represent an obvious area for promoting intra-OIC trade and Malaysia argued for the creation of a "Halal Standards during the forum in Malaysia's administrative Capital, Putrajaya. Malaysian officials said the forum which was attended by nearly 1,800 officials and businessmen from Malaysia and overseas, was aimed at changing the facts that trade between OIC members accounts for only 12 persons of their overall external trade. (Arnold 2005)

According to the 2007 Budget, Malaysia Prime Minister Datuk Seri Abdullah Ahmad Badawi unveiled unwavering efforts to promote the Halal industry, where RM50 million would be used to set up Halal parks in Pasir Mas, Kelantan, Gambang in Pahang, Chendering in Terengganu and Padang Besar in Perlis. "The SME Bank has also allocated RM20 million to finance entrepreneurs to develop these products," he said (Budget 2007 Highlights).

The importance of Halal or compliance to Islamic requirements in service sector encourages Malaysian academicians (Abu and Roslin 2007) to study critical retail service quality dimension that affects food shopping. This study is therefore a step at identifying the Halal retail service quality dimension that attracts Malaysian Muslim consumers to shop at certain grocery outlets and its implications on strategic retail development.

D-8 Group Initiative Towards Higher Intrade Volume Through 10 Years Business Road Map

Recently, the Developing Eight Countries (D-8) will focus on pushing intra trade and enhancing economic cooperation as its direction in the future. In terms of progress of the 10 years Road Map, since last year, the total trade of D-8 increased to US\$1 trillion with only a little progress from five percent to six percent. However, the main mission for D-8 in the future will still be focusing on the increasing intra trade from five to six percent to fifteen to twenty percent. Sounds ambitious and I personally believe that this is achievable as the modalities for cooperation although in the last nine or ten years (progress) was not so quick, but now the empowerment of the coordination of D-8 cooperation is strengthening. Hence, the respectful leaders who attended the 6th D-8 Group Summit are expected to declare business Road Map for the group charting of its future for the next 10 years.

CONCLUSION

D-8 from developing to developed? It is dream... but is it an impossible dream? Who knows it could be the possible dream or impossible dream of one day for the Group of Eight Islamic Developing Countries (D-8) being called the Group of Eight Islamic Developed Countries. And what more, to be similar to the Group of Eight (G-8) which is now permanently located in Tokyo.

This mission is really ambitious but not impossible because each member of the group has its own advantages in terms of resources and human capital like Iran and Nigeria which were major oil producing countries. Among the D-8 Group, although being a young group formed only about 11 years ago, it has already attracted the attention of some big countries. Even some of the big countries frequently ask for cooperation within the D-8 Group of Member States. Basically, the three leaders of the D-8 Group countries such as Egypt, Nigeria and Indonesia has been invited to the G-8 Summit.

Investment liberalization should also give opportunities to local SMEs to integrate into the global production network. Subcontracting is one way to facilitate this. To develop into highly competitive supporting industries or vendors supplying certain parts of global products is another way. The Government has a very important role to play to support this development, not only through specially-designed schemes but also indirectly through creating a conducive business environment (Tambunnan 2007). Actually, it is a good forum for G-8 to understand and recognise the establishment of the D-8 Group because the D-8 represents about 930 million Muslims. Although the D-8 Member States were from different continents and different political backgrounds they were united in cooperating under the umbrella of the grouping. Now... the world is looking.

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CQ(08)

LIFE CYCLE ASSESSMENT OF BIOLOGICAL MECHANICAL TREATMENT IN SOLID WASTE MANAGEMENT: CASE STUDY IN KAHRIZAK, IRAN

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ABSTRACT

Mechanical-biological waste treatment process commonly produces an organic rich fraction containing nutrients and organic matter which have the potential to improve physical, chemical and biological health of soil. Based on recommended BMT-based integrated MSW management system, life cycle assessment is employed to compare the environmental impact potential (EIP) of two BMT-based waste treatment strategies (BMT-incineration and BMT-landfill) with traditional landfill and incineration in Kahrizak, Iran. The results show that the landfill has a high impact on climate change and acidification whereas using BMT in landfill has decreased the effect on the climate change. Incineration scenario also has the highest impact on fossil fuel, climate change and respiratory inorganic. Meanwhile the usage of MBT-incineration has decreased the effects on climate change and fossil fuels. The result verifies that BMT based MSW management would be environmentally reasonable and helpful to develop integrated MSW management system in Kahrizak, Iran.

Keywords: *life cycle assessment, BMT waste*

INTRODUCTION

The Islamic Republic of Iran (IRI) is a vast country with total land area of 1,648,195 square kilometers divided into 26 provinces. The growth of environmental awareness in Iran has increased the attention that has been paid to solid waste management (SWM) and urban problems in recent years. Solid waste takes a variety of forms and comes from a wide range of sources. It consists of all kinds of wastes arising from social, economic, and industrial activities. During the past 30 years, the quantity and composition of solid waste generated in northern Iran have changed, but the methods of collection, transport, and disposal have remained the same. As a result, some provinces are facing serious environmental problems. Most of the rivers, for instance, are polluted and have been converted to dumping sites for all types of wastes arising from industrial, agricultural, and municipal activities. Within the last few years, environmental issues are increasingly becoming more important in Iran and the world due to the lack of environmental monitoring systems and necessary equipment in many industrial estates of Iran.

Self regulated environmental management tools like the ISO 14000, EMAS and Life Cycle Assessment could be adopted by the industries to structure their environmental efforts to the benefits of themselves and the environment (Sumiani, 2005).

In order to evaluate the environmental effects of a waste management (WM) system, it is necessary to consider all of the processes involved. A successful integrated solid waste management system, according to US EPA (1995), includes three parts: source reduction (including reuse), which is the most preferred method, followed by recycling and composting, and, lastly, disposal in combustion facilities and landfills.

Biological and mechanical treatment (BMT) process, as a pre-treatment method for MSW, which is always followed by compost, incineration and landfill, dates back to 1970s in Europe, has been widely spread in Germany and Austria, and is developing quickly in Italy, UK nowadays (Adnai et al., 2004; Slater and Frederickson, 2001).

BMT can decrease the amount and volume of MSW, stabilize the organic materials and recover the recyclables (Archer et al., 2005; FoE, 2004; SITA, 2004). Currently, the amount of municipal solid waste (MSW) generated in Kahrizak is about 1200 t/day. The great mass of MSW is directly treated by incineration and landfill without any pretreatment, except for compost. Meanwhile, only 5% of MSW generated from Kahrizak are recycled by separation.

Life Cycle Assessment (LCA) is a system analysis tool that has been recently applied to MSW management (Barton et al., 1996; Weitz et al., 1999; White et al., 1999), and it was chosen for evaluation to ascertain if environmental benefits could be obtained through a change in the MSW treatment system. In this paper, LCA is used for comparing environmental impact potential (EIP) of four different alternative waste treatment strategies; these are landfill, incineration, BMT-landfill and BMT incineration.

METHODOLOGY

Life Cycle Assessment (LCA), is a tool which has a global vision of the production system, in all processes and the operations interact, from the extraction of raw materials to the end of life are analyzed in terms of input and output, and also encompasses the burdens associated with resource depletion (ISO, 1997).

The life cycle assessment was performed for four scenarios of waste management: land filling, incineration, BMT land fill and BMT incineration.

The data for the assessment was collected from three different sources:

1. Sampling at solid waste disposal sites (SWDS)
2. Calculating data (DOE, 2007)
3. Environmental pollution control system facilities

Goal and scope definition

The goal of this study is to get the differences of environmental impact between four waste treatment strategies which are: Landfill, incineration, BMT-landfill and BMT incineration. The scope of this study evolves the environmental consequences of solid waste disposal. This assessment uses the LCA software SimaPro 7.1 and the LCA method Eco-Indicator 99 (H). In this study one tone of MSW is chosen as the functional unit for each treatment method during the life cycle assessment.

System boundaries

In an LCA, the choice of system boundaries is crucial for the results and their interpretation. Transportation was assumed to be identical in all scenarios, therefore these transportation stages before the waste treatment were omitted.

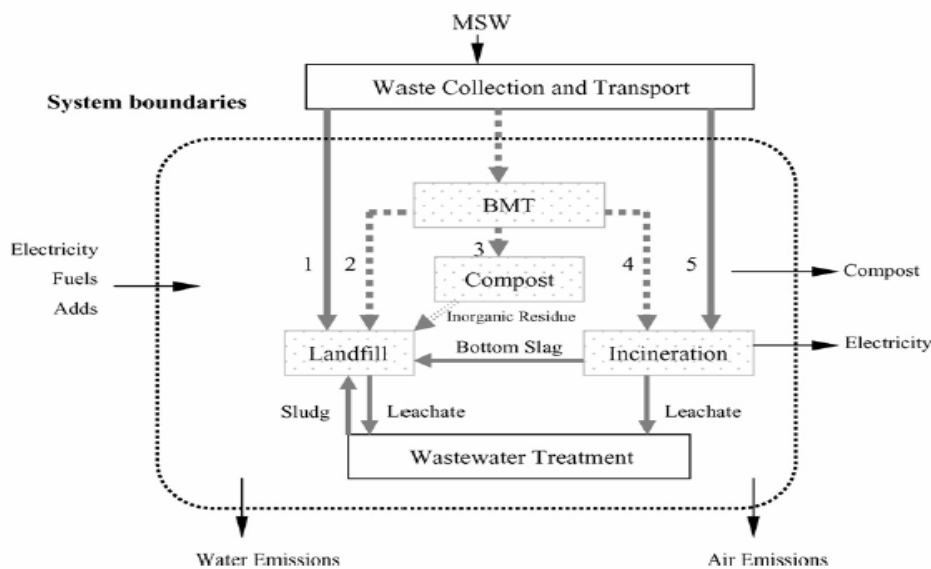


Figure 1: presents the system boundaries of the four different solid waste treatment methods.

RESULTS AND DISCUSSION

Life cycle inventory

Table 1 and Table 2 shows the life cycle inventory of landfill and incineration. Energy consumption, resources input and recovery (electricity, compost) and pollutant emissions to the atmosphere (CO₂, CH₄, SO₂, NO₂, N₂O, H₂S, HCl, NH₃) and water (N, P) were estimated for all scenarios. The primary data come from the incineration plant and landfill yard and Department of Environment in Iran. In this paper, CO₂ emissions from biogenic sources are not counted. According to US EPA (2002), CO₂ emissions from human activity do not enter the natural carbon cycle. Consequently, CO₂ emissions from burning fossil fuel are counted in this work. Likewise, CH₄ emissions from landfills are counted.

Table 1: Physical composition (as wt. %) of MSW (DOE of Iran 2007)

Component	Content
Organic garbage	55.58 %
Paper	5.68 %
Plastic	22.43 %
Wood	2.8 %
Textile	3.3 %
Metal	2.58 %
Glass	4.22 %
Ash	2.59 %

Table 2: Life Cycle Inventory of MSW Iran (DOEBof Iran 2007)

	Landfill	BMT-IAN	Incineration	BMT- INC
Energy (MJ/tMSW)	6.07*10	5.51*10	2.1*10 ²	1.1*10 ²
CO2 (kg/tMSW)	8.94*10	6.35*10	6.1*10 ²	7.8*10
CH4 (kg/tMSW)	2.23*10	1.1*10	3.8*10	1.5*10
CO (kg/tMSW)	2.13*10 ⁻³	3.34*10 ⁻⁴	6.8*10 ⁻¹	7.3*10 ⁻³
NOx (kg/tMSW)	0.07*10 ⁻¹	0.02*10 ⁻²	3.5*10 ⁻¹	4.5*10 ⁻³
SO2 (kg/tMSW)	2*10 ⁻³	1.2*10 ⁻⁴	6.3*10 ⁻¹	7.8*10 ⁻³
HCL (kg/tMSW)	5.4*10 ⁻⁴	3.2*10 ⁻⁵	8*10 ⁻²	6*10 ⁻⁴
HF (kg/tMSW)	2.4*10 ⁻²	1.2*10 ⁻¹	2*10 ⁻²	3*10 ⁻³
H2S (kg/tMSW)	4.8*10 ⁻¹	5.6*10 ⁻²	0.01*10	0.02*10 ⁻¹
NH3 (kg/tMSW)	4.5*10 ⁻¹	3.3*10 ⁻²	0.07*10 ⁻²	0.85*10 ⁻⁴
N (kg/tMSW)	4.8*10 ⁻³	2.3*10 ⁻⁴	4.1*10 ⁻³	5.3*10 ⁻⁵
P (kg/tMSW)	3.1*10 ⁻²	3.64*10 ⁻⁴	3.1*10 ⁻⁴	4.7*10 ⁻³

Life cycle impact analysis

LCIA for this study uses the Ecoindicator 99 method where it listed 11 impacts classified into 3 damage assessments (refer table 3):

Normalization

In order to gain a better understanding of the relative size of an effect, a normalization step is required. Figure 2 shows the impacts of normalization. Four major impacts have been highlighted. The landfill has the highest impact on the human health, while BMT land fill has low effects on the human health.

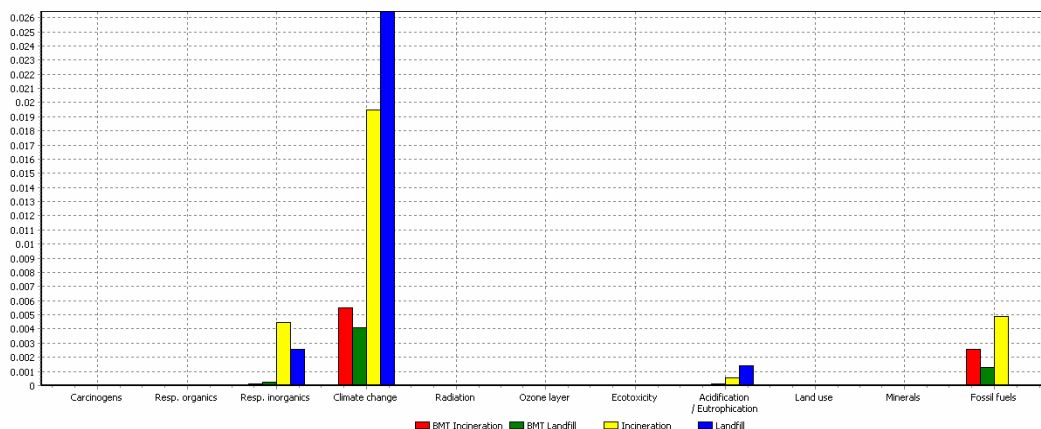


Fig. 2 Normalization of four waste treatment strategies Landfill, incineration BMT-landfill and BMT incineration

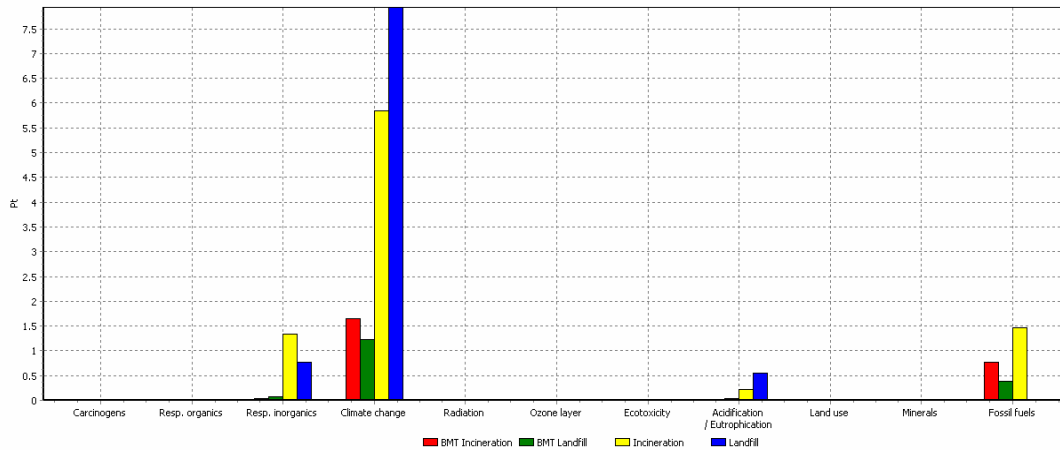


Figure 3: Weighting of four waste treatment strategies; Landfill, incineration BMT-landfill and BMT incineration

Weighting

To facilitate decision making, the normalized impact indicators may be weighted to yield a single, all-embracing impact indicator, through the use of a set of weighting factors. Fig. 3 shows the weighting of four waste treatment scenarios. The highest effect is related to landfill, while BMT landfill has less effect on climate change.

Table 3: Damage Assessment and Impact According to Ecoindicator 99

Damage Assessment	Unit	Impact
Human Health	DALY	Carcinogen, radiation, respiratory organic and inorganic climate change and ozone layer
Ecosystem	PDF*m2yr	Ecotoxicity, acidification, land use
Resources	MJ surplus	Minerals, fossil fuels

Characterization

Figure 4 shows the damage assessment of four waste treatment scenarios. The landfill scenario presents the highest effect on human health (0.000446 DALY) while BMT-landfill has less effect on that (6.65E-05). In addition, the highest effect of Ecosystem quality is related to landfill scenario (7.048573 PDF* m2yr), while BMT- incineration has less effect on the ecosystem (0.586216 PDF* m2yr).

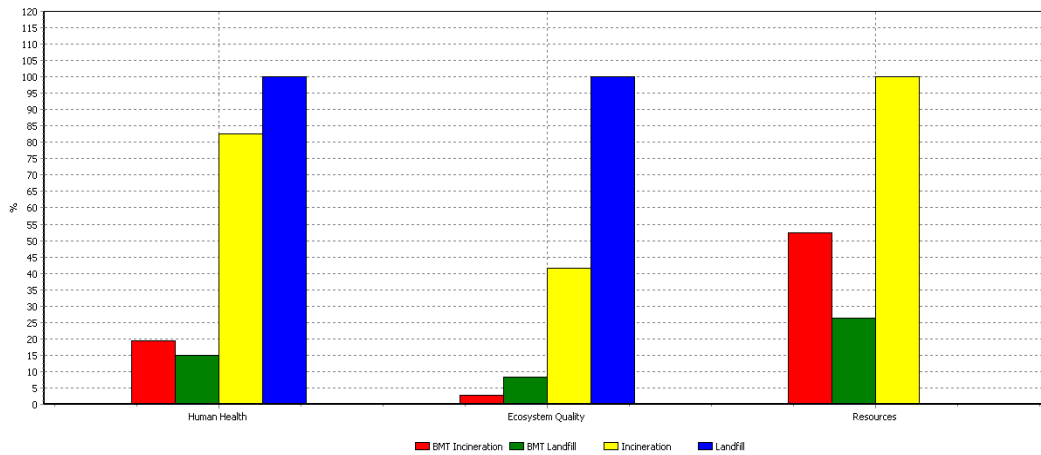


Fig.4 Damage assessment of four scenarios of waste treatment

Figure 4 also shows that incineration scenario has the highest effect on resource (40.95601 MJ surplus), while land fill has no effect. If the impact contributor is analyzed, the impact that contributed to the human health for landfill is from respiratory organics and climate change at the maximum value of 100% (1.14E-6 and 0.000406 DALY). High resource consumption for incineration scenario is generated from fossil fuels impact (40.9 MJ surplus).

Table. 4 Damage assessments from four waste treatment scenarios

Damage category	Unit	BMT Incineration	BMT Landfill	Incineration	Landfill
Human Health	DALY	8.71E-05	6.65E-05	0.000368	0.000446
Ecosystem Quality	PDF*m2yr	0.189081	0.586216	2.937404	7.048573
Resources	MJ surplus	21.45315	10.74608	40.95601	0

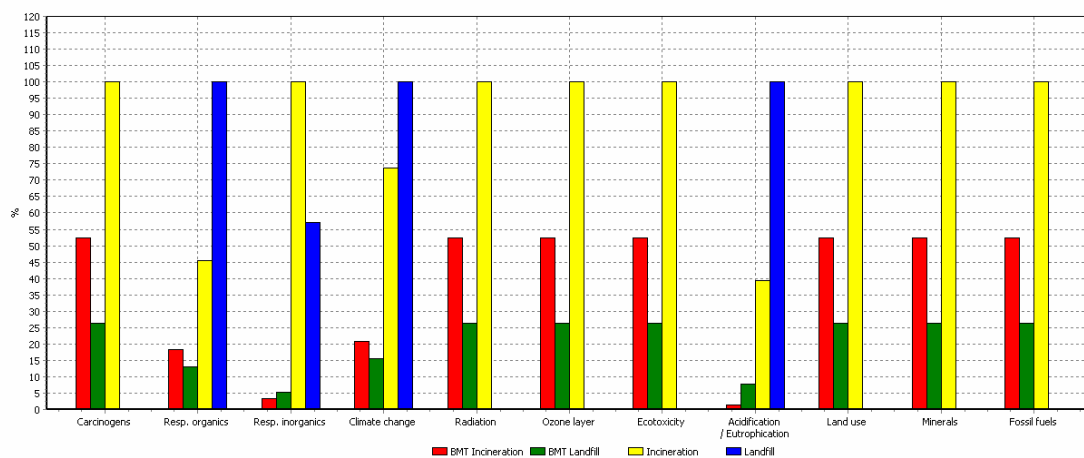


Figure 5: Damage Assessment per impact Categories

Figure 5 shows that land fill scenario contributed 100 % impact to respiratory organics (1.14E-6 DALY), climate change (0.000406 DALY) and acidification (7.05 PDF*m2yr). Moreover, incineration scenario contributed 100% impact carcinogenic (9.13E-8 DALY), respiratory inorganics (6.81E-5 DALY), radiation (2.74E-8 DALY), ozone layer (1.41E-8 DALY), ecotoxicity (0.0577 PDF*m2yr), land use (0.104 PDF*m2yr), minerals (0.0601 MJ surplus) and fossil fuels (40.9 MJ surplus).

Table 5 List of impact contributor for four waste scenarios

Impact category	Unit	BMT	BMT	Incineration	Landfill
		Incineration	Landfill		
Carcinogens	DALY	4.78E-08	2.39E-08	9.13E-08	0
Resp. organics	DALY	2.1E-07	1.5E-07	5.21E-07	1.14E-06
Resp. inorganics	DALY	2.27E-06	3.52E-06	6.81E-05	3.9E-05
Climate change	DALY	8.45E-05	6.28E-05	0.0003	0.000406
Radiation	DALY	1.44E-08	7.2E-09	2.74E-08	0
Ozone layer	DALY	7.41E-09	3.71E-09	1.41E-08	0
Ecotoxicity	PDF*m2yr	0.030233	0.015144	0.057717	0
Acidification/ Eutrophication	PDF*m2yr	0.104369	0.543783	2.775682	7.048573
Land use	PDF*m2yr	0.054478	0.027289	0.104004	0
Minerals	MJ surplus	0.031497	0.015777	0.060131	0
Fossil fuels	MJ surplus	21.42165	10.7303	40.89588	0

CONCLUSION

LCA was successfully conducted on the waste management in Iran. The presented case studies show how the environmental impact of new processes and technologies for the waste management requires the solution of methodological issues as the expansion of system boundaries and of time boundaries. But the required effort is fully counterbalanced by the quantitative and reliable information that an LCA can deliver. The results of life cycle assessment of the four different waste treatment strategies (landfill, incineration, BMT- landfill and BMT incineration) show that land fill has a higher impact on climate change (7.93) and acidification (0.55) while using BMT in land fill has less effect on the climate change (1.23). Incineration scenario shows has the highest impact on fossil fuel (1.46), climate change (5.85) and respiratory inorganics (1.33) while using MBT -incineration decreases the effects on climate change (1.65) and fossil fuels (0.765). The results of this assessment can be useful for solid waste management in Iran. Then LCA methodology is also useful to identify different decision making process.

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CQ(09)

KERANGKA TEORITIKAL STRATEGI PEMBELAJARAN KOPERATIF DALAM SASTERA ARAB. KESANNYA TERHADAP SIKAP, MOTIVASI DAN PENCAPAIAN PELAJAR.

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ABSTRAK:

Kajian ini akan membincangkan tentang kesan pembelajaran koperatif terhadap sikap, motivasi dan pencapaian pelajar yang mempelajari Sastera Arab 2 peringkat STPM. Seramai 120 orang akan di pilih daripada responden kajian di sekolah-sekolah yang mempunyai calon BA2 STPM di Kelantan meliputi pelajar SMKA di bawah Kementerian Pendidikan dan Maahad-maahad di bawah Yayasan Islam Kelantan (YIK). Calon yang terpilih akan mengikuti pembelajaran BA2 STPM berdasarkan dua bentuk pembelajaran iaitu pembelajaran koperatif (PK) dan pembelajaran secara individu atau tradisional (PT). Kerangka teoritikal bagi kajian yang akan dijalankan ini akan mengfokuskan kepada kesan pembelajaran koperatif (pembolehubah tidak bersandar) terhadap ketiga-tiga pembolehubah bersandar iaitu sikap terhadap pembelajaran sastera Arab, motivasi intrinsik dan ekstrinsik pelajar dan pencapaian pelajar cemerlang, sederhana dan lemah melalui perbandingan dengan pembelajaran tradisional. Seterusnya, metodologi kajian meliputi reka bentuk kajian, pemilihan subjek, alat kajian, kajian rintis, prosedur kajian dan cara analisis data akan diterangkan.

Kata kunci: pembelajaran koperatif, pembelajaran tradisional, pencapaian, sikap, motivasi

LATAR BELAKANG KAJIAN

Pendidikan sastera di Malaysia telah melalui beberapa peringkat pengajaran bermula di peringkat menengah rendah hinggalah ke peringkat yang lebih tinggi iaitu peringkat menengah atas (STPM). Dalam konteks pendidikan di bawah Kementerian Pendidikan Malaysia, pada peringkat menengah rendah, pendidikan sastera Arab disepadukan dengan pengajaran bahasa Arab yang lain. Sastera menjadi salah satu komponen bahasa Arab yang akan dipelajari untuk tujuan pengukuhan bahasa Arab. Begitu juga di peringkat menengah iaitu tingkatan empat dan lima, pelajar masih lagi mempelajari sastera sebagai salah satu komponen bahasa Arab. Pembelajaran secara khusus bagi subjek sastera akan bermula di peringkat menengah atas iaitu enam rendah untuk Sijil Tinggi Agama Malaysia (STAM) dan Sijil Tinggi Pelajaran Malaysia.(STPM).

Menurut Termuzi Abd Aziz (1999) dalam ucapan pendahuluannya bagi sukatan Bahasa Arab STPM , pembelajaran bahasa Arab termasuklah puisi, prosa dan prama sastera di peringkat STPM dilihat sesuai dengan situasi semasa dan sejajar dengan dengan peranannya sebagai jambatan ilmu antara pendidikan menengah dan pendidikan di peringkat yang lebih tinggi. Pelajar juga diharap dapat menguasai kecekapan berbahasa setaraf dengan intelek pelajar pada peringkat pra-universiti. Seterusnya, mereka juga diharap dapat mempertingkatkan cita rasa dan kehalusan bahasa Arab melalui penghayatan karya-karya pilihan yang mencerminkan kehalusan seni, budi, pemikiran, intelek, pernyataan rasa dan budaya Arab.

Namun, berdasarkan konsep pembelajaran yang diamalkan dewasa ini, pelajar masih lagi dilihat tidak dapat mencapai objektif pembelajaran yang sebenar. Hal ini terbukti dengan pencapaian pelajar yang lemah. Di peringkat STPM, pelajar kebanyakannya berprestasi rendah dan mempunyai tanggapan yang agak negatif terhadap Sastera Arab. Ketiadaan motivasi untuk belajar berpunca daripada kegagalan untuk meneruskan pembelajaran di peringkat lebih tinggi pada peringkat SPM dan juga kelemahan asas dalam bahasa Arab pada diri mereka. Aspek ini seringkali diabaikan oleh para guru yang hanya berperanan sebagai penyampai maklumat semata-mata. Guru sepatutnya memahami individu yang sedang diajar olehnya. Gregore & Ward (1977) dalam Abdullah Mohd Noor (1998) mengatakan bahawa pendidik yang mahukan kejayaan tugasnya ke atas individu pelajar haruslah memahami makna 'individu', dan mereka mesti menghubungkan cara pengajaran dan cara pembelajaran individu berkenaan.

Kebanyakan pengajaran puisi, prosa dan prama sastera Arab (Balaghah) dipengaruhi corak pengajaran tradisional yang berpusatkan guru. Kaedah nahu-terjemahan menjadi pilihan utama guru dalam menjalankan proses pengajaran (Ahmad Thalal, 1998). Pengajaran juga didominasi oleh guru yang berbentuk sehalu dan tidak memberi penekanan kepada faktor emosi dan afektif pada diri pelajar. Mereka tidak diberi peluang yang sewajarnya untuk menjalankan aktiviti pembelajaran sesama mereka. Tidak semua pelajar dapat mengikuti pengajaran yang diberikan oleh guru dengan baik. Ini dapat dilihat melalui pencapaian pelajar yang kurang memuaskan dalam peperiksaan Sijil Tinggi Pelajaran Malaysia (STPM) (Laporan Peperiksaan STPM 2006 & 2007). Sehingga sekarang, belum ada percubaan pelaksanaan pengajaran berpusatkan pelajar yang bersistem dan teratur. Kalau ada pun hanya setakat perbincangan sesama pelajar yang tidak serius. Dalam keadaan mana sekalipun, guru dianggap sebagai sumber utama dalam pengajian sastera.

Di Malaysia, pembelajaran berpusatkan pelajar telah mula diberi perhatian. Walaupun demikian, pelaksanaan strategi ini masih lagi jauh ketinggalan berbanding dengan apa yang dapat diperhatikan di Barat. Strategi pembelajaran koperatif telah mula dikaji oleh para sarjana tempatan pada peringkat sarjana dan juga peringkat doktor falsafah. Beberapa siri kajian telah dilakukan pada beberapa bidang seperti dalam pengajaran sains, perakaunan, matematik dan sebagainya. Dalam bidang bahasa, tumpuan kajian kebanyakannya dalam bahasa Inggeris sebagai bahasa kedua. Dalam bahasa Arab, beberapa kajian telah dilakukan pada peringkat menengah rendah dan menengah. Namun, belum ada kajian pada peringkat menengah tinggi seperti STPM.

Pembelajaran koperatif pada dasarnya mempunyai asas tersendiri dalam beberapa siri kajian dan tindakan yang dijalankan dalam pembelajaran. Kebanyakannya menekankan peningkatan yang progresif dalam pembelajaran dewasa. Pembelajaran koperatif menganggap bahawa pengetahuan adalah bersifat sosial berbanding dengan individu yang dibentuk oleh komuniti atau individu dan proses pembentukan dan pengujian idea adalah satu proses yang boleh disertai oleh semua (MacGregor, 1990). Pembelajaran koperatif menuntut supaya dilakukan semula proses merangka semula pengajaran tradisional yang memusatkan kuasa pada guru dan sebagai penyampai maklumat. Dalam pembelajaran koperatif, guru menjadi fasilitator atau pemudah cara dalam menjalankan proses

perkongsian maklumat, melibatkan pelajar dalam pembelajaran sesuatu maklumat, autoriti, kepakaran, kuasa dan kawalan dijelaskan (MacGregor, 1990). Pembelajaran koperatif boleh menghasilkan persekitaran pembelajaran alternatif yang baik kepada pembelajaran, kemampuan pembelajaran berkumpulan dan persaingan di kalangan pelajar.

Pembelajaran koperatif merupakan satu proses pembelajaran yang memberi penekanan kepada pembelajaran berkumpulan dalam menguasai bahan pembelajaran yang diberikan oleh guru. (Slavin, 1995). Asas kepada strategi pembelajaran ini ialah kerjasama antara ahli kumpulan dalam menjayakan sesuatu proses pembelajaran. Pembelajaran yang baik berlaku apabila pelajar menjalankan aktiviti pembelajaran dalam satu kumpulan yang distrukturkan dengan sempurna. Johnson, Johnson dan Holubec (1993) menyatakan PK sebagai pembelajaran dalam kumpulan kecil yang terdiri daripada dua hingga empat orang murid yang bersifat heterogen untuk memaksimumkan pembelajaran setiap ahli kumpulan bagi mencapai matlamat bersama. Kagan & Olsen (1992) pula menyatakan PK sebagai aktiviti pembelajaran dalam kumpulan yang berstruktur dan pembelajaran adalah bergantung kepada pertukaran maklumat secara sosial antara ahli-ahli kumpulan. Setiap murid adalah bertanggungjawab terhadap pembelajaran sendiri dan ahli kumpulannya. Selain daripada pencapaian akademik, kaedah ini memberi penekanan kepada pembangunan kemahiran sosial yang diasaskan mengikut pandangan humanistik yang berpendapat pendidikan sepatutnya berpusatkan pelajar dan di bawah kawalan pelajar.

Di bawah PK, keupayaan pelajar yang berkebolehan tinggi dan sederhana boleh dimanfaatkan untuk membantu pelajar yang berkebolehan rendah di dalam sastera Arab. Banyak kajian telah dilakukan di luar negara menunjukkan PK berupaya meningkatkan pencapaian pelajar di dalam pelbagai mata pelajaran untuk semua peringkat pendidikan (Johnson, Maruyama, Johnson, Nelson, Skon, 1981).

PERNYATAAN MASALAH

Prestasi pelajar yang mengambil bahasa Arab di peringkat STPM dilihat berada pada peringkat yang membimbangkan. Secara umumnya, pelajar pada peringkat STPM dikatakan mempunyai asas komunikasi yang lemah, sikap yang negatif terhadap subjek yang dipelajari, ketiadaan motivasi dan tidak biasa dengan strategi pembelajaran yang lebih bergantung kepada daya usaha sendiri. Cara dan gaya pembelajaran mereka tidak sesuai dengan keperluan pengajian peringkat menengah tinggi yang banyak memerlukan usaha persendirian untuk mendapatkan maklumat samada untuk kerja-kerja kursus atau memperkukuhkan maklumat yang mereka dapati daripada kuliah. Kebiasaannya, pelajar pada peringkat STPM terdiri daripada pelajar yang berprestasi rendah di peringkat SPM. Pencapaian yang rendah dalam peperiksaan SPM menyebabkan mereka tidak berpeluang untuk melanjutkan pengajian di peringkat lebih tinggi. Mereka tidak mempunyai pilihan selain meneruskan persekolahan di peringkat STPM.

Jika dilihat dari sudut pencapaian pelajar yang mengambil subjek Bahasa Arab STPM, didapati pencapaian mereka di dalam mata pelajaran ini adalah rendah dan lemah. Berdasarkan Laporan Peperiksaan STPM 2005 (2006), 2496 orang calon dari sekolah seluruh Malaysia yang mengambil subjek Bahasa Arab dalam STPM pada tahun 2005. Daripada jumlah tersebut, 23.3% calon BA telah gagal dengan mendapat gred F, menjadikan bilangan pelajar yang lulus 76.7%. Namun, daripada jumlah pelajar lulus, 58.29% mendapat gred C dan D. Hanya 18.39% pelajar sahaja yang mendapat gred A dan B.

Demikian juga dengan Laporan Peperiksaan STPM 2006 (2007), jumlah calon agak kurang daripada sebelumnya iaitu 1830 orang calon. Daripada jumlah tersebut, 22.5% calon BA telah gagal (gred F), menjadikan bilangan pelajar yang lulus 77.5%. Namun, daripada jumlah pelajar lulus, 52.74% mendapat gred C dan D. Hanya 24.75% pelajar sahaja yang mendapat gred A dan B.

Implikasi daripada keputusan ini, kelemahan ini akan memberi kesan kepada proses pembelajaran mereka jika terpilih untuk melanjutkan pengajian dalam Bahasa Arab di institusi pengajian tinggi dalam dan luar negeri.

Kemerosotan pelajar dalam pencapaian secara umumnya banyak dikaitkan dengan proses pengajaran guru dalam kelas. Laporan Penilaian Kurikulum Baru Sekolah Menengah (KBSM) yang dibuat oleh para pensyarah maktab-maktab perguruan di Malaysia mendapati sebilangan besar guru-guru tetap dan kekal mengamalkan gaya pengajaran sehalu “chalk and talk “ (Abdullah Mohd Noor, 1998). Kenyataan ini disokong Jemaah Nazir Sekolah (1992) yang menjelaskan bahawa guru masih kekal dengan peranan lama mereka sebagai pengajar. Tumpuan kepada peperiksaan semata-mata tanpa penyesuaian kepada gaya pembelajaran pelajar menyebabkan kemerosotan dalam pencapaian akademik mata pelajaran tertentu dan merupakan satu faktor menyebabkan matapelajaran itu tidak diminati (Abdullah Mohd Noor, 1998).

Mowafak Abdullah Ahmed Alkusairi (1994) mendedahkan pendekatan pengajaran secara logik (berpusatkan guru) didapati kurang berkesan dalam proses mengajar bahasa Arab sebagai bahasa kedua. Azlan Abd. Rahman (2007) menyatakan sebahagian guru bahasa Arab masih sinonim dengan kaedah nahu tradisional yang tidak banyak menyumbang kebaikan terhadap sistem dan proses pengajaran yang diinginkan. Pengajaran sastera Arab menggunakan kaedah nahu-terjemahan (Ahmad Thalal:1998) dengan memberi penekanan kepada menerangkan makna perkataan, memahami makna umum syair dan menerangkan bentuk-bentuk keindahan (balaghah) yang terdapat dalam teks (Mohd Solahuddin Mujawir, 2000). Konsep pengajaran sebegini adalah kaedah tradisional berpusatkan guru dan tiada penglibatan pelajar dalam proses pembelajaran. Kaedah ini tidak membantu pelajar mempraktikkan gaya pembelajaran berkesan (Abdullah Mohd Noor, 1998). Pelajar hanya berperanan sebagai penerima yang pasif. Mereka tidak diberi peluang untuk mengemukakan idea atau pendapat berkaitan isi pengajaran. Dalam keadaan ini, aspek psikologi pelajar telah diabaikan. Konsep pengajaran sebegini telah diwarisi turun temurun tanpa ada usaha untuk memambahbaikan dalam proses pengajaran.

Dalam bidang pengajian Balaghah di peringkat STPM, Abdullah Tahmin (1995) menyatakan bahawa Balaghah yang diajar di sekolah-sekolah di Malaysia adalah dalam bentuk teori dan kaedah. Ini merupakan satu kerugian besar kepada pelajar kerana nilai sebenar Balaghah tidak didedahkan kepada mereka dan yang merugikan lagi ialah cara pengajaran ilmu itu sendiri. Abdul Hakim Abdullah (2003) menyatakan kebanyakan guru yang mengajar Balaghah berpendapat kandungan silibus peringkat STPM lebih cenderung kepada hafalan kaedah dan contoh, tidak menekankan aspek penggunaan kaedah dan tidak menekankan aspek pemupukan kemahiran-kemahiran bahasa Arab secara keseluruhannya. Pengajaran guru lebih berpusatkan guru dan berorientasikan peperiksaan. Azhar Muhammad dan Abdul Hafiz Abdullah (2006) pula mendapati guru didapati cenderung menggunakan bahasa Melayu dalam pengajaran berbanding bahasa Arab.

Salinah Mohd Yusof (1998) menyatakan sikap dan minat seseorang pelajar boleh membawanya mencapai kejayaan dalam pembelajaran. Pelajar yang lemah dalam dalam pencapaiannya seringkali dikaitkan dengan sikap yang negatif terhadap subjek Sastera Arab dan corak pengajaran yang diamalkan oleh guru. Kebanyakan pelajar yang mengambil sastera Arab di peringkat STPM tergolong dalam golongan pelajar yang lemah konsep sendiri, lemah pencapaian dan lemah dari aspek kognitif dan perhubungan sosial. Menurut Aminah Ayob (2003), pelajar yang lemah adalah mempunyai keyakinan yang rendah manakala pelajar berjaya mempunyai sifat yakin diri dan suka berdikari. Sikap pelajar yang negatif terhadap sastera Arab juga dikaitkan dengan persepsi sastera sebagai tidak praktis, tidak komersil dan hanya bagi orang yang tidak berpijak di bumi yang nyata. Bagi golongan pelajar yang lemah penguasaan bahasa Arab, subjek sastera Arab dilihat sebagai sukar dan tidak mampu dikuasai oleh mereka khususnya untuk tujuan peperiksaan. Mereka beranggapan subjek ini sebagai 'killer' dan mereka tidak akan dapat mencapai keputusan yang baik dalam peperiksaan.

Dalam pembelajaran bahasa, sikap dan motivasi adalah berkait rapat antara satu sama lain. Para pelajar yang mempunyai sikap yang positif dan tinggi tahap motivasinya akan berjaya menguasai bahasa sasaran dan begitu juga sebaliknya. Dalam erti kata lain, sikap seseorang terhadap sesuatu bahasa mempengaruhi motivasinya untuk belajar bahasa tersebut (Gardner & Lambert, 1972; Jamali Ismail, 1992). Kajian Ahmad Thalal (1998) mendedahkan 90% daripada 225 orang pelajar berpendapat subjek ini sukar dipelajari dan difahami. Abdul Hakim Abdullah (2003) juga mendapati pelajar kurang berminat dalam pengajaran Balaghah di peringkat STPM di sebab beberapa masalah seperti bahan rujukan sukar diperolehi, tidak dapat dipraktikkan apa yang dipelajari, kerumitan isi pengajaran, contoh kerap tidak difahami dan sebagainya.

Dalam konteks pelajar sastera Arab di peringkat STPM, motivasi yang rendah dikaitkan dengan kelemahan mereka dalam menguasai isi pembelajaran. Keputusan yang rendah di peringkat STPM tidak dapat menempatkan mereka seiring dengan rakan mereka yang mendapat keputusan yang cemerlang. Pilihan yang ada hanyalah meneruskan pembelajaran di peringkat STPM dengan motivasi dan keinginan untuk belajar yang minima. Motivasi dalaman "intrinsic" yang dapat dipertingkatkan dengan minat dan bacaan yang meluas kepada sastera dalam diri mereka juga berada pada tahap yang minima.

Walaupun kaedah pengajaran berpusatkan guru merupakan satu-satunya bentuk pengajaran tunggal bahasa Arab yang diguna pakai semenjak dahulu lagi, dalam konteks pengajaran dan pembelajaran sekarang, ia dilihat memerlukan kepada pengubahsuaian. Penekanan kepada aspek kognitif semata-mata dalam pengajaran tidak mencukupi untuk menghasilkan bentuk pengajaran dan pembelajaran yang berkesan. Aspek afektif seperti sikap dan motivasi tidak diberi perhatian yang sewajarnya oleh para pendidik. Kajian sarjana moden sekarang ini banyak membuktikan aspek ini memainkan peranan yang penting dalam pembelajaran. Pembelajaran berpusatkan pelajar perlu digabungkan dengan pengajaran guru bagi menghasilkan pembelajaran yang bermakna.

KERANGKA KERJA KAJIAN

Strategi PK memberi kesan kepada pencapaian, sikap dan motivasi pelajar berasaskan kepada beberapa teori daripada pelbagai disiplin akademik. Kerangka konseptual pembelajaran koperatif adalah berdasarkan kepada bidang yang berlainan seperti falsafah pendidikan (Dewey, 1943), psikologi kognitif (Piaget, 1926; Vygotsky, 1978), psikologi sosial (Deutsch, 1949; Lewin, 1935) dan teori humanis (Kohn, 1986; Sharan, 1990). Teori ini dapat disimpulkan kepada tiga perspektif iaitu perspektif kognitif, motivasi dan afektif.

Perspektif Kognitif

Teori kognitif merujuk kepada kesan tindakan bersama itu sendiri (Slavin, 1995). Teori kognitif ini adalah berasaskan kepada dua bidang psikologi, iaitu teori perkembangan (Developmental) dan penghuraian kognitif (Cognitive Elaboration).

Dalam teori perkembangan, Slavin (1995) menyatakan bahawa tanggapan asas interaksi di kalangan kanak-kanak terhadap tugas yang sesuai akan meningkatkan penguasaan mereka terhadap konsep kritikal. Teori ini telah dikembangkan oleh usaha Piaget dan Vygotsky, khususnya konsep Vygotsky (1978) terhadap Zon Perkembangan Proksimal (ZPD) yang menyatakan pembelajaran perlu disesuaikan dengan perkembangan seseorang kanak-kanak. Perkembangan ZPD sepenuhnya bergantung kepada interaksi sosial di kalangan rakan sebaya kanak-kanak. Ini merujuk kepada jurang di antara apa yang boleh dilakukan sendiri oleh pelajar dengan apa yang boleh dilakukan oleh mereka di bawah tunjuk ajar individu yang berkebolehan (Slavin, 1993). Tambahan lagi, Piaget percaya bahawa pengetahuan arbitrari sosial (rambang) seperti bahasa perlu dipelajari melalui interaksi dengan yang lain. Interaksi ini akan membawa kepada konflik kognitif dan penghuraian kepada kekurangan dari sudut kefahaman. Hasilnya, akan muncul kualiti kefahaman yang lebih tinggi (Slavin, 1993). Berdasarkan teori Piaget, interaksi pelajar sesama mereka dalam sesuatu tugas pembelajaran akan membawa kepada peningkatan pencapaian. Apabila interaksi sesama pelajar berlaku, konflik kognitif akan meningkat disebabkan kefahaman yang berlainan di antara ahli kumpulan dan ini akan meningkatkan proses pembelajaran. (Slavin, 1995).

Kefahaman asas di sebalik teori penghuraian kognitif ialah jika sekiranya sesuatu maklumat perlu disimpan dalam ingatan dan dihubungkan dengan maklumat sedia ada, pelajar perlu terlibat dengan pengstrukturkan kognitif atau penghuraian sesuatu material. Berdasarkan teori ini, langkah paling

berkesan untuk mencapai objektif ini adalah dengan menerangkan material ini kepada seseorang (Slavin, 1993).

Teori Gagne (1985) pula mengambil kira peranan yang dimainkan oleh para pendidik dan pelajar. Pada pendapat beliau, apabila objektif pembelajaran jelas dan spesifik, guru mempunyai idea yang baik dalam perancangan pengajaran dan mencungkil kemahiran yang ada pada pelajar. Pembelajaran koperatif menekankan aspek struktur pengajaran yang teratur dan perbincangan isi pengajaran yang spesifik.

Teori kognitif secara umumnya menekankan aspek bersemuka dalam melakukan tugas. Interaksi sesama pelajar akan meningkatkan pencapaian disebabkan pemprosesan maklumat yang aktif. Daripada perspektif ini, peluang pelajar untuk berbincang, berdebat, membuat persembahan tugas dan mendengar pandangan rakan sebaya adalah elemen penting dalam pembelajaran koperatif. Pelajar belajar daripada rakan sebaya mereka kerana dalam perbincangan kumpulan, konflik kognitif akan timbul dan huraian yang pelbagai akan memperkayakan pengetahuan pelajar.

Perspektif Motivasi

Slavin (1993) menyatakan bahawa pendekatan kohesif sosial adalah berkaitan dengan perspektif motivasi dan menegaskan bahawa kesepaduan kumpulan adalah faktor penting dalam menjelaskan kesan pembelajaran berkumpulan ke atas pencapaian. Apabila setiap pelajar dalam kumpulan mengambil berat rakan yang lain, akan wujud motivasi intrinsik untuk membantu satu sama lain. Ikatan dalam kumpulan akan meningkatkan proses menggalak dan membantu ke arah perlakuan yang dikehendaki. Johnson dan Johnson (1994b) menyatakan hubungan dalaman yang positif yang terhasil daripada pembelajaran berkumpulan membantu dalam peningkatan motivasi kumpulan. Kajian Johnson & Johnson (1994) dan Slavin (1995) dan Gnagey (1992) juga mendapati pembelajaran koperatif memberi kesan kepada pencapaian pelajar pada semua aras pencapaian pelajar. Slavin (1996b) merujuk kepada beberapa kajian yang telah dijalankan dan merumuskan kesan pembelajaran adalah sama kepada pelajar cemerlang, sederhana dan lemah. Di peringkat kolej, Hampton dan Grudnitski (1996) melaporkan bahawa pelajar lemah lebih mendapat faedah daripada pembelajaran koperatif.

Merujuk kepada usaha yang dilakukan oleh Lewin (1935, 1948), Johnson dan Johnson menyatakan bahawa terdapat tekanan dalaman di antara ahli kumpulan yang merangsang tindakan ke arah menyelesaikan matlamat yang dikehendaki. Ini adalah berdasarkan tanggapan bahawa hasil adalah bergantung kepada perlakuan setiap pelajar dan akan bermotivasi untuk membantu rakan yang lain untuk mendapat ganjaran. Dengan kata lain, insentif kumpulan akan mendorong pelajar untuk menggalakkan perlakuan ke arah pencapaian matlamat di antara ahli kumpulan. Berasaskan tanggapan pelajar melaksanakan sesuatu pembelajaran adalah untuk mencapai tujuan tertentu, adalah dapat dijangkakan mereka akan lebih bermotivasi untuk mencapai kejayaan akademik dalam kumpulan mereka (Slavin, 1993). Seseorang boleh membuat tanggapan bahawa apabila seseorang pelajar telah

melakukan peningkatan dalam pencapaian berbanding sebelumnya, mereka akan lebih bermotivasi untuk melakukannya pada masa hadapan.

Berasaskan teori di atas, Johnson dan Johnson (1994) menegaskan pembelajaran koperatif berfungsi dari dua arah hasil kewujudan saling bergantung positif. Mereka menyatakan kerjasama ahli kumpulan akan membawa kepada kepercayaan kepada ahli kumpulan. Ini memberi kesan kepada semangat bekerjasama. Seseorang kebiasaannya akan mempercayai ahli kumpulan mereka dan akan lebih bekerjasama dengan mereka yang dipercayai. Dalam situasi kompetitif, persaingan akan meningkatkan keinginan seseorang untuk menang dan meningkatkan perbezaan penguasaan. Dalam pembelajaran individu, usaha individu adalah berlaku melalui proses menjauhi pelajar lain.

Menurut kajian Condry dan Chambers (1978), kepada pelajar yang diberikan satu set tugas berbentuk intelektual, pelajar yang mempunyai motivasi intrinsik yang tinggi menggunakan pengumpulan maklumat secara logik dan strategi penyelesaian masalah berbanding dengan pelajar bermotivasi ekstrinsik.

Pelajar yang mempunyai motivasi intrinsik yang tinggi akan bekerja keras untuk mendapat markah yang tinggi kerana ini adalah ganjaran bagi mereka (Maehr & Braskamp, 1986). Mereka melakukan segala aktiviti pembelajaran untuk diri mereka sendiri dan mendapatkan keseronokan daripada segala kerja yang dilakukan dengan sempurna.

Menurut Gagne (1985), Martin dan Briggs (1984) menyatakan bahawa terdapat bukti empirikal menunjukkan bahawa motivasi positif dengan signifikannya mempengaruhi pencapaian.

Perspektif Afektif

Teori ini adalah berdasarkan kepada falsafah pendidikan Dewey (1943) dan teori humanis (Kohn, 1986; Sharan, 1990). Perspektif ini menonjolkan motivasi intrinsik berbanding dengan motivasi ekstrinsik. Ahli humanis percaya bahawa pembelajaran berkumpulan dalam suasana yang tidak terancam akan membawa kepada kepada pembelajaran yang semulajadi.

Menurut Dewey (1943), pendidikan sebenar akan datang melalui cara merangsang keupayaan kanak-kanak menurut tuntutan situasi sosial untuk belajar sendiri. Situasi sosial ini akan memberi kesan kepada kemampuan mereka untuk menyelesaikan masalah dalam kehidupan mereka. Kurikulum yang dirangka perlu memberi kaedah kepada mereka untuk berinteraksi dengan rakan sebaya. Sebagai ahli sosial, kemampuan untuk bekerjasama dengan rakan membolehkan mereka belajar sesuatu dan menggunakannya dalam kehidupan sebenar.

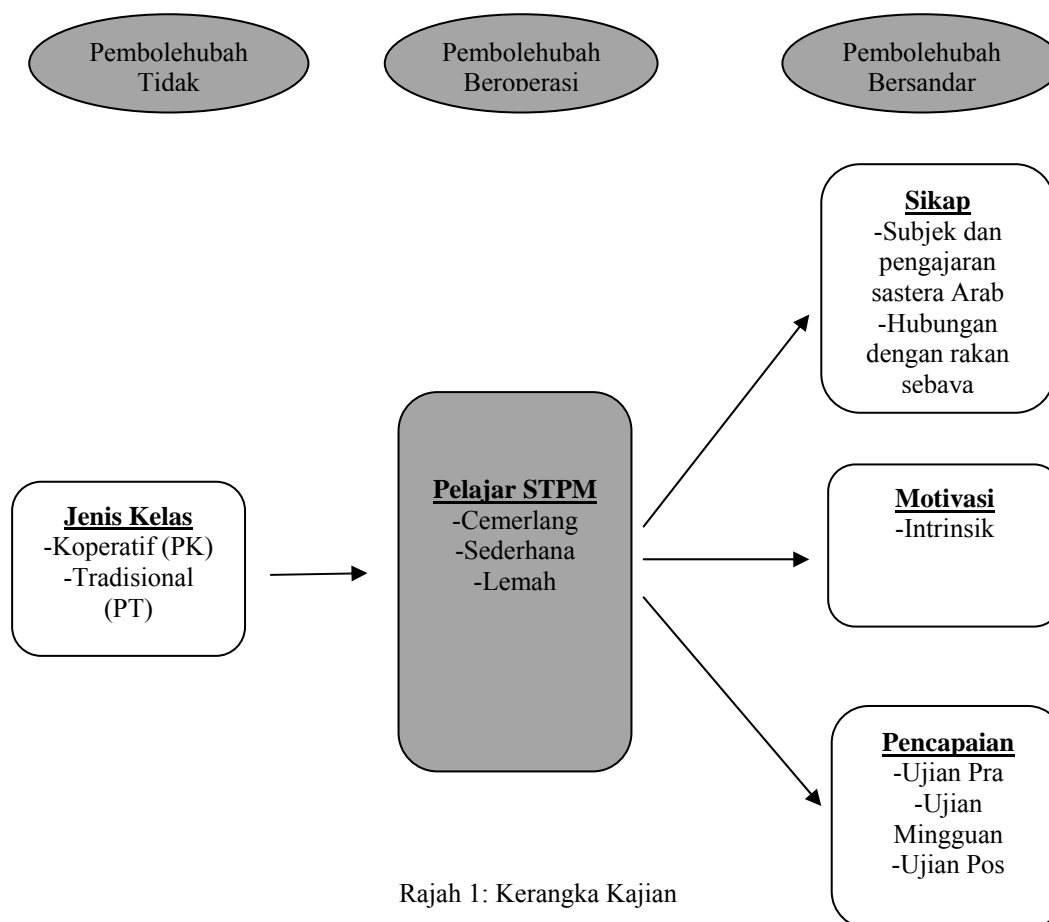
Menurut Boekaerts (1993), sekiranya matlamat dalam sesuatu pembelajaran adalah penting tetapi pelajar merasakan mereka merasakan diri mereka tidak dapat mencapai matlamat tersebut, tekanan emosi negatif akan timbul seperti runsing, marah dan kecewa. Dengan demikian, mereka akan memilih tindakan lain seperti mengelak kegagalan dan mengurangkan stres. Sebaliknya, jika seseorang pelajar

merasakan diri mereka dapat memenuhi tuntutan sesuatu tugas, emosi positif akan muncul dan proses untuk menguasai sesuatu tugas akan akan wujud.

Berdasarkan model beliau ini, emosi marah atau kerisauan yang terhasil daripada ketidakmampuan mereka untuk memenuhi tuntutan sesuatu tugas akan mendorong mereka memilih mekanisma tertentu. Dalam pembelajaran koperatif, mekanisma yang dipilih ialah dengan berdiam diri dan membiarkan rakan sekumpulan yang berkemampuan melakukan tugas yang tidak dapat dilakukan oleh mereka.

Kerangka kerja dan struktur tidak melalui satu perspektif teori yang khusus. Teori yang mendasari pembelajaran koperatif merangkumi Teori Piaget dan Vygotsky, Slavin dan Johnson yang berasaskan teori Lewin dan Deutsch dan falsafah pendidikan John Dewey akan membekalkan perspektif teoritikal untuk kajian ini.

Kerangka kerja bagi kajian ini adalah seperti berikut:



Rajah 1: Kerangka Kajian

OBJEKTIF KAJIAN

Kajian kuasi eksperimen ini dijalankan adalah berdasarkan tujuan-tujuan berikut:

1. Membuat perbandingan kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap sikap terhadap pembelajaran sastera Arab dan hubungan dengan rakan sebaya.
2. Membuat perbandingan kesan PK dan PT terhadap motivasi intrinsik pelajar.
3. Membuat perbandingan kesan PK dan PT terhadap pencapaian pelajar cemerlang, sederhana dan lemah.

PERSOALAN KAJIAN

Persoalan kajian bagi objektif kajian ini adalah seperti berikut:

1. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap sikap pelajar terhadap subjek dan pembelajaran sastera Arab?
2. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap sikap pelajar terhadap rakan sebaya?
3. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap motivasi intrinsik pelajar?
4. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap pencapaian pelajar-pelajar cemerlang?
5. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap pencapaian pelajar-pelajar sederhana?
6. Adakah terdapat perbezaan kesan strategi PK dan PT terhadap pencapaian pelajar-pelajar lemah?

HIPOTESIS KAJIAN

Berasaskan kepada objektif kajian yang dinyatakan di atas, beberapa hipotesis kajian telah dibina:

- Ho1: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap sikap pelajar terhadap subjek dan pembelajaran sastera Arab.
- Ho2: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap sikap pelajar terhadap rakan sebaya.
- Ho3: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap motivasi intrinsik pelajar.
- Ho4: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap pencapaian pelajar cemerlang.
- Ho5: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap pencapaian pelajar sederhana.
- Ho6: Tidak terdapat kesan pembelajaran koperatif (PK) dan pembelajaran tradisional (PT) terhadap pencapaian pelajar lemah.

METODOLOGI KAJIAN

Rekabentuk Kajian

Kajian ini dilaksanakan untuk melihat kesan kaedah pengajaran dan pembelajaran koperatif (PK) terhadap aspek sikap, motivasi dan pencapaian pelajar yang mengambil subjek Sastera Arab meliputi Sejarah Kesusasteraan Arab, kajian puisi, kajian prosa dan kajian Prama Sastera Arab (Balaghah). Kesan pembelajaran menggunakan strategi ini akan dibandingkan dengan strategi pengajaran dan pembelajaran tradisional berpusatkan guru. Kajian ini dijalankan di dalam kelas persekohan di beberapa buah sekolah menengah Arab Kementerian Pendidikan Malaysia (SMKA) dan Yayasan Islam Kelantan (SMAN). Konsep pengajaran dan pembelajaran di sekolah-sekolah ini masih menggunakan kaedah pengajaran nahu-terjemahan berpusatkan guru menyebabkan sebahagian daripada kelas yang terlibat dipilih untuk menggunakan kaedah pengajaran PK dan selebihnya menggunakan kaedah pengajaran NT.

Kajian ini adalah menggunakan dua bentuk kajian iaitu kajian kuantitatif dan kajian kualitatif. Bentuk kajian kuantitatif menggunakan kaedah kuasi eksperimen dan kaedah tinjauan, manakala kaedah kualitatif menggunakan kaedah temubual dan pemerhatian. Kedua bentuk kajian ini digunakan untuk menjadikan mendapatkan maklumat yang menyeluruh meliputi pelbagai sudut.

Kaedah kuasi-eksperimental yang digunakan ini menggunakan reka bentuk ujian pra-pasca bagi kumpulan-kumpulan tidak seimbang (Non-equivalent groups pre-post test design) (Cua Yan Piau, 2006) digunakan kerana reka bentuk penyelidikan ini menggunakan responden yang tidak dapat diperolehi melalui prosedur pilihan rawak. Kaedah kajian ini sesuai untuk kajian yang mengekalkan ciri-ciri semula jadi responden dan variabel bebas yang yang tidak dapat dimanipulasikan oleh penyelidik. Pelajar akan kekal berada dalam kelas seperti yang diatur oleh pihak sekolah. Kaedah ini sesuai untuk menguji perbandingan kesan dalam pelbagai situasi di mana teknik eksperimen yang sepenuhnya tidak dapat dilakukan (Newman, 1991).

Kaedah kuasi eksperimen ini bagi kumpulan-kumpulan tidak seimbang ini menggunakan dua kumpulan bebas yang berlainan bagi membentuk dua kumpulan kajian iaitu kumpulan kawalan dan kumpulan eksperimen. Kumpulan ini dibentuk berdasarkan ciri-ciri yang hampir sama sebagai kumpulan kawalan dan kumpulan eksperimen tanpa menggunakan prosedur pengagihan rawak. Walaupun demikian, antara ciri-ciri yang mungkin memberi kesan kepada hasil kajian ialah tahap kebolehan pelajar dalam menguasai mata pelajaran sastera Arab. Oleh yang demikian, ujian pra diperlukan untuk menentukan tahap kebolehan pelajar bagi tujuan penyelerasan perbezaan asal antara kumpulan dan juga pembahagian pelajar cemerlang, sederhana dan lemah.

Reka Bentuk Kajian Kaedah Kuasi Eksperimen Kumpulan Tidak Seimbang

Kumpulan rawatan (PK)	U1	O	U2
Kumpulan kawalan (PT)	U1		U2

PK= Kumpulan Pembelajaran Koperatif

PT=Kumpulan Pembelajaran Tradisional

U1= Ujian Pra sikap, motivasi dan pencapaian.

O= Rawatan.

U2= Ujian pos sikap, motivasi dan pencapaian.

Ujian pra dijalankan untuk menyelaraskan perbezaan asal antara kumpulan PK dengan kumpulan PT. Pembolehubah bebas adalah strategi pembelajaran yang digunakan bagi setiap kumpulan.

Pemilihan Subjek Kajian

Sampel kajian yang akan dipilih adalah berdasarkan jumlah pelajar yang akan mengambil subjek B. Arab STPM pada tahun 2009. Sekolah yang terlibat dalam kajian meliputi Sekolah Menengah Kebangsaan Agama di bawah Kementerian Pendidikan Malaysia dan Maahad di bawah Kelolaan Yayasan Islam Kelantan (YIK). Saiz sampel kajian yang dicadangkan sebanyak seramai 120 orang berdasarkan Jadual Penentuan Sampel Krejcie dan Morgan (1970) .

Kerjasama daripada guru yang mengajar subjek Sastera Arab dan Balaghah diperlukan untuk menjayakan kajian ini. Kajian eksperimen akan dijalankan dalam waktu persekolahan. Permohonan akan dibuat kepada pihak sekolah bagi mendapatkan masa minima satu jam (jadual anjal) bagi tujuan kajian.

Pengagihan subjek kajian secara rawak tidak dapat dilakukan kerana kelas telah ditentukan oleh pihak sekolah pada awal sesi persekolahan. Sebagai alternatif, agihan pelajar ke dalam dua kumpulan kajian yang terlibat dilakukan berdasarkan skor Ujian Awal. Kelas kumpulan PK dan kumpulan PT akan dibahagi sama rata berdasarkan min keputusan yang diperolehi.

Alat Kajian

Ujian Awal

Ujian ini dilakukan untuk mengukur tahap kebolehan pelajar dalam sastera Arab berdasarkan pengetahuan yang dipelajari semasa peringkat rendah dan menengah. Solan yang dirancang meliputi aspek sastera dan balaghah yang telah dipelajari sebelum ini. Soalan objektif menguji kefahaman

pelajar terhadap aspek sastera dan balaghah yang telah dipelajari pada peringkat menengah (SPM) dan (STAM).

Ujian Sikap

Ujian sikap dilakukan berdasarkan item Classroom Life Instrument (CLI) yang telah diubahsuai oleh Ghaith (1993). Beberapa item yang sesuai dipilih dan diubahsuai menggunakan skala sembilan mata.

Ujian Motivasi

Ujian dilakukan menggunakan model yang bertujuan mengukur motivasi intrinsik dan ekstrinsik pada diri pelajar. Alat kajian yang digunakan adalah berdasarkan model Harter (1981) yang telah diubahsuai kepada skala sembilan mata.

Ujian Pencapaian

Borang soal selidik ini digunakan untuk mengukur tahap pencapaian pelajar dalam sastera Arab setelah tamat eksperimen, iaitu pada minggu ke sembilan, berdasarkan pengetahuan yang diperolehi sepanjang eksperimen dijalankan. Soalan dibina sendiri oleh pengkaji berpandukan tajuk yang diajar dalam eksperimen. Soalan ujian akan disemak oleh guru yang berpengalaman dalam bidang ini.

Kajian Rintis

Kajian rintis akan dilakukan terhadap item-item yang dibina bagi borang soal selidik berkaitan ujian sikap dan ujian motivasi. Kajian akan dilakukan pada sekolah-sekolah yang tidak terlibat dengan eksperimen. Borang soal selidik ini akan diuji kebolehpercayaannya menggunakan Ujian Alpha Cronbach dalam SPSS. Item yang rendah nilainya akan dibuang atau diubahsuai mengikut komen yang diperolehi daripada responden.

Prosedur Kajian

Kebenaran untuk menjalankan kajian akan dipohon daripada Bahagian Perancangan dan Penyelidikan Pendidikan, Kementerian Pendidikan Malaysia, Jabatan Pendidikan Negeri Kelantan dan Pejabat Pendidikan Daerah Kelantan. Permohonan juga akan diajukan kepada Yayasan Islam Kelantan (YIK) bagi mendapatkan kebenaran menjalankan penyelidikan di sekolah yang terlibat.

Kunjungan ke sekolah yang terbabit dengan eksperimen akan dilakukan untuk mendapat kerjasama daripada guru yang akan terlibat dalam penyelidikan dan juga untuk mendapatkan persetujuan pengetua.

Penerangan bagi menjalankan kaedah pengajaran PK akan diberikan kepada guru yang terlibat selama satu hari. Sesi penerangan ini akan dikendalikan sendiri oleh pengkaji. Guru yang terlibat dengan kaedah PT juga akan diberikan taklimat pelaksanaan pengajaran dan juga maklumat berkaitan prosedur kajian dan bahan pengajaran.

Bagi menyeragamkan pengajaran bagi setiap kelas, penyelidik akan menentukan tajuk-tajuk yang akan diajar dalam tempoh eksperimen. Persediaan mengajar, nota rujukan pelajar, tugas, soalan kuiz dan bahan bantu mengajar yang lain akan disediakan oleh pengkaji. Sebelum kajian dijalankan, surat persetujuan ibu bapa akan diedarkan kepada setiap pelajar. Kemudian, pelajar akan menjawab Ujian Awal untuk membolehkan agihan pelajar kepada kedua-dua kumpulan eksperimen dapat dijalankan.

Kajian ini akan dijalankan selama lapan minggu berkemungkinan pada sesi kedua persekolahan tahun 2009. Rasional masa kajian ini dipilih adalah berdasarkan kepada jumlah pelajar yang benar-benar akan menduduki peperiksaan bahasa Arab STPM telah mantap. Tempoh ini dirasakan sudah mencukupi berdasarkan tinjauan yang dijalankan oleh Slavin (1983) yang berpendapat tempoh dua minggu sudah memadai untuk menentukan keberkesanan kesan pembelajaran koperatif terhadap pencapaian. Tempoh masa yang panjang ini juga dipilih dengan mengambil kira gangguan yang akan wujud seperti cuti umum, cuti pertengahan semester dan peperiksaan akhir.

Sepanjang tempoh eksperimen, penyeliaan akan dilakukan oleh pengkaji pada kelas kumpulan PK dan PT bagi memastikan pelaksanaan eksperimen berjalan dengan lancar. Perbincangan dengan guru yang terlibat dengan kajian juga diadakan dari semasa ke semasa bagi mengenal pasti masalah dan cadangan untuk mengatasinya.

Pada akhir sesi eksperimen, borang soal selidik akan diedarkan oleh pengkaji kepada pelajar yang terlibat. Penerangan cara menjawab soalan selidik akan diberikan sebelum pelajar menjawab soal selidik tersebut.

Pembelajaran Koperatif

Pembahagian pelajar kepada kumpulan-kumpulan kecil dalam kelas PK adalah berdasarkan kepada panduan yang diberikan oleh Slavin (1995). Berdasarkan Ujian Awal, pelajar akan dibahagikan dalam kumpulan-kumpulan kecil yang terdiri daripada empat hingga lima orang. Setiap kumpulan akan terdiri daripada seorang pelajar cemerlang, dua pelajar sederhana dan seorang pelajar lemah.

Dalam minggu pertama, pelajar kumpulan PK akan diberi penerangan berkaitan pelaksanaan pembelajaran PK oleh guru yang terlibat. Pelajar akan mengikuti sesi suai kenal dan berbincang mengenai nama kumpulan, logo dan slogan kumpulan di atas sehelai kertas manila.

Aktiviti PK akan dilakukan bermula dengan guru menyampaikan kandungan pelajaran untuk satu topik kecil dan menerangkan aspek yang berkaitan dengan isi pelajaran. Seterusnya, pelajar diberi masa untuk membuat tugas secara berkumpulan di dalam kelas. Tugas yang telah selesai disemak sendiri oleh pelajar berpandukan perbincangan bersama guru di dalam kelas. Apabila selesai satu tajuk kecil, pelajar akan menjawab secara individu soalan kuiz pendek yang dijawab dalam jangka masa 10-15 minit.

Markah kuiz adalah dalam bentuk peratusan yang akan dibandingkan dengan skor asas pelajar. Skor asas pelajar ini diperoleh daripada purata markah pelajar dalam ujian semester pertama. Pengiraan mata untuk individu adalah berdasarkan perbezaan skor asas dengan skor kuiz dalam bentuk peratus. Pengiraan mata peningkatan bagi setiap pelajar adalah seperti berikut:

Jika skor kuiz:	Mata peningkatan adalah
100%	30
Lebih tinggi dari skor asas sebanyak 11 dan ke atas	30
Sama atau melebihi skor asas sehingga 10	20
Lebih rendah dari skor asas tidak lebih dari 10	10
Lebih rendah dari skor asas melebihi 10	5

Untuk mengira skor kumpulan, mata peningkatan yang diterima oleh semua ahli dalam sesuatu kumpulan dijumlahkan dan dibahagi dengan bilangan ahli kumpulan yang hadir ketika kuiz dijalankan. Pengiktirafan bagi kumpulan yang berjaya ditetapkan berdasarkan purata mata kumpulan.

Purata Markah Kumpulan	Penghargaan
15-19	Jayyid
20-24	Jayyid Jiddan
25-30	Mumtaz

Kumpulan yang berjaya memenuhi kriteria yang ditetapkan akan diberi penghargaan. Satu pelekat bintang ditampal pada kertas lukisan kumpulan tersebut. Pelekat yang berbeza diberikan berdasarkan pencapaian kumpulan. Aktiviti ini akan dilakukan sepanjang tempoh eksperimen dijalankan.

Pembelajaran Tradisional

Pengajaran yang dilakukan dalam kelas PT adalah berdasarkan kepada bentuk pengajaran yang biasa dilakukan oleh guru yang terlibat. Pengajaran dimulai dengan guru menyampaikan kandungan pelajaran diikuti dengan menerangkan aspek yang berkaitan dengan isi pelajaran. Pelajar mencatat isi pengajaran dalam dalam kertas edaran. Seterusnya, pelajar diberi masa untuk membuat tugas secara individu di dalam kelas. Pelajar menyemak sendiri tugas mereka berdasarkan perbincangan oleh guru. Apabila selesai satu topik kecil, pelajar akan menjawab soalan kuiz pendek dalam masa 10-15 minit.

Pelajar akan diberikan markah dalam bentuk peratus sahaja. Tiada pengiraan skor individu atau pengiktirafan kumpulan. Aktiviti ini akan berterusan sepanjang tempoh eksperimen.

Analisis Data

Data yang diperoleh adalah dalam bentuk kuantitatif dan kualitatif. Data berbentuk kuantitatif akan dianalisis menggunakan SPSS 16.0 meliputi data Ujian Sikap, Ujian Motivasi dan Ujian Pencapaian Pelajar. Data kualitatif yang diperoleh melalui temubual dan pemerhatian yang berbentuk soalan terbuka pula akan dianalisis menggunakan penilaian pengkaji.

Data Kuantitatif

Data akan dianalisis menggunakan SPSS 16.0 menggunakan statistik deskriptif dan inferensi. Statistik deskriptif digunakan untuk menerangkan aspek demografi pelajar manakala statistik inferensi

digunakan untuk melihat perbezaan sikap, motivasi dan pencapaian pelajar. Ujian T Untuk Pengukuran Berulangan dan Ujian Anova Dua Hala akan digunakan.

Data Kualitatif

Data kualitatif akan dianalisis berdasarkan langkah-langkah yang dicadangkan oleh Strauss dan Corbin (1995). Maklumbalas pelajar akan dikategorikan mengikut kategori utama yang terhasil. Maklumbalas pelajar dilihat dari dua aspek iaitu pengalaman positif dan pengalaman negatif berkaitan sikap, motivasi, pelaksanaan PK dan pengajaran guru dalam kelas.

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KNOWLEDGE, ATTITUDES AND BEHAVIOUR OF FIRST YEAR TERTIARY STUDENTS

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ABSTRACT

Enrolment in higher institution of learning provides an opportunity to acquire skills and advancement of knowledge as a preparation for workplace. Adjustment period from teacher orientated school to independent learning at higher institutions however may not be a smooth journey for all. Several empirical researches highlighted that many of these students entered university unprepared for academic tertiary demands and challenges which may then affected their academic performances. This paper discusses the result of a study that evaluates first year student's knowledge, attitude and behaviours as they adjusted to tertiary learning environment. A sample of 195 quantitative method students in their second and third semester responded to Likert response type questionnaires that seeks to examine the relationship between their attitudes, behaviours and knowledge. It is observed that the student's perceptions to first year learning experiences differ significantly according to the programs pursued. Knowledge, attitudes and behaviours between high achievers and average students also differs significantly. However no gender differences were found in knowledge, attitude and behaviour of first year students in this sample. Implications to the finding are discussed.

Keywords: *tertiary first year experiences, survey, achievement, learning, on parametric*

INTRODUCTION

Many Malaysian universities including University Technology MARA have developed various orientation activities and initiatives to facilitate new students enrolled in their programs. These activities are usually designed to help students be better equipped so as to develop a positive social adjustment attitudes and behaviors towards enhancement of academic goals. There are a vast amount of researches on determinant of tertiary student's academic achievement. Researchers nevertheless agree that psychological, educational and sociological factors are major influences on academic achievement of tertiary students (McKenzie, 2002). Bloom (1976) suggested that three key areas contributed to academic success; cognitive entry skills and IQ (50%); quality of instruction (25%); and affective characteristics (25%). Cognitive entry skills and IQ are typically measured by placement scores and grades prior to entry into post-secondary studies. While the quality of instruction is measured by evaluating instructional method, design of the curriculum, textbooks and supplemental materials used. Affective characteristics refers to student's behaviors such as study skills, test-taking skills, locus of control; attitude such as motivations, attitude or engagement in the learning process and socio economic status. In a recent study by Anthony (2000) he suggested that graduating students perceived self-motivation, appreciation of mathematics and good inter-personal communication skills as the most important factors in determining their academic success.

The first year experiences will undoubtedly shape students academic and non academic path. How they perform during the first year remains as one of the most crucial period for academic development and success in the later years. However according to Evans (1999) newly enrolled tertiary students are usually not prepared and equipped with right knowledge and attitude to meet academic and social challenges of higher education. In Malaysian context, several studies have explored tertiary performances predictors. Majority of these studies have focused on using secondary examination grades (SPM) or matriculation grades and reported a moderate correlation between SPM grades and tertiary performances (Ummu Khair et al.,1997; Siti Aishah,2000). Siti Aishah found that among engineering students (graduating cohort 1998-2000) in UiTM Pulau Pinang, 54% of the final semester CGPA scores can be explained from their tertiary higher mathematics grades rather than SPM grades alone. While contribution of affective factors such as motivation, attitude or behaviors towards learning experiences in the first year remain unexplored empirically. This paper attempt to fill this gap by exploring first year tertiary students knowledge, affective and behaviors in learning taking into account programs and gender differences.

LEARNING IN THE FIRST YEAR

Adapting to tertiary learning life style often can be challenging experiences to many students. During this period of transition, students must adjust to new teaching and learning environments as well as different social and physical environments. Numerous studies have examined the role of study skills and student motivation on first year academic achievement levels in various tertiary programs. These studies confirm the importance of student involvement and engagement in learning process. Engagement is consistently reported to be highly correlated to student learning (Hunter and Linder, 2005; Anthony's (2000). In mathematics learning self confidence in mathematics was linked to achievement (Lobsterman, 1988). Those with high self confidence are more likely to succeed in mathematics course than those who with high mathematics anxiety.

Khyasudeen et al., (1995) surveyed 3554 Malaysian university students and found an alarming trend in their study habits and attitude. They observed that 70% of the students had poor study techniques and display the unfavourable attitudes towards their study. Poor time management skills, little peer group interactions, ineffective lectures and tutorials use and had poor note taking skills were among the negative behaviour reported in this study. In addition, a large number of students had poor reading habits and showed no priority in buying books and with little effort in researching for extra references or other academic materials.

Most university offers support services which normally include accommodation, library, clinical, counsellor, and sports facilities etc. for student's conveniences. Research found that knowledge of services and usage affected academic achievement (Rosch, 2003). However, library uses indicated differences between disciplines. Evans (1999) however stressed that it is academic discipline that influences student's use of library services and hence affects their performances. The first year learning transitions to tertiary education are of particular interest to researchers and policy makers. The first year of tertiary study has been identified as the year in which the greatest amount of academic failure occurs

(Williams, 1982; McInnis, 2001). Furthermore the completion of the first year is an indication of an ability to complete degree program and proceed with their career. Therefore, the study on first year experience of students can have a major impact on future study options and work participation.

RESEARCH OBJECTIVES

This study explores the different components of first year learning experiences as perceived by students particularly on the effects of student programs and gender. In addition, this paper also explores how different components of first year learning experiences (FYL) differ between high achievers and ordinary students.

RESEARCH QUESTIONS

The specific research questions guiding this study were as follows:

1. Do first year experiences differ between students from different programs?
2. Do first year experiences differ between genders?
3. How do high achiever attitude, knowledge and behavior differs compared to average students' in this sample?

METHODOLOGY

A survey was administered in class during the first several weeks of the July 2008 semester to students enrolled in an Introductory Statistical Methods at University Technology Mara (UiTM) Kelantan. Students data were collected data in April 2001 in four sessions after their lecture. Two different faculty members taught the four sections. A total of 195 students provided usable responses. The response rate was 96%. Thirty percent were statistics major (CS111 program), Thirty two percent were business majors (BM111 program), while thirty eight percent being finance majors (AC111 program). Student's age ranges from 17 to 18. Seventy three percent (73%) were female while the remaining twenty seven (27%) male. Figure 1 shows program and gender cross tabulations.

Table 1: Program * Gender Cross tabulation

		Gender		Total
		male	female	
program	CS111	10	49	59
	AC110	24	38	62
	BM111	19	55	74
Total		53	142	195

First Year Learning Experience (FYL) Measure

Students were administered the adapted first year learning experiences (FYL) measure from Schrader & Brown, 2008) to assess their knowledge, attitude and behaviors. This inventory consists of 60 items. For each item, respondents indicated on a 5-point Likert scale the extent to which they agreed with each item. The scale ranges from 1 to 5. The inventory consists of three subscales knowledge, attitude, and behaviors. Table 2 show the components and items used in FYL measure.

Table 2: Component of FYL and items

Behaviours component	Description	Items
Academic behaviours	Items pertaining to academic issues such as note taking, academic goal setting and effort.	1,2,3,8,13 4,5,6,7
Decision behaviours	Item related to decision making process such as ethical issues or handling conflict.	9,10,11,12,14
Conscientious behaviour	Items pertaining to issues of appropriate behaviour, health or social.	15,16,17,18
Proactive behaviour	Items reflected initiatives that students take for personal well being.	
Attitude component	Items	Items
Attitude towards tools for academic success.	Items related to general tools of academic success such as diet and exercise.	20,21,27,33,34 23,24,26,29,30
Attitude towards interactions	Items pertaining to interaction in campus.	
Knowledge component	Examples	Items
Knowledge for resources	Items pertaining to use of resources such as technology.	44,45,46, 49,50 38,39,40
Knowledge of academic skills	Items pertaining to academic issues such as academic goal and effort.	51,52,56,57 41,42,44,45
Knowledge for health and wellness	Items referring to issue of personal health and medical issues.	
Decision making knowledge	Items dealt with decision making process understanding influences and outcomes.	

ANALYSIS

According to Siegel, responses to a single Likert item ought to be treated as ordinal data because when using five levels, one cannot assume that respondents perceive the difference between adjacent levels as equidistant. Ordinal data must be analyzed using a non-parametric test (Siegel, 1956). Hence, when treated as ordinal data, Likert responses are analyzed using non-parametric tests, such as the Mann-Whitney test, the Wilcoxon signed-rank test, and the Kruskal-Wallis test.

RESULTS

Table 3 displays the students mean CGPA and standard deviations between the three programs. Students CGPA for program CS111 is the highest compared to others, while program AC110 has the lowest CGPA.

Table 3: Mean CGPA values and Program

Program	Mean	N	Std. Deviation
AC110	2.34	12	.200
BM111	3.07	69	.325
CS111	3.29	28	.380
Total	3.05	109	.421

In order to answer the first research question, it is important to find out how different group of first year students in this study responded as they answer the FYL questionnaires according to each components.

First Year Experiences Between Programs

This section reports how students responded to FYL surveys according to programs. Group responses mean rank for selected items from each components of first year learning experiences are shown in Table 4.

Table 4: Ranks of items with program

Q	Survey question	Group	Mean rank	P value
2	I manage my time effectively	CS111	98.20	.587
		AC110	93.08	
		BM111	101.96	
13	I take good notes in class.	CS111	96.89	.782
		AC110	95.11	
		BM111	101.30	
14	I use computers to work on my course assignments.	CS111	86.91	.006*
		AC110	88.40	
		BM111	112.67	
18	I always work in groups.	CS111	91.93	.003*
		AC110	84.77	
		BM111	113.92	
19	Focusing my effort on my academic work is important to me.	CS111	82.58	.020*
		AC110	107.45	
		BM111	102.38	
22	When making a decision, I should consider ethical factors and implications.	CS111	85.50	.067
		AC110	106.56	
		BM111	100.80	
23	I should avoid rash, spontaneous decision-making.	CS111	82.14	.011*
		AC110	107.97	
		BM111	102.30	
26	I should always resolve conflict responsibly.	CS111	82.86	.037*
		AC110	102.36	
		BM111	105.16	
38	I know how to effectively focus my effort on my work.	CS111	81.06	.011*
		AC110	102.59	
		BM111	107.66	
440	I know how to stay motivated in university.	CS111	83.65	.042*
		AC110	103.32	
		BM111	104.98	
551	I know how to act responsibly when confronted with issues of a sexual nature.	CS111	88.87	.200
		AC110	95.05	
		BM111	104.98	

(Kruskal-Wallis Test , * indicates significant level p value <0.05)

In almost all responses students from BM111 rated highly compared to other groups. However only seven items were significant (Refer to Table 4). While CS 111 students rate low most of attitude, behavior and knowledge items. Surprising fact is students from CS 111 program despite having highest mean CGPA scores among the groups indicated lowest rating in item the item 'I know how to stay motivated in university'.

In order to determine if these results were correlated with students' achievement, non-parametric correlations between CGPA grades (categorized into 4) and attitude, behavior and knowledge components scores were conducted on each of the students' responses. No to weak correlations ($\rho < 0.30$) were found for all the components suggesting that there is no observable relationship between a student's perceived knowledge, attitude and behavior as measured by FY scores and their achievement.

First Year Experiences Between Genders

Mann Whitney test was conducted to see if there were significant differences between male and female on FY learning experiences dimensions. While Mean rank values among male and female or most items shows different responses, none of the values are statistically significant ($p > 0.05$). Responses are selected and summarized in Table 4.

First Year Experiences Of High Achiever Students

In order to address the third research question, we wanted to know how do FY learning experiences of high achievers differ with those from ordinary students. Mann Whitney test was carried out to see if there is any significant differences between high achiever and ordinary students responses in attitude, behavior and knowledge component of FY. Table 6 displays significant results from the analysis.

Table 5 : Mean Ranks of LY Items Between Gender

Q	Survey question	Group	Mean Rank	Sum Rank	P Value
2	I manage my time effectively	Male Female	103.36 96.00	5478.00 13632.00	.361
10	When medical issues arise, I go (or will go) to the university clinic/panel	Male Female	88.54 101.53	4692.50 14417.50	.141
13	I take good notes in class	Male Female	90.96 100.63	4821.00 14289.00	.260
18	I always work in groups	Male Female	99.65 97.38	5281.50 13828.50	.790
19	Focusing my effort on y academic work is important to me	Male Female	92.77 99.95	4917.00 14193.00	.388
30	It is important to use the library's resources to help with my coursework	Male Female	87.75 101.82	4651.00 14459.00	.098
27	I should work towards my long term academic goals	Male Female	87.75 100.50	4651.00 14070.00	.083
49	I know how to use the library's electronic resources to help with my courses	Male Female	86.16 102.42	4566.50 14543.50	.057

(Mann Whitney test * indicates significant level p value < 0.05)

Table 6 : Mean ranks of items between high achiever (HA) and ordinary students (O)

Q	Survey question	Group	Mean rank	Sum Rank	P value
2	I manage my time effectively.	O	92.96	15709.50	.661
		HA	87.37	1310.50	
13	I take good notes in class.	O	95.65	16165.00	.004*
		HA	57.00	855.00	
18	I always work in groups.	O	92.46	15533.50	.899
		HA	86.83	1302.50	
19	Focusing my effort on my academic work is important to me.	O	92.36	15609.00	.303
		HA	94.07	1411.00	
22	When making a decision, I should consider ethical factors and implications.	O	92.88	15603.50	.020*
		HA	82.17	1232.50	
45	I should always resolve conflict responsibly.	O	92.22	15585.50	.001*
		HA	95.63	1434.50	

(Mann Whitney test * indicates significant level p value <0.05)

Four of the items in Table 6 showed high achiever scores significantly higher compared to ordinary students. However, other items were not significant. This analysis shows the importance of taking good notes.

DISCUSSIONS

In the present study, the students' first year learning experiences were examined by looking at their attitude, behavior and knowledge. Similar to other studies discussed, the findings also indicated differences between programmes and gender. The FYL measure used in this study were believed to capture the constructs of attitude, behaviour and knowledge aspect of first year learning experiences. However, attitude and behavior are complex construct and further research need to be done to capture all the hidden elements of these construct thoroughly. The results of this exploratory study suggested that students from different programs experiences different learning experiences. High achiever students also exhibit some attitudes and behaviors that differ from ordinary students. However, it is interesting to note that gender effect was not significant in any of knowledge, behavior and attitude items among these students. Further work need to be done to explore this area.

First year tertiary presents varieties of challenges for students all categories of students. Therefore any programmes of interventions aimed at increasing students study strategies and motivation must be done in the first year to increase the success of students in higher level courses. There are no shortcuts to academic success. Appropriate and adequate preparation must be monitor and maintained at all times. Hence at the beginning of the semester new students must continually be given an overview of learning in the university, an understanding of the academic system and how to manage their learning

are crucial at this stage. All students must be shown the importance of fully utilizing university's facilities to support their studies regardless of their academic programmes and gender.

In addition, there should be ongoing programmes to strengthen students' positive attitudes, general study skills and to develop independent learning. Particular attention must be given to the importance of regular class attendance and the need to balance between social activities and academic life. Currently the students support unit at UiTM Kelantan provides personal and academic counseling to students but these services need to be more widely accessible and carried out in more effective manner. University academicians and administrators must be focused on helping students to become academically prepared while non academic factors taken into consideration to enhance and support their overall achievement.

LIMITATIONS

The FYL inventory relies on self-report in assessing students' first year experiences. In this respect, participants in this survey may want to present themselves in the most favourable light. In addition, the students' CGPA were not verified and are again subjected to self report and students' memory. However, students were reminded to respond to the inventory honestly and confidentiality was assured. Caution must also be taken in generalizing the results to all first year tertiary students at UiTM as the findings may be a particular group of first year students' (cohort July 2008). This is a major limitation in this study as the participants were not randomly selected. Nevertheless, these findings can contribute to the current research literature on how attitude, behaviour and knowledge of first year students relates to their first year academic success.

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ED(02)

THE ROLES OF THE METAFUNCTION OF LANGUAGE AND THE FUNCTION OF METALANGUAGE IN TEACHING AND LEARNING MANDARIN AND ENGLISH AS A SECOND LANGUAGE

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ABSTRACT

Function refers to the potential and competence of a particular thing or action in performing certain tasks. Function of language means the communicative effects to be achieved by a speaker or writer. In linguistics, the notion of metafunction is a core content of Systemic Functional Grammar (SFG) proposed by Halliday (1978, 1979, 1985, 1994, 2004). Metafunction is the function of function. In simple words, the function of language concerns about 'what language does for', whereas metafunction of language concerns about 'how language does what language does for'. According to Halliday, the metafunction of language comprises three functional components of the semantic system: ideational function, interpersonal function and textual function. The ideational function again comprises the experiential function and logical function. Metalanguage is the language for reflection and monitoring of some class of languages, i.e., its function refers to the use of language to describe and examine about the structure and meaning of the identical or different languages. In addition, the function of metalanguage also includes the reflection of the situational norms and social regulations towards language and its usage.

Keywords: *metafunction, function, metalanguage, Mandarin, English*

THE METAFUNCTION OF LANGUAGE AND THE FUNCTION OF METALANGUAGE

The prefix meta- in metafunction and metalanguage has the meaning of reflection. Metafunction of language is the reflection of function about functions of language and metalanguage is the reflection of language about language.

The discussion of metafunction of language is rooted in functions of language. Functions of language usually concern two questions: a. what tasks get done by language? b. In what ways can language work for those tasks?

The first question usually is about the basic function of 'what language is for'. What tasks get done by language refers to what communicative meanings can be generated from the interactive process among the factors of circumstances, activities and participants in a communicative context. On the other hand, the second question 'in what ways can language work for those tasks' is about the potential of a language in the realization of meanings corresponding to the moment (when), the purpose (why), the participants (to whom), the medium and channel (what), and the language competence and effects (to what extent), of a dynamic construction of text in a communicative context. The highly generalized function of language for the process as well as the product of 'what language is for' is called metafunction of language. When we use languages to discuss the nature and possible outcomes of the above questions, the set of those discussions comprise the essence of metalanguage.

Language is a social semiotic system (Halliday, 1978). The existing languages in the world are mediated by sounds and either with or without written words (alphabetical or calligraphic letters) for representing those sounds. Although languages in reality came into existence in the form of sounds and written words, but as a personal internalized thinking and interpersonal communicative tool or resource, it will only have such functions as the meanings carried by the strings of sounds and words that form a meaningful text /discourse. Therefore, it is important to study the meanings of words and the potential formation of utterances of any kind of languages. When we say language has many functions, it normally means functions that can be accomplished by the meanings carried by the sounds or written words of a particular language in a text. For example, in English, “Honey comes here” is different from “I love to eat pancakes with honey”. In example one, ‘honey’ is a term of endearment meaning ‘darling’ whereas in example two, ‘honey’ is the food that bees produce.

We use language to perform many tasks, including making references to things and relationships, depicting phenomena, creating ideas, exchanging information, and reflecting on our thinking process and the existing reality. In the study of language, such language functions can be detailed and categorized in several sub-systems of language from the perspective of meanings (semantics) and the ways in realization of those meanings (phonology and lexico-grammar).

According to Systemic Functional Grammar proposed by Halliday (1978, 1979, 1985, 1994), language is perceived as a resource of making meaning rather than a set of rules for specifying structures. Thus, grammar is viewed as a “system of wording” for creating meanings. The basic unit of analysis in grammar is the text (spoken or written) organized according to the rhetorical context. Therefore, sentences are studied in its discourse environment. At semantic level, there are three metafunctions of language, namely, ideational function, interpersonal function and textual function. They are categorized according to the meaning potential that constitutes in performing the corresponding metafunctions of language (Halliday & Matthiessen, 1999). The table below is a brief summary:

Table 1: Metafunctions of Language Proposed by Halliday (1978, 1979, 1985, 1994)

Metafunction	Definition	Meaning Potential
Ideational function	Refers to the expression of language in speaker’s various experiences towards the real world, including the inner world of his own consciousness.	Ideational meanings related to experiences.
Interpersonal function	Refers to the capability of language in expressing speakers’ identity, status, attitude, motive and their inferences towards things and roles to establish and maintain social relations.	Interpersonal meanings related to participants of discourse.
Textual function	Refers to the competence of language in organizing the ideational function and interpersonal function into text.	Textual meanings that provide features of the context of discourse and cohesion and coherence of a discourse.

Before proceeding further, let us look at what ‘meaning potential’ means. Halliday (1994) claims that there are at least three levels in a meaningful expression through a text, namely: lexico-grammar level (lexis + morphology + syntax), phonological level and semantical level. With regard to speaker’s self-awareness of choosing the appropriate terms (lexico-grammar level) mediated by sound/letters (phonological/ graph logical level) to express information (semantical level), it is realized by a selection of meanings from several sub-systems of language functions that construct the text in line with the speaker’s intention of expression and conform to the social regulations of language usage and formation. Some examples of those sub-systems of language functions are semantic system, transitivity system, mood system, modality system, thematic system, and intonation system. The purposeful selection of such sub-systems of language function are linked by the speaker to form a grand networking of meaning realized in speaker’s choice of wordings and ways of saying. The many options to form the grand networking of meaning in communication is called meaning potential, though there are many factors that come into play their roles and restrict the speaker in determining his/her choice of wording and ways of saying. Such factors are participants’ demographic background (class; gender; age; ethnic identity; educational level; occupation and religious belief), preference of audiences, local culture, social regulations, context of discourse, and speaker’s experience and competence in that language (Grosjean, 1982: 136).

According to Halliday (1994: 15), regarding the meaning of Systemic Functional Grammar, the term “systemic” is used to refer to the view of language as “a network of systems, or interrelated sets of options for making meaning” and the term “functional” is used to indicate that the approach is concerned with purposeful selection of meaning. So, the grammar depicted by Halliday is not focusing on word classes as the formal grammar does, but is rather more concerned with the meaningful expression in systematic ways of saying and wordings, though the traditional grammatical terms have still been used such as theme, mood, modality, transitive, and intonation.

Metalanguage is a language opposite to ‘object language’, it refers to a set of languages or symbols used for the function of analyzing, describing and explaining the object language. In short, it is “language about language” (Reddy, 1979). In teaching Mandarin as a second language in a classroom in UiTM, Mandarin is the object language, therefore Malay or English can be used for the metalinguistic purposes. When people use Mandarin to explain the nature and usage of Mandarin language, then, in this sense, Mandarin can also serve as metalanguage. The set of such metalanguage will include grammatic and linguistic terminologies and symbols like phoneme, morpheme, nouns, adjectives, verbs, transformation-generative grammar, systemic-functional grammar, metafunction, etc. It also includes the simple words from the natural language used in lexicology and lexicography in defining the meaning of words (Wierzbicka, 1996). The term metalanguage was first coined by Alfred Taski (1944) but it is used for the study of logic in the initial stage. Jakobson (1960) later was the pioneer linguist who used the idea of metalanguage in the study of function of language.

MANDARIN AS A SECOND LANGUAGE (MSL) IN UITM

The courses of Mandarin in UiTM mainly mediated via “Hànyǔ Pīnyīn”, i.e., the spelling system resorts to romanized alphabets together with the four symbols used for indicating intonation. At present, students use “Hànyǔ Pīnyīn” to answer the questions in examination paper as well as doing assignments. For instance, to construct the sentence ‘I love you’ in Mandarin, students will write in the romanized spelling form of “Wǒ ài nǐ” rather than put it in Chinese characters “我爱你”. The reason in doing so is because the main objective of the course of MSL in UiTM is to prepare the students with the competence of listening and speaking for simple conversation with the Mandarin speaking community, not for the capability of reading written texts mediated in Chinese characters. For this objective, at its lowest need of the course, students have to master the spelling system of “Hànyǔ Pīnyīn” via the romanized alphabets and four intonation symbols, and use it to create Mandarin text for talking and writing.

In UiTM, students who attend the MSL classroom usually know nothing or know very little about Mandarin. The adult students of UiTM need to learn this language through Bahasa Malaysia or English, the two languages they have acquired and are fluent in. Bahasa Malaysia is the students’ mother tongue, whereas English is a second language that students have learnt from a very young age, and as the common medium for almost all subjects offered in UiTM. As a result, teachers and students often resort to students’ mother tongue to talk, to discuss, and to comment about Mandarin during classroom teaching and learning. Occasionally, teachers do resort to English for repetition of explanation in Malay towards the targeted language (Mandarin) to emphasize meaning or usage of certain Mandarin words and sentences. Hence the discourse in the MSL classroom is basically bilingual or multilingual. Most of the functions of the use of Bahasa Malaysia and English are in fact metalinguistic. They are consciously used by teachers and learners to analyse, argue, clarify, compare, define, describe, depict, discriminate, discuss, emphasize, exemplify, explain, justify, modify, represent, revise, translate and validate the aspects of pronunciation, lexical, syntax, semantic and pragmatic aspect in Mandarin language. It is hoped that with this metalinguistic consciousness in resorting to one’s language and cultural repertoires, students could be aware of and understand better the pronunciation, structure, meaning and usage of the Mandarin language by comparing it to Malay and English languages. We will provide some classroom examples in the following section from various linguistic aspects to elaborate why such metalinguistic awareness is important.

At pronunciation level, many UiTM students experience a great difficulty in memorizing the tone of the Chinese words because both Malay and English are not intonational languages but use intonation for emphasis when asking questions or when making statements. Generally, teachers do not demand very much from students in mastering the intonation aspect of Chinese words. They often tolerate students’ mistakes in pronouncing incorrect tones, but stress firmly on the correctness of spelling and speaking in using the correct alphabets in words. Before we provide one example why students should pronounce correctly in Mandarin for a message that is spelt in romanized form, let us discuss briefly

the spelling system of “Hànyǔ Pīnyīn” and its subtle differences in contrast to the way the Malay words are pronounced.

The pronunciation of vowels a, e, i, o, u, and its combination like “ai, ao, ia, ie, iao, iou, ua, uo” are identical between Malay and Mandarin. The combination of a vowel (or vowels) followed with a nasal consonant ‘n’ and ‘ng’ such as “an, in, ian, en, un, uan, ang, ing, ong, iang, uang” are also identical in Malay and “Hànyǔ Pīnyīn”. However, for the consonants b, c, ch, d, f, g, h, j, k, l, m, n, p, q, r, s, sh, t, z and zh,, the pronunciation in Mandarin is quite close to Malay but yet different, except for 5 letters: f, h, l, m and n which are identical. For instance, the letters “b, d, g” in Mandarin are spelled exactly as “p, t, k” in Malay. Some common examples are, father: 爸爸bàba (=papa), the younger brother: 弟弟didi (=titi), grandfather: 公公gōnggong (=kongkong). But the letters “p, t, k” in Mandarin are spelled exactly as “p, t, k” in English, which stress on the aspirated way of pronunciation. The Malay students often make mistakes in the spelling of letters “p, t, k” in Mandarin in their reading and speaking, because they tend to pronounce without stress on aspirated sound, i.e., they follow the Malay language pronunciation. A male student may encounter an embarrassing moment if he pronounces wrongly for the following sentence to a female friend:

Wo jīnwǎn lái kàn nǐ (I will pay you a visit tonight)
 □ □ □ □ □ (I/tonight/come/see/ you)

If student followed the Malay language to pronounce the word “kàn”, then it will mean “gàn: 干” in Mandarin. The original meaning for “gàn” means doing. However, it is often used by people for the metaphor of a bad motive of ‘doing’ such as ‘to kill’ and ‘to rape’. As a result, because of wrong pronunciation, a good proposal will sound very badly to a woman as it can mean “I will rape you tonight” or “I will kill you tonight”.

At phrase level, the position of the adjective to a noun for Mandarin and English is placed before the noun whereas in Malay it is placed after the noun. Four typical constructions of phrases are shown in Table 2.

Table 2: Four typical constructions of phrases

Mandarin	Malay
1. piàoliang de yīfu (beautiful/clothes)	baju yang cantik(clothes/beautiful)
2. bàba de xiézi (father’s/shoes)	kasut bapa (shoes/father)
3. jīfàn (Chicken/rice)	nasi ayam (rice/chicken)
4. Diāomàn dǎo (Tioman/island)	Pulau Tioman (island/Tioman)

The order for adjective and nouns in Mandarin are similar to English. The particle ‘de’ in example 1 and 2 is used to denote an attribute or possessiveness. Its function is same as ‘yang’ in Malay. But in Malay, it does not need to use ‘yang punya’ for the case of ‘kasut bapa’. When the noun or proper noun is used to indicate attribute but not possessiveness, the word ‘de’ is not necessary, as in example 3 and 4. Students who are not aware of this may construct the phrase like “Selera de Cāntīng” (Selera

Restorant), whereas the correct way of saying is “Selera Cāntīng” as in the structure of example 4. Two common examples of mistakes corresponding to example 3 are “chēzhàn bāshi” (Malay: Perhentian bus) and “Wǎnshang Xīngqītiān” (Malay: Malam Ahad) which should be written as “bāshi chēzhàn” (bus/stop) and “Xīngqītiān wǎnshang” (Sunday/night). These are similar to the English ‘bus stop’ and ‘Sunday night’.

However, at clause level which involves a reference of place for an action to take place, Malay is similar to English but opposite to Mandarin. The example below shows that verb (action) will be placed after the place of occurrence in Mandarin (see Table 3).

Table 3: Different order of words in a clause between Mandarin and Malay

Mandarin	Malay
Zài jiā xiūxi (at/home/rest)	Rehat di rumah (rest/at/home)

So, it is quite common for students to make similar mistakes in the following sentence:

“Wǒmen qù chīfàn zài cāntīng”. (We/go/eating/at/the canteen)

which is a direct translation from the Malay “Kami pergi makan di kantin” which means “We go eating at the canteen”. In Mandarin, it should be “Wǒmen qù cāntīng chīfàn” (we/go/canteen/eating). In such a sentence, Mandarin will organize the words according to the sequence of occurrence, that is, ‘eating’ at the canteen will happen only after we are present at the canteen.

In this short article, it is not our main intention to provide examples of all types of errors made by students in learning Mandarin. Some common examples of students’ error are given here just to stress one point: it is important to cultivate students’ metalinguistic awareness in learning a second language by knowing the difference between the mother tongue and the second language. According to Krashen and Terrell (1983), the teaching materials and learning activities of a second language need to plan for attracting students’ conscious attention in recognizing the language structure. Teachers should prepare learning materials and provide sufficient opportunities for students to verbalize the grammatical rules of the targeted language and explain why it happened to be that way (e.g., Mandarin will organize the words in a sentence according to the order of occurrence). By getting the students involved in the verbalization through modeling, reading, speaking and writing, it will help students to internalize in their mind the grammatical rules and structure of the second language Mandarin or English.

LANGUAGE COMPETENCE, METALINGUISTIC COMPETENCE AND METAFUNCTION LEARNED IN MSL CLASSROOM

In general, the activity of language is a spontaneous process, whereas the activity of metalanguage is a process that needs to take the initiative in knowing, monitoring and improving the effect of language outcome or talk about the linguistic constituents. When a student knows how to correctly pronounce a syllable of a word, we may say the student has the language competence (the capability of using sounds or conventional symbols) in producing the pronunciation of the syllable. However, if the student can clearly point out what phoneme it contains in that syllable, then he has the metalinguistic

consciousness or competence in knowing the syllable. In fact, possessing a metalinguistic competence is not only possessing the knowledge of pronunciation, vocabulary, and syntax of a language, the student needs to know why and in what way the choice of wording is used and would be well accepted by the targeted language communicating community. One good example is provided below regarding this issue.

The single word “sedap”(=wonderful) is commonly used in Malay to express the state of the high satisfaction and appreciation towards food, drink, music, films, perfume, clothes and games. Other usages include “sedap” in sleeping on a comfortable bed, driving a newly bought car, or using a high performance computer. Some Malay students even used ‘sedap’ (spiritually, not physically) for fasting obligation during the Ramadhan. To express such ‘sedap’ in Mandarin, it will be presented in the combination of “good + action in the related activity” (see Table 4).

Table 4: Various “Sedap” in Mandarin related to certain activities

Activity	Various “Sedap” in Mandarin
Eating	hǎochī (good/to eat)
Drinking	hǎohē (good/to drink)
Listening	hǎotīng (good/to listen)
Watching	hǎokàn (good/to watch)
Smelling	hǎowén (good/ to smell) or hǎoxiāng (good/aroma)
Wearing	hǎochuān (good/to wear)
Playing	hǎowǎn (good/to play)
Sleeping	hǎoshuì (good/ to sleep)
Driving	hǎojià (good/ to drive)
Using	hǎoyòng (good/ to use)
Enjoying (fasting)	hǎoshuǎng (good/to enjoy)

In this case, one Word ‘sedap’ denotes many meanings depending on the sentence/ context/ tone of the user. In English the Word ‘carry’ is used to mean many things too but in Malay, there are many alternatives to carry which are more precise in usage. Eg., bimbit, jinjing, junjung, dukung, angkat, etc.

From the perspective of ideational, interpersonal and textual function, in expressing the idea of ‘wonderful’ of appreciation upon a very good entertainment given to us by a friend, we have the choice of words for it on what kinds of entertainment we received as listed in the above table. When it is used correctly in a proper mood that suits for the communication context, our sincere appreciation will help to establish a good interpersonal relationship between us and the host.

Finally, we would like to maintain that MSL teachers should cultivate students’ acquisition of metafunction of targeted language for an effective construction of ideas, establishment of interpersonal relationships and transmission of messages. It is because words will change its meaning in different contexts and mood. We have to make our choice of wording wisely and suit it for the communication contexts. For example, the word “hǎotīng” in the same as the above ‘wonderful’ in the activity of listening, but turns into a negative meaning in the following sentence. So, it can’t be used for the context of appreciation because its meaning is “You are good in licking somebody’s boots”, where the meaning of “hǎotīng” has become ‘the action of flatter’ in this sentence, which is not a positive quality to have.

Nǐ hěn huì shuō hǎotīng huà (you/very/capable in/saying/nice/to listen/word)

CONCLUSION

In MSL classrooms, a good instruction will definitely include the high metalanguage instruction. Such classrooms will be filled with explicit talk about language and the culture that is embedded in it. Students will be exposed to how written and spoken texts work or don't work. Students will also be guided to construct the correct text in a proper mood that fit the circumstance and purpose of discourse. In MSL classrooms, by introducing the new language and comparing it to students' mother tongue, students tend to know better the features, characteristics, patterns, genres and discourses in both languages. Hence, teachers should always proceed through the lesson by pausing and commenting on his/her own or students' use of language, including at various language levels like vocabulary, pronunciation, grammar, syntax, and genre. In conclusion, as text is the arrangement of semantic reality realized by the metafunction of selection of meanings and words for a specific discourse purpose, and the metalinguistic awareness help to achieve such communication purpose, therefore, mastery of the metafunction of English, Malay and Mandarin and the function of metalanguage is imperative in MSL classroom teaching and learning of a language.

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THE EFFECT OF PROBLEM-BASED LEARNING ON STUDENTS' TEAM WORK ABILITY: A STUDY ON GRADUATING ACCOUNTING STUDENTS IN UiTM TERENGGANU

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ABSTRACT

One of the criteria looked for by the employers in employing a staff is the ability to work in a team, especially nowadays when employees of an organization need to work with other employees in diverse background and culture as a result of the borderless world. However, many of our graduates do not possess this ability, which later contributes to poor work performance. Many parties blame the higher institutions as they fail to expose the students to real working environment, since the teaching method used is more centered on delivering knowledge without inviting active participation from the students. Hence, this paper attempts to evaluate the effect of Problem-Based Learning (PBL), which is a more student-centered learning method, on the students' teamwork ability (TWA). The sample studied consisted of forty-eight graduating accounting students from UiTM Terengganu. It was discovered that PBL did affect teamwork ability as measured by Paired Samples t-Test before and after the PBL session. They felt that their teamwork ability had been enhanced after a semester of PBL. Both genders did not differ significantly in their views of TWA as a result of PBL. However, students with lower CGPA of below 3.00 felt that PBL had improved their TWA better than students with higher CGPA of 3.00 to 3.49. When further probed, many preferred a combination of PBL and lecture approach rather than learning based solely on lecture.

Keywords: *problem-based learning, generic competencies, teamwork ability*

INTRODUCTION

Unemployment among graduates in Malaysia has still been discussed heatedly by many parties. To prove just how serious this phenomena is, Quek (2005) cited the results of a study conducted by the Higher Education Ministry of Malaysia on this matter, which revealed that only 57 per cent of graduates were successful in securing jobs, 29 per cent remained jobless while another 14 per cent went on to further their education. Previous researches carried out by Asma and Lim (2000); Lee (2000); Quek (2000) and Kanapathy (2001) attempted to obtain feedback from various employers in Malaysia on the contributing factors to this issue. They pointed invariably to the deficiencies of tertiary education in equipping students with generic competencies to meet the needs of the workplace as the lack of it can add liabilities to the corporations. Repeatedly, Quek (2005) cited a press release from the Human Resources Ministry of Malaysia which expressed that many graduates are good only in theory and many are unable to meet the expectations of the corporate sector. Jacobsen (1993) described

generic competencies as success skills in employees that are needed to transfer learning from the classroom to the workplace for fulfilling work demands. In other words, Quek (2005) cited from various researchers that employers prefer workers who have generic competencies like interpersonal skills, leadership skills, teamwork and oral and written skills for work performance.

Albrecht and Sack (2000) had strongly urged accounting educators to take greater effort to devise new pedagogical approaches by stating that, "Students forget what they memorize. Content knowledge becomes dated and is often not transferable across different types of jobs. On the other hand, critical skills rarely become obsolete and are usually transferable across assignments and careers." In addition, Duch, *et al.*, (2001) suggested that accounting educators need to "design educational experiences for students that require them to be active, independent learners and problem solvers rather than passive recipients of information." A few years before, Woods (1997) pointed out that PBL is the most effective teaching method in the most recent 30 years since the learning environment in PBL includes every kind of factors currently known to improve the efficiency of learning, hence equipping students with the generic competencies required. Moreover, according to Hahgparast *et al.* (2007) PBL challenges students to 'learn to learn' and work cooperatively in groups to seek solutions to foster effective learning, while Woods (1994) concluded that PBL is more than an extremely effective environment to learn subject knowledge as it can be used to help students develop skill in lifetime learning, change management, teamwork, conflict resolution and problem solving. They learn through experience, through the benefit of working together and they learn best from teaching each other and in the context of compelling problems (Cross, 1998; Annis, 1983; McKeachie *et al.* 1986; Cross, 1999).

Similar outcome was revealed by Margetson (1996) who stated that PBL can change students' role from being knowledge receivers to knowledge seekers as students are to develop their own plan of direction. However, she added that it can disturb their comfort zone that leads to the building of tension among them. A key intention of PBL, cited by Alessio (2004), is that such tension may lead to learning material in a different way, creating opportunities for self-directed and deep learning. Dahlgren & Dahlgren (2002) discovered that deep learning can occur when students work together in small groups and in self-directed learning, where independent thinking is encouraged.

Apart from that, [Prince \(2004\)](#) stated that in a PBL environment, students experience working as part of a team which provides a natural environment that promotes effective team work and interpersonal skills. [Dishon & O'Leary \(1994\)](#) defined a team as "a group of two to five students who are tied together by a common purpose, to complete a task and to include every group member." While Moy (1999) defined interpersonal or team working skills as "the ability to work, adapt and interact with people of varied background or discipline, within or across organisations." This will obviously form an important experience as part of their preparation for work life in the modern business world. The same opinion was expressed by [Krajcik *et al.* \(1999\)](#) who suggested that in order to succeed in the real world, students need to know how to work with people from different background. This finding conformed with another research finding by [Cockrell *et al.* \(2000\)](#) who discovered that collaborative groups foster students' sense of ownership of the knowledge that is

created over the semester and within the groups, leadership moves from student to student as situations arise and resolve.

Similarly, Challenger (2008) in his online newsletter asserted that one of the most important requirements for success in today's job market is the ability to be a team player, especially now, when companies are beset on all sides by increasing competition. A major measure of what kind of an employee the candidate will be is whether the individual has demonstrated teamwork ability. Of the same opinion is Firth-Cozens (1998) who stated that major change continues to occur in all successful organizations and partly as a means of dealing with the changes, there is an increased emphasis on team working. Team working is seen as a way to tackle the potential fragmentation of services and improve service quality, to widen skills, and acts as an essential part of the need to consider the complexity of modern services.

However, as many researches had discovered, despite their potential benefits, it is clear that not everyone wants to work in team since it can cause some people within them dissatisfaction and unhappiness. Furthermore, not all team are effective, proving that teamwork has to be trained and is not a byproduct. In the Malaysian context, tertiary institutions should consider the implementation of new curriculum pedagogy that can instill teamwork ability among the students rather than letting the students getting lost in the process of acquiring it.

OBJECTIVES OF THE STUDY

The purpose of this study is to urge accounting educators to seriously consider PBL as a pedagogy that can better prepare accounting professionals effectively for the challenges of the 21st century, though Hansen (2006) states that PBL is still a relatively new approach in accounting education. Therefore, this study aims to examine the effect of PBL on teamwork ability of accounting students of UiTM Terengganu. It is hoped that the positive outcome of PBL will lead to the wide implementation of this approach by the management. Suggestions on the best way to conduct the PBL approach in classrooms will also be looked into.

METHODOLOGY

The focus of the research was on forty-eight graduating first degree students who were randomly selected out of fifty from the Faculty of Accountancy, UiTM Terengganu. These students had undergone the PBL approach classroom in which they took the subject of Strategic Management (MAF 640) for one semester which happened to be their first and only experience learning under full PBL approach. The Accounting Faculty was chosen as this was the only faculty that fully implemented PBL approach in its teaching of Strategic Management. The PBL approach was partially implemented in the teaching of other subjects; hence did not meet the requirement of the study.

Only one researcher was directly involved in the data collection. The class was conducted twice a week and each session lasted for two hours within a 14-week duration. The data were collected twice, during the 3rd session and during the last session at end of the semester, in which the survey

questionnaires were distributed to the respondents. The questionnaire consisted of two different sections - section A consisted of 6 items on students' background while section B consisted of 23 items evaluating the effect of PBL on the students' teamwork ability. These items were evaluated using Likert Scale from 1, which represented 'strongly disagree' to 7, which represented 'strongly agree'. Data entry and analyses were carried out using SPSS.

The above researcher also made observation on the whole process of PBL approach especially during group discussions that took place in the classroom, noting down the students' reactions, opinions and remarks. At the end of the semester, students were required to write their learning experience under PBL approach throughout the duration of the whole semester.

FINDINGS AND DISCUSSIONS

The findings on the effect of PBL on students' teamwork ability are discussed below.

Does PBL Affect Team Work Ability?

Most researchers like Parker (1990) and Cohen (1994) agreed that teamwork seems to be a central characteristic of PBL. Therefore, it was hypothesized that students' teamwork ability will be enhanced after a PBL session. Before further analyses were conducted, an internal reliability test was done to determine if the 23 items evaluated were internally reliable to measure teamwork ability. The outcome with the high positive value of alpha of 0.925 confirmed that all items did measure the teamwork ability. Based on Kolmogorov-Smirnov Test, p-values of 0.560 and 0.404 (which were greater than 0.05) for before and after the PBL session respectively denoting the distribution of both teamwork ability before and after the PBL session were normally distributed. Paired Samples t-Test was then conducted to see how students evaluated their teamwork ability, before and after the PBL session. The test conducted showed that the evaluation after the PBL session was better (mean of 5.799) as compared to before the PBL session (mean of 5.657) at a confidence level of 90% (p-value of 0.057) as shown in Table 1. Therefore, the result conformed to the previous researches done.

Table 1 : Mean Comparison of TWA Before and After PBL

Team work ability	Mean	Std. Deviation
Before PBL	5.657	0.533
After PBL	5.799	0.604
Significant level (2-tailed)	0.057	

Upon seeing that PBL did give some positive impacts on students' teamwork ability, further detailed investigations were carried out on how students by different genders and CGPAs perceived teamwork ability as a result of PBL as exhibited in Table 2; and also in respect of 23 items related to students' teamwork ability after the PBL session. Table 3 listed the 23 items evaluated with the mean value and standard deviation for each item.

PBL and Teamwork Ability Perceived by Gender and CGPA

Table 2 shows how students of different genders and CGPAs perceived their teamwork ability as a result of PBL. Independent Samples t-Test conducted discovered that both male (mean value of 5.68) and female respondents (mean value of 5.84) gave almost the same scores, indicating that both genders did not differ significantly in their view of teamwork ability with a p-value 0.492.

However, when examining their perceptions based on their CGPAs, the result showed that as a result of PBL approach, teamwork ability was better perceived by students with CGPA below 3.00 (mean value of 5.96) as compared to students with higher CGPA of 3.00 to 3.49 (mean value of 5.48). This was significant at 99% confidence level, with a p-value of 0.008. From the researcher's observation (who was directly involved in the data collection), this could be due to the teamwork discussion in which each team member was expected to contribute ideas equally and this discussion also ensured that every student in the group would gain the knowledge from the work done. Therefore, weaker students would feel more at ease learning from their peers for peer learning tends to eliminate the barrier to ask questions. However, smarter students might feel that the process would slow them down especially when they felt that they could not really rely on their weaker counterparts to complete their tasks satisfactorily and this would require more time and commitment from them.

Table 2: TWA Perceived by Gender and CGPA

Background		No. of Students	Mean	*Std. Dev	**Std. Error
Gender	Male	8	5.68	0.89	0.31
	Female	40	5.84	0.54	0.09
CGPA	Up to 2.99	33	5.96	0.53	0.09
	3.00 – 3.49	15	5.48	0.62	0.16

*Std. Dev = standard deviation; **Std. Error = standard error mean

Students Evaluation on Their Team Work Ability as a Result of PBL

Further analysis on 23 items related to students' teamwork ability as the effect of going through a semester of PBL pedagogy was carried out and listed in Table 3. Mean values can be categorized as 'slightly agree' when it falls within the scale of 4 to <5, 'moderately agree' when it falls within 5 to <6 and 'strongly agree' for the scale of 6 to 7 out of possible 7.00. A mean value of 6.13 out of 7.00 for item no. 5 showed that students strongly preferred to work in groups in solving a problem rather than working individually for group work would facilitate the completion of a given task as measured by item no. 4 with a mean value of 6.15. It might be due to the fact that each team member would try their best to contribute ideas in team discussions (mean of 6.19) which would result in better alternative solutions. Haghparast, et al., (2007) discovered that students with experience in both PBL and traditional pedagogy preferred the PBL pedagogy, stating greater independence, more flexibility, self-responsibility, teamwork, more student involvement, better understanding and integration of subjects and an enhanced learning environment working in groups. This satisfaction could be due to several factors, such as a more active role of students in a small group-based PBL pedagogy which offers a

more holistic view. Conforming to this statement, students moderately agreed that team interactions had certainly enhanced their learning (mean of 5.81).

With a mean value of 5.80, the respondents moderately agreed that they felt at ease sharing their ideas with the team as each team member would prefer to discuss one's idea even though it sounds silly rather than totally rejecting it in the first place (mean of 5.96). They would carefully explore alternatives in order to attain maximum group benefit (mean of 5.68). This had somehow made them felt that their team members were supportive to each other (mean value of 5.77) resulted to stronger ties among them (mean value of 5.77). Seaberry (2002) reported similar teacher observations of face to face interactions and active discussions among the PBL student groups, during class time. This was supported by Alessio (2004) who observed students using resources other than the required text, to search for answers and information designed to fill in gaps and confirmed statements made by group members making students in the small PBL groups engaged actively in the learning process and formed a type of learning community, with each making a meaningful contributions, as they tackled the problems. The second lowest mean at 5.26 was scored for item no. 23 when students moderately agreed that they could visualize what was expected of them by their team members, hence enabled them to complete the task assigned by their team on time (mean of 5.56).

Basically, respondents strongly agreed that through teamwork they learnt how to be responsible to others (mean value of 6.02). Respondents moderately agreed (mean value of 5.88) that their team members respect them well. As a result, they admitted that they could respect their team member's opinions or ideas (mean of 6.30), accepted their strengths (a mean of 6.17) and took rejections and comments positively (mean of 5.92). These have somehow trained them to be successful team players as described by Challenger (2008) who stated that an effective team member could sense what contributions need to be made, and how he or she can best support the group in achieving its goals through asking key questions at the appropriate time, or making observations based on the statements of others, melding differing views into a cohesive whole and providing the perspective that is needed to establish a plan of action. In addition, he added that by respecting others, the team player has sensitivity to the needs of others for recognition and does not propose any course of action without at first considering the views of all parties who will be concerned with the decisions.

Table 3: Students Evaluation on Their Teamwork Ability as a Result of PBL

No.	Items	Mean	Standard Deviation
1	I always respect my team member's opinions or ideas.	6.30	0.68
2	I would try my best to contribute ideas in team discussions.	6.19	0.73
3	I can respect my team members' strength.	6.17	0.63
4	I think it's easier to complete the given task in a group rather than working alone.	6.15	0.90
5	I would prefer to work together in a group in solving the same problem rather than working individually	6.13	1.01
6	Through team work, I learn how to be responsible to others.	6.02	0.84
7	I adapt well with any new changes/ideas agreed by the team members.	5.98	0.79
8	When working in a team, I can control my emotion.	5.98	0.81
9	I would prefer to discuss one's idea even though it sounds silly to me rather than totally rejecting it in the first place.	5.96	0.91
10	I can take rejections and accept comments from my team members positively.	5.92	0.90
11	My team members respect me well.	5.88	0.89
12	I feel the team interactions enhance my learning.	5.81	0.98
13	I feel at ease sharing my ideas with the team.	5.80	1.20
14	I don't mind working with people with different school of thought.	5.79	1.03
15	I feel strong ties with my group.	5.77	0.86
16	I feel my team members are supportive to each other.	5.77	1.27
17	I would carefully explore alternatives in order to attain maximum group benefit.	5.68	0.86
18	I can generate positive effect to my group.	5.58	1.03
19	I can always balance my team's interest and my personal interest.	5.57	1.11
20	I can complete the task assigned by my team on time.	5.56	1.15
21	Should there is a clash in schedule; I normally give priority to my team rather than my own affair.	5.42	1.13
22	I think I can clearly visualize what is expected of me by my team members.	5.26	0.98
23	I am able to motivate my team members to solve difficult problems.	5.19	1.04

Due to the ability to tolerate, working with others with different school of thought should not be a problem to them (mean of 5.79). They also admitted to being able to adapt to any new changes or ideas agreed by other team members (mean of 5.98) as they believed that they could control their emotion when working in a team (mean value of 5.98). These traits are highly needed in a successful teamwork as stated by Yalcin et al. (2006). They reiterated that an effective and democratically structured small PBL group may benefit from its relation with psychotherapeutic principles (listening and tolerating hostility) where group members themselves determine the rules resulting to improving students' communication skills. As a result, students can acquire abilities to work together, take initiative, share knowledge, and show mutual respect.

Realizing the benefit and effectiveness of the PBL approach, 20.8% of the students chose the PBL approach, while another 50% chose a combination of PBL and lecture when asked of their preferred learning approach. Only 29.2% of them chose lecture method alone (traditional method). It showed that the majority of the students preferred a combination method of PBL and lecture, indicating that students did recognize the effectiveness of PBL, but somehow, a few lecture sessions were required to

clear some ambiguities and put things in the right path, especially when this was their first experience being exposed to the full PBL approach. PBL was still seen as very essential to equip them with some soft skills like improving their communication skills, boosting their confidence level, stimulating their thinking process and others as shown in the above tables. Therefore, combining both methods was expected to greatly contribute to a more effective learning.

CONCLUSION AND SUGGESTIONS

Team work is not a natural process arising from a meeting of a group of people. Frank (2005) explained that it is rather an initiated process that requires organizational activities and specific procedures over a period of time. Therefore, for students to be effective team members, they must be trained to work in groups. One way to instill teamwork ability among them is through the implementation of PBL sessions since teamwork seems to be a central characteristic of PBL. It trains the students to work in teams, both before and during the project. Frank (2005) further added that this will prepare them to cope with conflicts among team members, to make group decisions and to accomplish tasks for the necessary organizational preparations. He thus stressed that faculty should be trained in group mentoring for a trained lecturer would better build the working teams and lead them to produce effective and synergic work.

Therefore, it is strongly suggested and proposed that it is now high time to implement PBL pedagogy throughout the whole UiTM system. However, the implementation of PBL should be carried out in stages to make learning more effective so that students can reap the full benefit of PBL to enhance their generic competencies. Fresh school leavers who have just entered the university should be exposed to a combination of 30% PBL and 70% of lecture mode. The proportion of PBL to lecture should be changed accordingly once the students become more mature and independent in the later semesters and only then should the PBL portion be gradually increased. Towards the final year, PBL should be fully implemented with the supervision from the lecturers. Lectures should no longer be made available at this stage, suggesting that by now students would be independent enough and equipped with necessary soft skills that would prepare them for the more challenging real world once they graduate.

As suggested by Duch (2001) the lecturers must play significant roles to guide, probe and support students' initiatives, not lecture, direct or provide easy solutions. The degree to which a PBL course is student-directed versus lecturer-directed is a decision that the faculty member must make based on the size of the class, the intellectual maturity level of the students, and the instructional goals of the course. When the faculty incorporates PBL in their courses, they empower their students to take responsible roles in their learning - and as a result, the faculty must be ready to yield some of its own authority in the classroom to their students.

However, the success of PBL will greatly depend on the exposure and readiness of the academic staff to PBL and also the support provided by the administration. Since PBL is still new in UiTM, the academic staff must be given adequate training and exposure and also be allowed to visit other leading

universities pursuing PBL. Clear indications should be given as where to go and what to do so that students' achievement would not be at stake.

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ET(01)

STATUS AND PROBLEMS OF THE ENVIRONMENTAL IMPACT ASSESSMENT IN MALAYSIA

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ABSTRACT

As one of the most progressive developing countries, Malaysia has experienced rapid development in terms of physical development and construction. This has raised public concerns over environmental degradation issues and problems, and has led to the creation of the 1974 Environmental Act, followed by the introduction of the Environmental Impact Assessment (EIA) in 1988. While there is no doubt that EIA is vital to ensure all relevant information is followed by decision-makers, there are some procedural limitations in the EIA that created a loophole for exploitation by project proponents during the development process. Therefore, a study was conducted in 2004 to investigate the procedures and approaches taken on the EIA implementation in the Langkawi Islands. This study found that one of the prominent elements in the EIA implementation is public participation. However, this study also found its limitation of public participation in the EIA implementation.

Keywords: *Langkawi Islands, EIA legislation, assessment procedures and limitations.*

INTRODUCTION

This paper aims to investigate the procedures and approaches of the Environmental Impact Assessment (EIA) in Malaysia. The focus of the study is on its implementation in the Langkawi Islands. The first part of this paper reviews the development of EIA implementation. This paper further coins-up the importance of public participation in the EIA implementation processes and approaches. Finally, this paper highlights the status and problems of public participation in the EIA implementation.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IN MALAYSIA

The EIA was introduced in Malaysia in 1988 as a mandatory legislative requirement through the Environmental Impact Assessment Order (DOE 1987) (prescribed activities). It was developed based on the National Environmental Policy Act (NEPA) 1969 of the United States (Briffett et al. 2004). The legislation empowered the Director General of the Department of Environment (DOE) to: "...protect and enhance the quality of the environment through licensing, setting of standards, co-ordination of research, and dissemination of information to the public." (Briffett et al. 2004: 222)

In terms of implementation, two types of the EIA report were adopted comprising preliminary and detailed assessment whereas the objectives of preliminary assessment are as follows (Figure 1):

- To examine and select the best form of project option available;
- To identify and incorporate into the project plan appropriate abatement and mitigating measures;
- To identify significant residual environmental impacts and another additional objective is required in the detailed assessment;
- To identify the environmental costs and benefits of the development project to the community.

Preliminary assessment is required in all development applications and the DOE will decide on the detailed assessment requirement based on the 'intricacy and impact of the development and its sensitivity and vulnerability' (Briffett et al. 2004: 232).

LIMITATION OF EIA IMPLEMENTATION

According to Briffett (1999: 336), sometimes, the EIA process in Southeast Asia (including Malaysia) was 'simply used as a means to obtaining planning permission'. For example, in Malaysia, only a project included in the 19 prescribed activities listed in the Handbook of Environmental Impact Assessment Guidelines (DOE 1995) required EIA study. However, there were some weaknesses in the quantitative guidelines provided in the EIA handbook and raised criticism because of it was vulnerable to abuse by submitting multiple mini projects (Briffett et al. 2004). For example, an EIA was only required if the project was proposed for development on a hilltop or hillside exceeding 50 hectares, or a hotel with more than 80 rooms, irrigation schemes of more than 5000 hectares and coastal reclamation or clearance of mangrove swamps and housing development of over 50 hectares.

Unfortunately, even the handbook showed some weaknesses in the EIA implementation, there was no amendment done for an improvement. But, in March 2005, after the local newspapers exposed the environmental destruction from the development near to Kuala Lumpur, the Malaysian Prime Minister, (Abdullah Ahmad Badawi) asks for the changes to the existing EIA requirements (Utusan Malaysia 25 March 2005). The government then proposed a compulsory EIA study of any development project starting with 20 hectares and above, compared to 50 hectares and above in current requirement (Utusan Malaysia 25 March 2005). However, the proposal has not been finalised and still in the revision process.

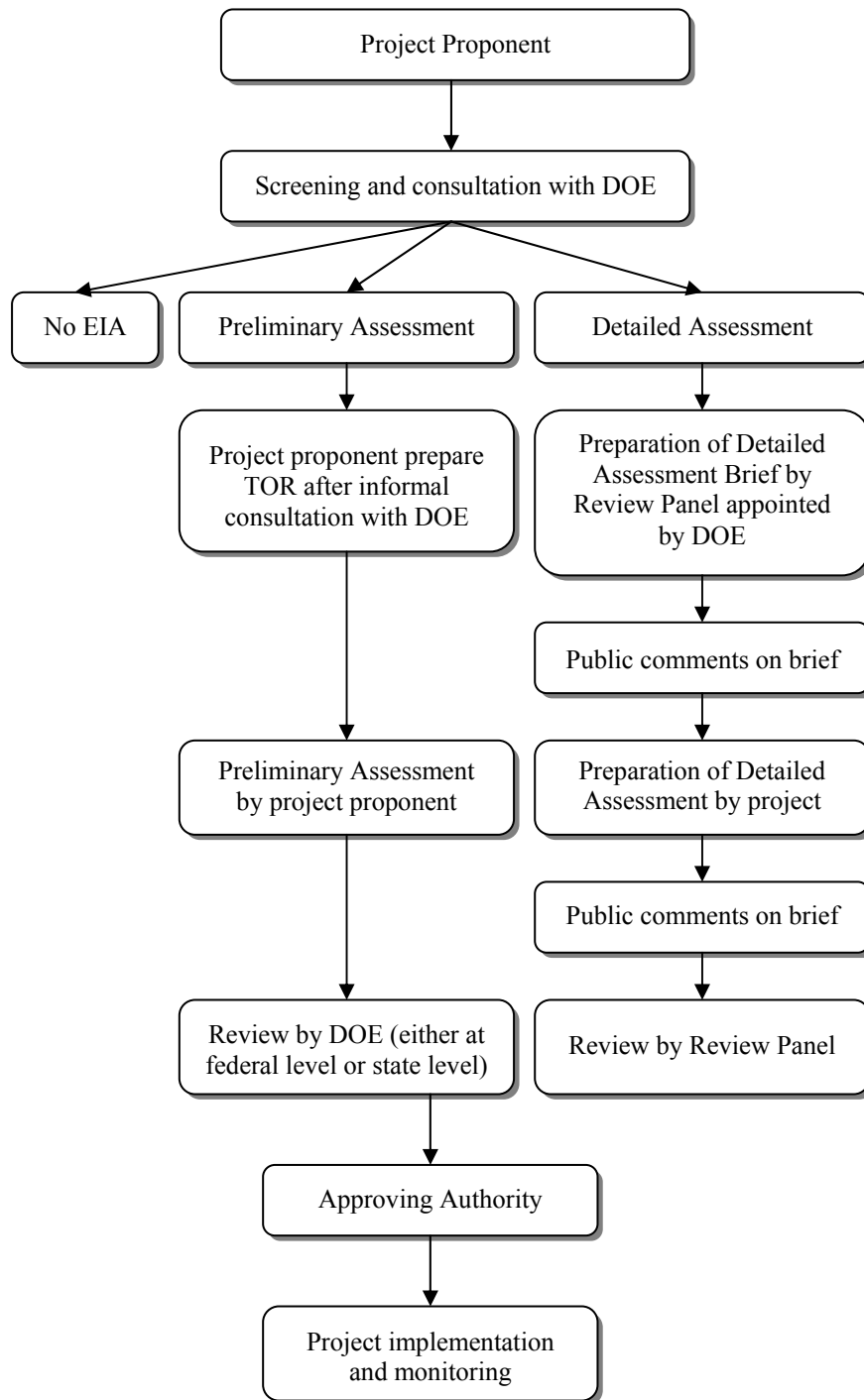


Figure 1: EIA Process in Malaysia
(Source: Staerdahl et al. 2004)

PUBLIC PARTICIPATION IN EIA

The definition of participation covers various concepts such as:

- According to France (1998), participation is a process of empowering every individual in the community to involve in government development.
- Skeffington (1969) explained participation from political consideration by sharing an action to formulate policies and proposal between government and citizens.
- While World Conference of Agrarian Reform and Rural Development (1979: In Misra, Sundaram & UNCRD 1983) and Brager and Specth (1973) defined participation as a basic human right for every human being especially disadvantages group.

It seems to suggest that the definition of participation explains about the concept of democracy, human right and empowerment as a core of the definition. It shows that public participation is an important process in the planning system, which also extends to the political system and has a big role to bring the executive decision from the top to bottom through a planning process.

Staerdahl et al. (2004) revealed that public participation is the central element in the EIA process since its effectiveness depended on how the involvement process is conducted in the practice. Furthermore, they explain three levels of public participation in EIA process:

- Legitimatising participation - occurred when the sole purpose of the participatory process was to legitimate the process, but it does not have any influence on the content.
- Instrumental participation - applied when the public was utilised as information providers to improve the quality of the EIA reports, but the public's prioritisation of problems and benefits was disregarded.
- Democratic participation – was when the views and the priorities of the public were taken into account in the decision-making process.

In EIA study, public participation is required for an improvement in project design. In that case, the term of “public” referred to the ‘workers and local community’ because they were the closest parties with the project (DOE 1994: appendix 1). However, the public participation process only became compulsory in the detailed assessment, not in the preliminary assessment (DOE 1995). According to Lee (2000, cited in Briffett 2004), participation process in EIA study was done in two stages: first, during the preparation of EIA study through surveys, meetings and other methods and, second, by written comment procedures after the EIA report was available for viewing.

However, Staerdahl et al. (2004: 16) pointed out that the public only had ‘limited possibilities for commenting on the project itself unless representative such as the NGO was invited as a member of the EIA Review Panel’. Their viewed was that the public participation in EIA process in Malaysia was only an ‘instrumental participation’ since the information received from the public was used merely to improve the EIA report, but disregarded the development issues to the public.

In addition, Leong (1991, cited in Briffett et al. 2004) reveals that most of the EIA reports submitted in Malaysia were preliminary assessments where public participation was not required. For example, from 1988 until 1999, out of 1317 EIA reports that were submitted to the DOE, 1234 (95%) were preliminary, 15 were detailed and the remainder were risk assessment and exclusive economic zone studies (DOE 1995; Memon 2000).

The figure showed that only 15 public participation processes in EIA study were conducted in Malaysia during that period. Even though the preliminary reports also provided detailed information more than the minimum requirement (Briffett et al. 2004), the high percentage (95 %) of preliminary assessments submitted was not a good sign for participatory process since it was only required in the detailed assessment study.

The limitation of participation process during the EIA study was caused by the weaknesses in the regulation. For example, the EIA handbook stated that, 'the proponent may, if they believed it was in the public interest, applied for not making the report available for public viewing' (DOE 1995: 34). Nevertheless, what was meant by 'public interest' in the regulation was not clarified. According to Abdul Ghani, (2004), previous experience showed that the response was poor even though the public were invited.

Mohd Nor (1991) claimed it was caused by their apathy, their lack of awareness and lack of expertise. However, it was so typical to blame the public for not participating since 'the access to information about the projects and their environmental consequences was very limited' (Boyle 1998: 112). In fact, the EIA reports were not officially released to the public, even though the handbook (DOE 1988) clearly stated, 'the public was invited to comment on a proposed project which has been subjected to detailed assessment'. Besides, it was difficult to evaluate the environmental impact statements (EIS) because of the confidentiality of the document submitted to the DOE. As Mohd Nor (1991: 138) explained, 'rigid government control over such reports has handicapped the process of public participation in EIA' in Malaysia. Perhaps, the decision makers were worried of the experience from Penang Hill project in late 1980s (Mohd Nor 1991) when public objection on environmental issues caused cancellation of the project.

Furthermore, Briffett (1999: 336) suggested that the attitude of the decision makers also needed to be changed and EIA should not 'simply be used...to obtaining planning permission'. They need not have negative perceptions just because 'it introduced too much commitment to increased public participation in the planning processes' (Briffett 1999: 333). An example from the Asian Rare Earth waste repository project in Malaysia showed that unprecedented protest from the public improved the project and provided a better design (Boyle 1998). Brager and Specht (1973) referred participation to 'the means by which people, who are not elected or appointed officials of agencies and of government, influence decisions about programs and policies which affect their lives'. While the Skeffington (1969) defined public participation as 'a sharing action to formulate policies and proposal' but a complete participation only happens when the public are allowed to participate actively in the planning process. Public participation also is about human right as concluded in the World Conference of Agrarian Reform and Rural Development (1979: In Misra, Sundaram & UNCRD 1983) 'Participation of the people in institutions and system which govern their lives is a basic human right and also essential for realignment of political power in favour of disadvantaged groups and for social and economic development'. It is a channel for people to 'ensure the effective influence on the decision making process at all levels of social activity and social institutions...'" (Geneletti 1975: In Misra, Sundaram &

UNCRD 1983). Furthermore, France's (1998) defined participation as 'a process of empowerment that helps to involve local people in the identification of problems, decision-making and implementation, which can contribute to sustainable development'.

IS PUBLIC PARTICIPATION NECESSARY IN THE EIA IMPLEMENTATION PROCESS?

Slocum and Thomas-Slayter (1995) explained that people need to participate during the decision making process for their personal interests as well as the society's since planning activities will consequently affect public lives. Furthermore, the World Health Organisation (WHO) (2002) developed several arguments as to why the public participation process is important from the viewpoint of the citizens and professionals working with the local authorities (Table 1).

Table 1: The Importance of Participation Process

Why participation process is important?	
Citizens' arguments:	We have a right to say about decisions that affect our lives We know more about where we live and what we want and what is best for us than people working for big organisations We are fed up with politicians and civil servants asking us what we think and then not taking our views into account. We want to be actively involved and to have an influence We all have something to contribute and our ideas and views are as valid as anyone else's
Professionals' argument:	Community participation can help us target resources more effectively and efficiently Involving people in planning and delivering services allows them to become more responsive to needs and therefore increase uptake Community participation methods can help develop skills and build competency and capacities within communities Involving communities in decision making will lead to better decisions being made, which in turn are more sustainable because they are owned by the people themselves Community participation is a way of extending the democratic process, of opening up governance, and of redressing inequality in power Community participation offers new opportunities for creative thinking and innovative planning and development

(Source: World Health Organisation 2002)

The citizens stress on their right to voice opinions and want it to be considered in the decision-making. Meanwhile, professionals argue that involving citizens can contribute towards better decision-making and target resources more efficiently. The public participation process also has the potential to educate citizens and increase their awareness by being more responsive.

CONCLUSION

This paper reviewed the current development of EIA implementation process in the development of the Langkawi Islands. However, this study found that there seemed to be problems and limitations to implement it effectively, i.e. due to previous public participation processes conducted in the Langkawi Structure Plan 1990-2005 and the Langkawi Local Plan 2001-2015 were based on the Town Planning Act (Act 172). However, even though the existing procedures stated in the Town Planning Act (Act 172) aim for a greater public involvement, they have not addressed the issues of limited opportunity in the decision making process. Most of the decisions were controlled by the government.

In fact, the existing participation approaches were ineffective and failed to achieve the aim of delivering information on the government's agenda for development. As a result, lack of understanding about the Langkawi Structure Plan 1990-2005 and the Langkawi Local Plan 2001-2015 has affected the effectiveness of participants' ability. Moreover, several conditions set up by the governing body such as only accepting group complaints or issues related to participants' land has excluded local residents from participating in the decision making process. This study uncovers that an improvement in the public participation process in the study area should not only deal with the involvement approach, but also involves the organisation and administration of the public participation process. The current scene reveals that more opportunities for public involvement in the decision making process suggesting that the importance of introducing the Public Participation Framework (PPF). Further research should consider the introduction of PPF in the Malaysian context that enables effective involvement and participation in the EIA implementation.

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ET(02)

THE ENHANCEMENT OF SPACES IN BETWEEN BUILDINGS FOR URBAN RECREATION DEVELOPMENT

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ABSTRACT

Whenever developers or building owners develop a specific parcel of land, the focus of the development is mainly within their boundaries. The space left in between is to allow fire engine to access through. Besides fire escape requirements, the allocation is for fulfilling the minimum distance requirement by the local authority. Examples of such spaces area are the rear, the side of buildings and under the flyovers or bridges. As a consequence of that the space is not intentionally designed. Even though local controllers have their own expert advisory committee, it doesn't mean the whole city development is well taken-care. Without any awareness on the significance of such spaces; such spaces will be occupied by a group of the urban community for their own personalisation area. To some extends they will use it for negative activities. If this continuous; the city safety, security and surveillance will be threatened. Therefore, in line with the acceleration of urban transition for mega-city in the East Coast Economic Region (ECER); it is a call for multi disciplinarians to focus on the future of those spaces in the city.

Keywords: *public space, negative space, positive space, urban recreation development*

INTRODUCTION

The definition of space in between building is an urban outdoor public realm beyond the private premises. It is an outdoor area in which sculpture or public activity may take into scene. The area has potential for great use in the urban infill especially if it is located within the packed and high density city. For instance; walking experience through the city will enhance the awareness on the number of nice spaces in between buildings for people to chill in and out. However, the experience will be disturbed by negative scenes in the public place. The negative scene could be a description of space which is visually and physically caused a hindrance to our senses. Since our present public is now more selective on what they experience in the city, therefore the space shall be revitalized for more economical and beneficial. The approach of revitalizing the public space has been realized as methods of promoting cities for economic growth by most urban developers. Hence, this approach shall be complied in the new coming mega-cities as well as in the existing heritage cities.

THE ISSUE

In most developed cities in the developed countries, the city manager and public had learnt that the spaces in between buildings have potentials and also threats. The potential is the revitalization of small urban public spaces to provide dynamism sense to the city citizen. On the other hand, the leftover space without any objective threatened city safety and security. Since most of the developing cities in the developing countries; the development execution limited within the ownership boundary, therefore: the public realm were left inferior to other spaces. In the new coming mega-city a paradigm shift must be

made. The importance of the space in between buildings as public realm shall be realized by city stake holders, managers and end users. It shall be considered as part of the micro-development of the East Coast Economic Region's (ECER) and not after-thought design. Therefore, it is a call to enhance the space in between buildings for revitalization.

REVIEWS ON 'IN BETWEEN' SPACES

The interpretation of the space in between is perceived in different angles. From the public point of view the existence of the space in between is unintended and observed it as no man's land. For them it is an '*orphanage*' space that they pass by on their destiny in the city. From private stake holders, their care for public space is beyond their scope of work. On the designer's side, their focus are more on the micro-development within the stake-holders' perimeter. On the other hand; town planners focus on the macro-development which covers the overall city development. To patch things together it is the duty of urban designers. However, the space belongs to the local authority.

The overlapping of focus in city development is made to detail-up the development into more specific execution. However, there are human errors of zooming up spaces into the reality of public space. The error is due to the execution of the development is in the scale-down basis. On the other hand, the occupation of public space by public is at one to one scale. Consequently, the process of transitioning scales between the real space on site to paper and vice-versa in the development execution has caused error. Instead, Alexander (1997) claimed that the existence of the space in between buildings was due to the degree of enclosure of those spaces. The degree of enclosure of the space in between buildings determined the quality of the space. The more enclosed-space could be considered as more positive space as compared to the less enclosed or partly enclosed space. Hence, the degree of enclosure shall be imagined in the physical components of the surrounding form.

The physical component

In the physical of the space in between is made up of five basic components in human visual perception: top, bottom, left hand side, right hand side and end of visual plane. The first two components are: the top and bottom horizontal component i.e.: the road and sky. The second two-vertical component: i.e. the right-hand facade and the left-hand facade. The fifth component is the end of the visual plane in which all the components merged together in human visual field. The example of the bottom-horizontal component functioned as the street or the main traffic and human circulation in the city. The top horizontal component is the sky of the street. The two-vertical components of the space are the facades of buildings in perspective view. The fifth component is the back plane where the diminishing point lies in the observer's viewing angle.

The enclosure

In perceiving spaces in between buildings, Alexander (1997) agreed that there are two different kinds of outdoor spaces: negative space and positive space. He regarded an outdoor as negative space when it is a free space or shapeless without enclosure. In contrast, an outdoor space is positive when it has a distinct, definite shape of the surrounding enclosure. In design a room with definite shape

defined the quality of an indoor space; therefore the shape for outdoor space in between buildings is as important as the shapes of the buildings which surrounding it to define its quality. The following Figure 1 demonstrates the kinds of space which have entirely different plan geometries, which easily distinguished the quality space indoors and outdoors due to the enclosure factor.

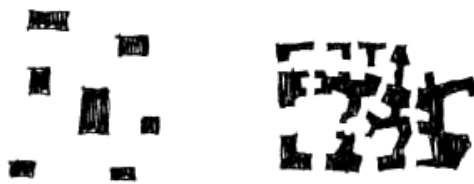


Figure 1: The plan of space in between buildings: without enclosed and with enclosed geometry. (Alexander, Christopher. (1997).

The geometry

According to Alexander (1997); the existence of the negative and positive spaces was due its geometry of the enclosure in terms of physical form and physical size of the space in between buildings. The geometrical form of space leads to the activity of the space. For example, the space with geometry of parallel wall with open-ended path of buildings had limited the space for any activities except side walking. The sidewalks are too tight to fit in a minimum of two persons passing-by. The size reflected the space as after-thoughts design and not built with the end users in mind. The alternative functions for the space is that the space could be occupied for landscaping purposes and limit to pedestrian only.



Plate 1: The illustration of a tight space in between buildings

The Visual Perspective

The visual quality as perceived by the end users depends on the combination of experience of viewing while moving in the city. The end user's experience used to combine the memory of indoor and outdoor spaces in the city. The overall perceptions on the city atmosphere on indoor and outdoor views of spaces are subject to the end users' personal judgement. Then, end users will decide to accept to reject the quality of the city. Therefore, a proper strategy shall be planned to ensure that the

collection of personal perceptions by every end users are recorded as positive as possible. This is due to the fact that the individual perception may lead to the communal perception and hence the communal perception may lead to the overall image and identity of the city.

The Perception of Form and Space

Wallschlaeger (1992) and Moutoussis, K., & Zeki, S. (2008) agreed that there is a psychological clues that the form and space of the surrounding environment send to human visual perception. Of course, the concepts of perception and communication are inter-related that enhance messages and symbolic forms. Hence, the perception in the human brain on selecting a quality of three-dimensional space relates closely to the selection of space by the conscious visual perception.

THE WEAKNESSES OF SPACES IN BETWEEN BUILDINGS

There are positive and negative attributes to the overall quality of urban space as found in the review and the urban observational study. The first phase of the primary data was conducted in Jonker Street and Jalan Laksamana in Banda Hilir, Melaka on August 2008. The first phase was done to search for the weaknesses of spaces in between.

The negative space

There is a negative perceptions labelled by end users towards the space. Most of the low surveillance areas perceived as negative space. The spaces in between buildings found in between, in front, at the sides and at the rear of buildings. Due to the variety of sizes and location of those spaces; the degree of surveillance were also varies.

An area with higher surveillance has higher security. According to Bently et. al. (1987); an exposed and more visually-accessible area is more secure. Therefore, it is visor to allow pedestrians and end users to pass by or circulate around the space in between buildings. The activity of moving around buildings can be programmed as part of the overall urban recreation development.



Plate 2: The illustration of the space in between buildings in Banda Hilir, Melaka

In most cases, it was reported that most of the non-surveillance spaces have high tendencies for negative functions. In fact, the spaces were used as rubbish collection space and storage of unwanted items. Those spaces may also used by the homeless and smugglers as meeting points. In short, the poor surveillance area became a venue for criminal acts such as pick pocketing, smuggling, and drug trafficking.

Facade Character

The characteristic of the space in between building are highly influenced by the architecture style of the surrounding facades. For example, the space in between a row of historical buildings reflected the spirit of heritage. If the surrounding buildings are institutional therefore; the space in between will reflect its formality. In short, the physical setting of the surrounding buildings has high influence to the spirit of space. The character of the wall orchestrates the psychology of the space in between.

Adjacent Space

The quality of indoor spaces in the city in most city development were taken care by the individual owner. However, if the quality of adjacent outdoor spaces is not taken care, the sustainability of the will not be secured too. The psychology of city environment is closely-knitted the indoor and outdoor space context.

Left-over space

The passive green area allocated by the local authority may be interpreted as unused space by public. Without proper designation of function may mislead the end-users to use the space for rubbish-disposal or unlicensed business premises.

Danger zone

The danger spaces in between buildings may be created due to its location. Open and public space can be a hazardous space if located adjacent to high-risk zone such as open space around power sub-station, oxidation pond, accident-prone area, construction sites, electrical pylons, and deep monsoon drain. In most cases, those areas were dedicated for passive green area by the planning department of the local authority. To avoid public access those spaces shall be buffered and posted with safety signage for public consciousness of such spaces in the city.

Set-back space

The road, river and building set-back or reserved areas may also be considered as negative space. Those spaces owned by the local authority might be for future use such as road widening or river embankment. However, the function was not acknowledged to public and often misinterpreted as negative space. The space was left without poor maintenance caused the public to perceive the area as uneconomical space. Due to those misperceptions lead some of city end-users to occupy it creatively for charging public who park in this area. They benefited themselves as the parking manager by collecting charges from public.

Non-illuminated space

The identified space in between buildings could be considered as a negative space due to its low-illumination. The level of brightness has been considered as one of the factors that contributes to the liveliness and deadness of the space. In night time, those unlighted space might risk the end users' safety. They were exposed to any possibility of crime in the darkness of the city night.

Non-surveillance space

Less accessible and isolated spaces from pedestrian and vehicular circulation were beyond visual surveillance. The examples for this area were the rear of the buildings without island-access or basement parking. Those were another spot for crime scenes and negative activities. The label of the space by public is as high risk are which shall be avoided by them hence more negative propaganda towards the space.

THE POTENTIAL FOR URBAN RECREATION DEVELOPMENT

Lack of sense of belonging leads to impersonalized space. The negative space in the city shall be personalized to be a positive space in terms of functions and enhanced for revitalization. It has its own potential for urban tourism recreation development.

Newman (1972) encompassed that the feeling of "*ownership*" or responded as "personalization" by Bently et.al.(1987) which both agreed that the positive psychological feeling shall be encouraged as part of the aims in the design development. This personalization could be developed in the space in between buildings for urban recreation development strategies. Generally, the following strategies of enhancement for the space in between buildings shall be applied in the ECER city development; in envisaging the city as an 'outdoor living room' for public recreation development:

The Positive Space

Most of the spaces in between row of buildings in most of cities in Malaysia functions as streets. According to Abbaszadeh, F. (2007): the physical components of the street are identified in the survey have been group into seven categories: building, location, landscape, street furniture, street design, traffic system and quality of view. Those seven components were the attributor to the character of the space either vibrant or static. In terms of street elements Abbaszadeh, F. (2007) identified nine elements of the street as: height and size of the facade, scale of the facade, architecture style and decorative elements of the facade, colour of the facade, information and advertisement signage of the facade, language of the sign board, illumination of the facade, street furniture style of the facade and the activity in between the facades. Therefore, for positive city image all the nine elements shall be considered for revitalization.



Plate 3: The lively space in between buildings in Jonker Street, Melaka with linear roadside -market

Meeting Point

The space in between building can function as meeting point. This idea works if the outdoor space is a visually and physically accessible for public gathering. Besides that, the space in between buildings could function as a landmark of a meeting point. Examples of this meeting point are the Dataran Merdeka in Kuala Lumpur, Dataran Helang in Langkawi, Dataran Pahlawan in Melaka and Dataran Ipoh in Perak. In revitalizing such spaces, the identification of such spaces is to ensure that the physical components, the accessibility, the degree of enclosure and the geometry are appropriate for meeting point purpose.

Waiting Point

With an efficient public transport system in the city, it makes long commutes more bearable. It is more pedestrian-friendly if the spaces in between buildings offer the pedestrian its function as space for sitting back with a take-out coffee and chill for a bit while waiting for the next bus. The place can become a breath-taking space before catching a crowded train. With this kind of approach the space could be experienced by the end users of regular travelers and tourists as a relief space. It is non-costly 'breathing space' could be considered as recreation activities for urban citizens while commuting to their destinies.

Outdoor Eating

The space in between buildings such as covered or uncovered sidewalks can be turned to a nice outdoor eating space. The city of Amsterdam in Holland and the Venice in Italy are examples of cities that the visitors commemorated their experience of walking through spaces of active theme cafes besides the curvilinear canals. Battery Park City in New York and Bintang Walk in Kuala Lumpur were part of the urban recreations development of road-sidewalk cafés which revitalized the night-life culture in those cities.

Pedestrian Mall

Petaling Street and Chow Kit Road in Kuala Lumpur, Lebuah Chulia in Penang and Jonker Street in Malacca are examples of pedestrian malls in Malaysia. Small retailers sell their goods including fast foods, fruits, accessories, watches, handbags and souvenirs along the road sides in between two rows of buildings. The continuity of the outdoor shopping activities has extended the indoor shopping activities. The continuous link between the indoor and the outdoor of the shopping activities will create the vibrancy. The linear shopping activities in the Bazaar Ramadhan in most cities in Malaysia were part of the success strategies of enhancing the space in between buildings.



Plate 4: The illustration of a busy open -sky urban pedestrian mall

Art Appreciation

The great thing is on a regulation applied in certain parts of the cities such as in the city of New York and Gangnam in Korea, in which regulated all buildings frontage must have their own outdoor sculptures for public art appreciation. Since art is one of the important artistic element that gives a cultural expression to the life of a city; the regulation is sound tangible to enhance the space in front of buildings for art appreciation. The following illustrations are just a sampling of the hundreds of sculptures in the Gangnam city.



Plate 5: The emptiness of space in between building can be filled for sculpture appreciation (Source: [//http://kauero.inigo-tech.com/blogs/topic](http://kauero.inigo-tech.com/blogs/topic))

Display Parade

In Rantau Panjang Kelantan the space in between buildings allowed the end users to appreciate the product display for sale. In fact, the approach of selling product along the parade has considered as conventional way of business promotion. For spaces in between buildings in front of the shop houses there are big opportunity for display of selling product. This product promotion will enhance further the space in front and in between commercial buildings for positive function as part of urban recreation activities.



Plate 6: The display parade in front of shop houses in Rantau Panjang Kelantan



Plate 7: The souvenir display in front of shop houses in Banda Hilir Melaka

Photo-taking Point

Part of the urban recreation activities used to be done by the end users such as tourists or visitor to the city is taking photographs. The space in between buildings shall cater this kind of activity within the city outdoors. By providing a small space to accommodate for this kind of function will increase the sense of personalization among the visitors. With this kind of outdoor space it will allow the end users to perceive the city image and identity in a more enjoyable manner.



Plate 8: The steps in front of building can be used for photo-taking to take place

Active Landscape: Interactive Exercise-Prop

Walking is a simple exercise. The space in between buildings may allow shaded space in between for self-help cardiac activity. The activity may take place for non-vehicular space by locating the exercise props or just safe space for walking. This enhancement could be applied for urban residential and commercial area which might help the heart-problem citizen to have preventive measures activity.

For the space in between building located in working zone it could be enhanced for walking activity. The strategy could help the city citizen to upgrade their quality of life through healthy lifestyles.

Interactive Signage

In our present digital era; an interactive information and advertisement shall occupy the space in between buildings located at the danger zone area. Since, the space is not suitable for public access therefore the space can be useful for advertisement purposes. This area will benefit the end users or tourists by the provision of interactive information on the city programs and advertisement of the recent products. Besides that, illumination from the billboard is also useful for lighting up the surrounding area in night time.

Active Green

The tight-space in between building has it's a hope for enhancement. The space shall be provided with illuminated pavement or boulevard. The cost of simple streetscape is very cheap as compared to the benefit of increasing the safety of the end users during night walking activities in the city.

The Festive Mood

The physical component of the space in between buildings has included the sky as the top horizontal element. The sky component of the outdoor space for spaces in between buildings plays an important role in quality of the space. It has the potentials of creating the liveliness of the festive mood. For instance if the space in between buildings is linked with decorated with Chinese lantern; it creates the mood of Chinese festival. On the other hand, if the same space is sky-linked with 'ketupat' lantern, it enhanced the Malay festive mood!

CONCLUSION

Finally, the enhancement of small urban public space in between buildings should be treated as 'a revitalization of city outdoor living room'. Hopefully, before the new mega-city really takes place in our city, it is not too late to enhance the idea of prioritizing the public space. The public space including the space in between buildings shall be enhanced for the future city's outdoor experience in the urban recreation development. With that awareness among the city stakeholders, city manager, the sense of personalization among all the city users will be increased and the pride of being part of the city citizen will soon be elevated. Thus, the positive feeling among the citizen will lead to the promotion of the city image and identity. Even though, mega-city is the dream, the future of the humanity at ground zero shall not be jeopardized!!

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ET(03)

UTILIZATION OF RAIL-BASED AMPANG LINE LRT

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ABSTRACT

Booming economy has resulted an increase in car ownership and acute traffic problems in major urban areas particularly the Klang Valley. The Government has taken steps to alleviate this escalating problem with the implementation of the Light Rail Transit (LRT) which will form the central feature of an integrated transportation network, combining feeder buses and commuter rail services to offer an efficient alternative to the current limitations of road travel. Although rail usages are showing encouraging sign, optimal utilization has yet to be achieved. The Ampang Line Light Rail Transit (formerly known as STAR LRT) in Kuala Lumpur, has a capacity of 500,000 passengers per day but the daily average is only 150,000 passengers. This indicates that the Ampang Line is underutilized by approximately 70 percent. Literatures which have been reviewed include types of rail-based urban public transport available in Malaysia and existing government policies on the public transportation. A qualitative approach is applied whereby an on-board survey and stated preference survey were conducted respectively on both users and non-users of the Ampang Line LRT. This paper will identify factors that affect the LRT rider ship which deters private car users from utilizing it. Variables which are likely to encourage the usage of LRT will also be looked into. This paper was mooted with the intention to increase the usage LRT which is currently underutilized. Finally it will elaborate the factors and variables which have been identified as having effects on LRT passenger's travel behaviour.

Keywords: *public transport, light rail transit, rider ship.*

INTRODUCTION

Malaysia is a country that is growing vastly after independence, especially since the late 1970s. Evidently, we can see development after development being planned, built and completed, most notably within Kuala Lumpur and its conurbations (known as Klang Valley⁶¹). Due to the prosperously growing economy, there is a rapid increase in the number of population in Malaysia. Klang Valley being the main attraction, allured more people to migrate in as it offer attractive and wide variety of job opportunities with better salary to satisfy living needs.

Rapid development since 1950s has also caused the area expansion of Kuala Lumpur. In the 1950s, Kuala Lumpur only covers an area of 93 square kilometres⁶² but has expanded to 243 square kilometres with the population of 1.42 million in the year 2000⁶³. As a result, this has brought in massive development in urban transport infrastructures. With booming economy comes an increase in private car ownerships. Malaysia's rapid growth in population, economy and motorization has resulted in the number of registered motor vehicles to increase by 8,321,517 over the 13 years period from 1990 to 2003.

⁶¹ Klang Valley comprises of Federal Territory of Kuala Lumpur, Federal Territory of Putrajaya and Districts of Petaling, Klang, Gombak, Hulu Langat and Sepang in the state of Selangor.

⁶² <http://geografi.um.edu.my/online%20papers/whithertsp.doc> Retrieved on 9th August 2007.

⁶³ Kuala Lumpur Structure Plan 2020 (Chapter 2)

In other words, there was a general increase of 54.6% for all motor vehicle registration in Malaysia. Currently, there are more than 12 million registered vehicles in Malaysia, comprising 30% of motorcars, 59% of motorcycles and 11% of other vehicles, all which are currently moving on 75,160 km road network in this country. The number of registered vehicles is increasing every day and the average annual growth is 4%. This figure is estimated to double by the year 2020. The question now is what about the road network? Will it increase twice the size and length to meet the requirement?⁶⁴

Given its low population density, remote residential areas, the sprawling trend and the government's emphasis on promoting Proton, the national car, it is no surprise that Kuala Lumpur is one of the most car-dependent cities in the world.⁶⁵ Public transportation in this city of nearly 2 million people comprises only a dismal 20% of total motorized travel as compared to other neighbouring countries; 80% in Hong Kong, 60% in Seoul, 56% in Singapore, 54% in Manila, 49% in Tokyo and 30% in Bangkok⁶⁶. Kuala Lumpur has a current modal split of about 80:20 in favour of private transport, reflects an obvious imbalance between private and public vehicle usage⁶⁷.

The rapid increase in the use of private vehicles has its root in the weak Malaysian public transportation system. The rise of population and the rapid increase of car ownership in relation to inadequate public transport have largely contributed to increase traffic congestion, road traffic accidents, casualties, and environmental pollution.

For years, the public transport services have not been consistent or reliable. As a result, car traffic has increased. New flyover projects are being proposed to disperse (but not reduce) traffic throughout the Klang Valley. Yet, cheap, effective and quick improvements on public transportation are usually ignored. Usage of public transportation in Klang Valley has in fact dropped sharply, from 34% in 1985 down to 16% in 2003, while roads have become more and more congested as the use of private vehicles has increased from 47% in 1985 to the current 71%⁶⁸. Studies undertaken by the government show about 1.5 million people drive into the Kuala Lumpur city centre daily and only about 500,000 or 11% use public transport⁶⁹.

In view of the increasing number of registered private cars and related road injuries and deaths in Malaysia, a shift away from private vehicles towards other safer modes is essential. The increasing number of car users involved in crashes and associated injury has prompted the government of Malaysia to undertake various studies to address the problem. One of these studies was the shift of transportation mode from private car to public transportation in Malaysia.

⁶⁴ Hassim Mat, Overall Planning towards Safety Urban Flow, APSA conference 2005.

⁶⁵ http://www.unhabitat.org/downloads/docs/4522_69594_K0654594%20HSP-GC-21-INF3.pdf.

Retrieved on

⁶⁶ Misao Sugawara, Japan Railway and Transport Review No 4; Urban Transport in Asian Countries (page 23-29).

⁶⁷ National Physical Plan (Chapter 5.7)

⁶⁸ Ninth Malaysia Plan 2006-2010 (Chapter 18 page 377).

⁶⁹ <http://www.eturbonews.com/> (Malaysia to solve Kuala Lumpur Public Transport Woes dated 31st August 2006) Retrieved on 21st September 2007

In the move to improve the transportation chaos in Klang Valley, the government has taken steps to alleviate escalating problems with the implementation of urban rail services, whereby Klang Valley is currently being served by 5 different rail-based transport which includes The Ampang Line LRT (formerly known as STAR LRT), the Kelana Jaya Line LRT (formerly known as PUTRA LRT), KLIA Express and KLIA Transit, KL Monorail and the KTM Commuter. Recently, LRT and commuter rail usages are showing an encouraging sign, whereby there is an increase in average daily rider ship for all services (refer Table 1).

Table 1: Average Daily Ridership on Urban Rail Services 2001-2005

Urban Rail Services	2001	2002	2003	2004	2005
The Ampang Line	88,801	91,702	107,082	120,426	125,208
Kelana Jaya Line	143,778	149,105	154,869	160,361	165,695
KLIA Express & KLIA Transit	-	4,983	7,323	9,990	12,075
KL Monorail	-	-	23,872	33,837	44,442
KTM Commuter	57,339	60,504	67,522	74,960	85,733

Source: Economic Planning Unit

However, optimal usage has yet to be achieved. Among all rail-based urban public transport, The Ampang Line LRT is among the least utilized, whereby the capacity per day is 500,000 passengers, but there is only an average of 150,000 passengers per day. This indicates that the **Ampang Line is underutilized by approximately 70%**, compared to the Kelana Jaya Line which has an average of 180,000 passengers per day over the capacity of 200,000, the KLIA Express and KLIA Transit which has 6,000 passengers per day over the capacity of 40,000 and KL Monorail which has an average of 45,000 passengers per day over unknown capacity.

Research Questions

Despite the improvement to the public transport system and road infrastructure, and billion of Ringgit are being invested for improvement, the rail-based urban public transport utilization is still low. Therefore, it is essential to find out why the public is preventing themselves from using the rail-based urban public transport by answering three main questions:

1. Why aren't people commuting by rail-based urban public transport?
2. What deters people to shift from private to public transport?
3. What are the important variables likely to encourage the use of rail-based urban public transport?

Research Objectives

Based on the three research questions, three research objectives are being formed:

1. To identify factors that has a significant effect on transit rider ship.
2. To identify factors that deters private transport users from utilizing public transport.
3. To determine the trade off users make, when considering the choice of their transport mode.

In order to solve the transportation problems and urging people to reduce the use of private transport, there must be a viable alternative. If the public transport is not reliable, how will those people who stop using the private transport commute? The country cannot afford to keep building new roads because this does not solve traffic problems.

Therefore, this research is very important to understand the rider ship pattern for users. Through the understanding of human's behaviour, rational policies and strategies could be formulated to encourage greater utilization of public transport. In addition, there are future plans of expanding the current rail-based urban public transport as well as expanding rail-based urban public transport to other states of Malaysia. Therefore understanding rider ship pattern accurately will assist in the selection of best location of stations and better planning of routes.

LITERATURE REVIEW

Public Transport

Transportation refers to the movement of people, goods, information and energy. Public transport has various types of interpretation and is widely defined according to the different framework of transportation system in different region.

According to *Brändli (1994)*, public transport can be characterized by some specific properties and it is the production of transport services for masses of people, not just individual. This service is completely fixed in space and time by means of timetable. There is always a chauffeur, thus eliminating the need to drive oneself and trips involved more than one means of transportation including walking, that is, passengers have to change designated interchanges.⁷⁰

Public transportation, public transit or mass transit comprises transport system in which passengers do not travel in their own vehicles. While the above term is generally taken to include rail and bus services, wider definitions might include scheduled airline services, ferries, taxicab services etc. — any system that transports members of the general public.

A further restriction is sometimes applied, whereby transit should occur in continuously shared vehicles, which would exclude taxis that are not shared-ride taxis. Public transport is usually regulated as a common carrier and is usually configured to provide scheduled service on fixed routes on a non-reservation basis. Majority of transit passengers travel within a local area or region between their homes and places of employment, shopping, or schools.⁷¹

Public transport can offer significant advantages in areas with higher population densities, due to its smaller physical and environmental footprint per rider and the problems associated with mass private car ownership and use (high parking charges and high levels of traffic congestion).⁷² However,

⁷⁰ C.Freksa (2005) *Spatial Cognition IV: Reasoning, Action, Interaction*, Germany.

⁷¹ Wikipedia, http://en.wikipedia.org/wiki/Public_transport, 9 Jan 2008.

⁷² Peter Nijkamp, Sytze A. Rienstra and Jaap M. Vleugel (1998), *Transportation planning and the future*, West Sussex : John Wiley & Sons, Ltd

road-based public transport risks being considerably slower than private vehicles if it gets held up in general traffic congestion and to compound this, scheduled transport vehicles have to make frequent stops to board additional passengers and an individual trip may require one or more transfers. Routes are often circuitous to increase the area serviced by the system. Transport authorities wishing to increase the attractiveness and use of public transport often responded by increasing the usage of dedicated or semi-dedicated travel lanes (grade-separated, elevated, or depressed rights-of-way) and traffic light pre empts and many other measures.

Light Rail Transit (LRT)

Light rail or light rail transit (LRT) is a form of tram system that generally uses electric rail cars on private rights-of-way or sometimes on streets. Light rail is a relatively new term, as an outgrowth of trams/streetcars. Speeds are usually higher, and articulated vehicles may be used to increase capacity. While the term is generally used for systems with modern light rail vehicles, it can be applied to any tram system. Light rail is a step below rapid transit, which is fully grade-separated.

The term light rail was devised in 1972 by the U.S. Urban Mass Transit Association (UMTA) to describe new streetcar transformations which were taking place in Europe and the United States. In Germany, the term *Stadtbahn* was used to describe the concept. Light in this context is used in the sense of "intended for light loads and fast movement", rather than referring to physical weight, since the vehicles often weigh more than the so-called heavy rail systems. The investment in infrastructure is also usually lower than those at heavy rail system.

The most difficult distinction to draw is between light rail and streetcar or tram systems. There is a significant amount of overlapping between their technologies, many of the same vehicles can be used for either, and it is common to classify streetcars/trams as a subtype of light rail rather than as a distinct type of transportation. The two general versions are:

- The traditional type, where the tracks and trains run along the streets and share space with road traffic. Stops tend to be very frequent, but little effort is made to set up special stations. Because of space-sharing, the tracks are usually visually unobtrusive.
- A more modern variation is trains that tend to run along their own right-of-way are often separated from road traffic. Stops are generally less frequent, and the passengers are often boarded from a platform. Tracks are highly visible and in some cases significant effort is expended to keep traffic away through the use of special signalling, level crossings with gate arms or even a complete separation with non-level crossings. At the highest degree of separation, it can be difficult to draw the line between light rail and metro system which is a rapid rail transit. Increasingly, light rail is being used to describe any rapid transit system with a fairly lower frequency compared to heavier mass rapid systems such as the London Underground or the Mass Rapid Transit in Singapore⁷³.

⁷³ http://en.wikipedia.org/wiki/Light_rail Retrieved on 20th September 2007

The Ampang Line

The Ampang Line is previously known as STAR (Abbreviation in Malay: Sistem Transit Aliran Ringan or Light Rail Transit System) before it was renamed to The Ampang Line in April 2007. This system is under the management of RapidKL's rail transport division. The Ampang Line started its operation in the year 1996, with the Ampang-Sultan Ismail route while the second stretch Chan Sow Lin-Sri Petaling started its operation in 1998. This system has an average of 150,000 passengers per day with capacity of 500,000 passengers per day. The Ampang Line operates from 6.00am to 11.50pm daily.

The Ampang Line LRT is operated with drivers. The entire Ampang Line system runs a total route length of 27 km, of which 17.6 km is at grade while 9.4 km is on viaduct. There are 25 stations altogether, eleven stations along Sentul Timur-Chan Sow Lin and seven each along Chan Sow Lin-Ampang and Chan Sow Lin-Sri Petaling (17 at grade and another 8 elevated). Basically there are two routes, which are the Sentul Timur-Ampang and Sentul Timur-Sri Petaling. Both lines converge at the Chan Sow Lin interchange station. The merged line leads to the North, terminating at Sentul Timur Station (refer Figure 1).

Phase I (Ampang-Sultan Ismail) runs generally at-grade from Ampang using the former KTMB rail reserve to Plaza Rakyat (Puduraya) from where it will run on elevated track along Jalan Tun Perak, then along the East bank of Sungai Gombak to terminate at Jalan Sultan Ismail. The administration, workshops and the stabling area are located at Ampang. For Phase I, there are 17 two-vehicle trains running on double track, segregated from all other traffic and fully fenced.

Phase II (Sultan Ismail-Sentul Timur and Chan Sow Lin-Sri Petaling) is an extension of the Phase I route, which comprises a further 3.2 km of track to the north and 11.8 km to the South. The Phase II extensions served to provide an improved public transportation system to the National Sports Complex at Bukit Jalil during the 1998 Commonwealth Games.

Since its launch, the Ampang Line had been intended to include forms of interchangeability with other rail-based systems in the region. When The Ampang Line was launched in 1996, the Bandaraya Station became the first station to be designated as an integration station, connecting to the Bank Negara KTM Commuter station. With the completion of the Sri Petaling-Chan Sow Lin Line, the Bandar Tasik Selatan station was opened as a more integrated interchange between The Ampang Line, KTM Commuter, Express Rail Link (ERL). The system currently has a total of five stations linked to other railway systems at different locations:

1. Titiwangsa Station with KL Monorail
2. Bandaraya Station with KTM Commuter's Bank Negara Station (within walking distance)
3. Masjid Jamek Station with Kelana Jaya Line
4. Hang Tuah Station with KL Monorail
5. Bandar Tasik Selatan Station with KTM Commuter and ERL

The Ampang Line is the only rail system in the Kuala Lumpur rail transit network that does not stop within or near Kuala Lumpur Sentral.

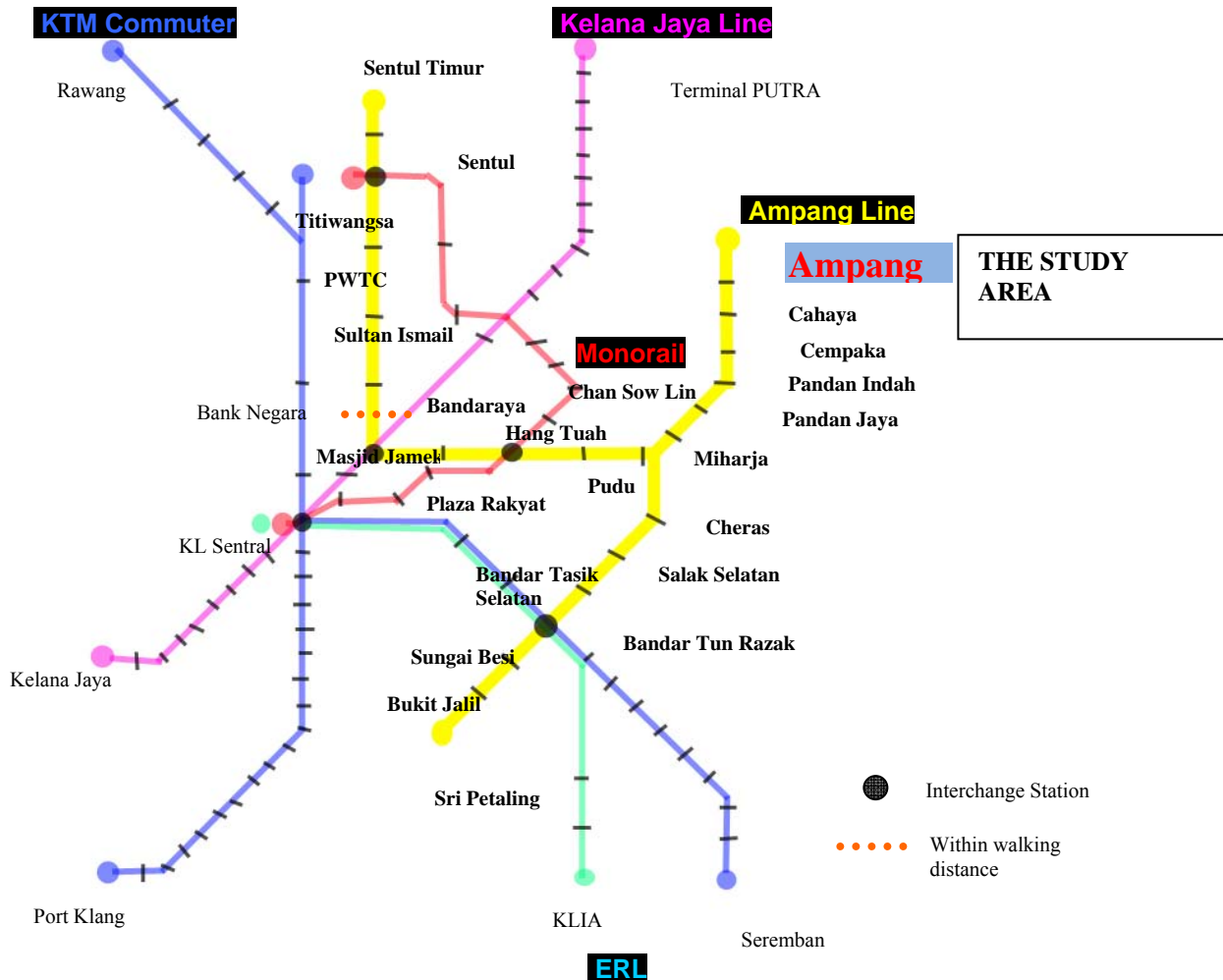


Figure 1: The Ampang Line LRT routes (in yellow)

RESEARCH METHODOLOGY

A proper laid methodology is essential to ensure that the information obtained for the study is rigorously relevant. A good methodology will make sure that the information gathered is consistent with the study objectives and that the data is collected by accurate and economical procedures. The objective of the research project logically determines the characteristics desired in the research design. Research objectives are dependent upon the stages of the decision-making process for which information is needed. The necessary data may not be found from the literature review, therefore data collection, be it primary data or secondary data may be collected to answer the research project questions.

To achieve the objectives of this study, survey was carried out in the Federal Territory of Kuala Lumpur over a period of one month (from 24th January 2008 till 27th February 2008). Kuala Lumpur was chosen as the study locality because it has high car ownership and use, and public transports (bus and rail) are available. This research will focus on the Ampang Line and due to time and energy

constraints, this study will only emphasize on the Ampang LRT Station and its surrounding area. The focus of this research is mainly to investigate the public's perception and experiences regarding the Ampang Line service. In order to reach the objectives, this study will examine 2 groups of people, which are the users and non-users of the Ampang Line. Study on non-users is included to identify factors which deter them from using the Ampang Line.

Research Flow Chart

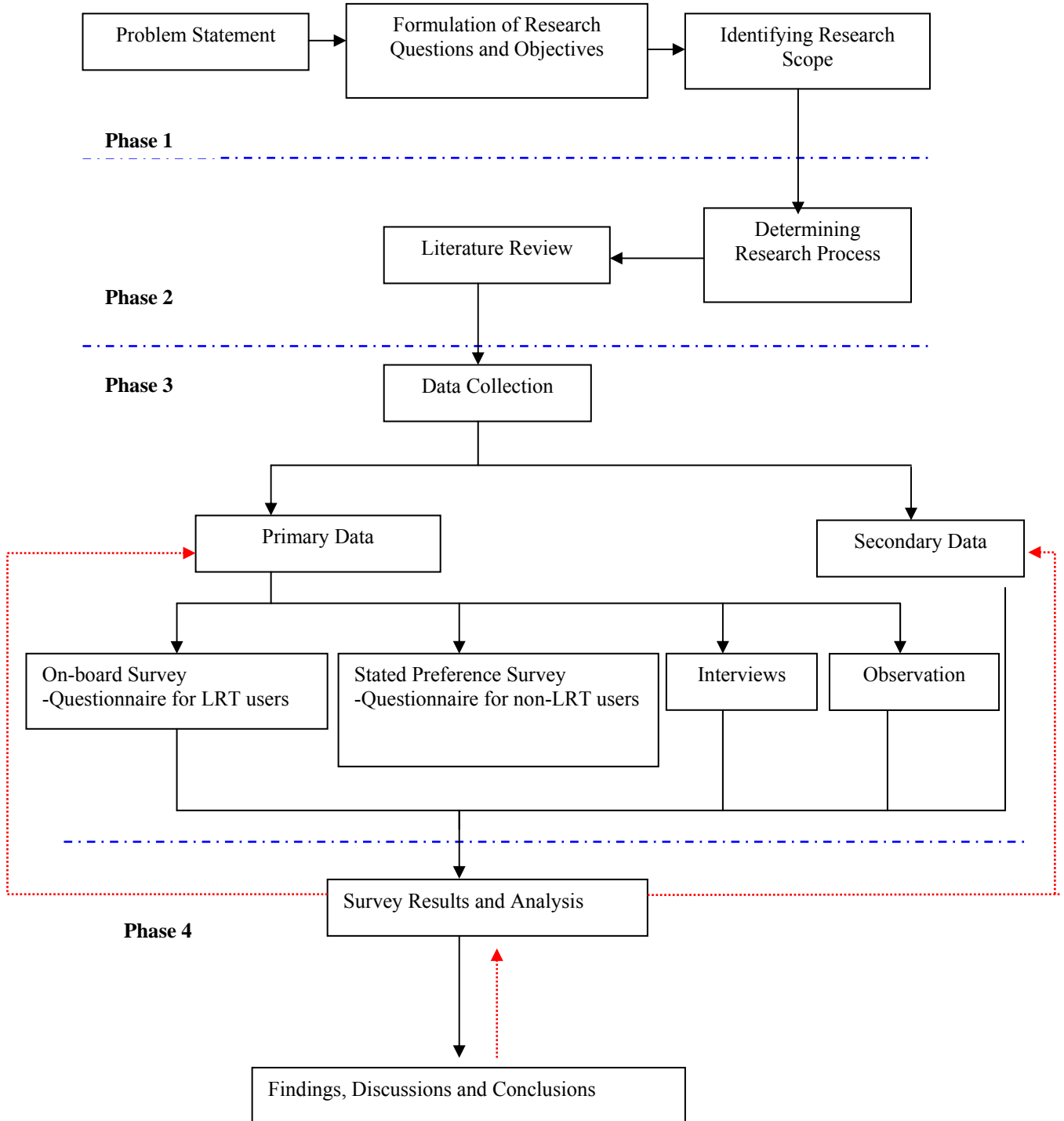


Figure 2.1: Research Flow Chart

Data Collection

Research may be quantitative or qualitative in nature. This study adopted the quantitative research because reality may be captured and translated into the form of statistical analyses. (Straub D, 2004). The general data collection techniques for quantitative research are secondary data sources, objectives measures or tests, semi-structured interview questions and structured survey questionnaires (Straub D, 2004). The data collection technique adopted were secondary data sources, semi-structured interview questions, observation and surveys.

Sampling

In order to explain how respondents are chosen for the surveys, it is necessary to introduce sampling. For Ampang Line users, the total population which is used is the average of passengers per day which is 150,000 while for non Ampang Line users, the population taken is the population of Ampang Jaya Municipal Council which is about 574,300. Due to the large number of population, the following equation will be used to calculate the sample size:

$$n = \frac{N}{1 + N(e)^2}$$

Where by N = population, n=sample size, e = precision level.

Source: Kinnear and Taylor (1996), *Marketing Research*, Mc Graw-Hill

Due to time constraint, the precision level of $\pm 7\%$ is being used for both sample size. Both population of users and non-users of Ampang Line exceeded 100,000 people, therefore based on the formula calculation, the **sample size for users and non-users are 200 respectively**. The sampling method being used is simple random sampling. In a simple random sample, one person must take a random sample from a population, and not have any order in which one chooses the specific individual. This simple random sampling method is used twice, both for Ampang Line users and non Ampang Line users separately, as demonstrated in Step 2. For users of Ampang Line LRT, every 5th person the surveyors met was being chosen as a respondent while they were waiting to board trains, while they were in the trains or while they disembark from trains respectively. For non-users of Ampang Line LRT, every 5th person the surveyors met while walking around the area nearby the Ampang LRT station were taken as respondent.

FINDINGS

The findings from the study are divided into two groups; the Ampang Line users and the non Ampang line users.

Ampang Line Users

Out of the total of 200 respondents of Ampang Line users, 57% of them are females. Among the 200 respondents, 35% of them are from the age group of 16-25 year-old, (refer Table 2). This indirectly indicates the target users of the Ampang Line. There is a lower number of respondents from the group

of more than 45 year-old, whereby it comprises only a total of 12% of the total respondents. This is due the fact that most respondents from this group are married with children and they have the ability to own vehicles.

Table 2: Gender and Age Group of Ampang Line Respondents

GENDER	AGE (YEARS OLD)						TOTAL
	<16	16-25	26-35	36-45	46-55	>55	
MALE	10	36	18	12	6	4	86
FEMALE	14	34	22	30	8	6	114
TOTAL	24	70	40	42	14	10	200

Figure 3 shows the rating on the existing condition by the Ampang Line users in terms of punctuality, waiting time, frequency, off-peak service, seats, crowd and supporting facilities. Generally we can see that there are some dissatisfaction shown in terms of off-peak service, the comfort of seats and also the crowd in the train.

In terms of off-peak service, users are not very satisfied as they have to wait quite a long time. Currently the off peak service frequency is in between 6 minutes up to 40 minutes. A high number of users voiced out their opinions on the design of the seats. The seats of Ampang Line trains are made up of metals, so therefore it creates uncomfortable condition for users when the weather is too cold or hot (refer Figure 4). Besides that the smoothness of the surface will make passengers glide from their original seating position. Besides that, the crowd in the train especially during peak times causes users to feel too packed in the train.

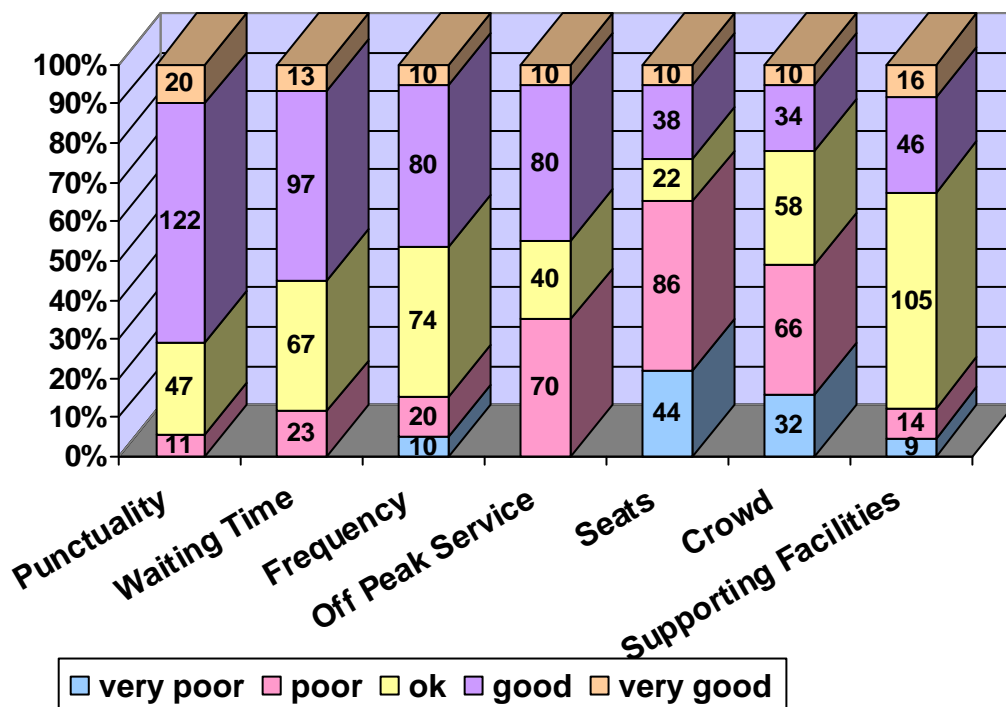


Figure 3: Respondents Rating



Figure 4: Seat design of Ampang Line LRT

Figure 5 shows the rating on the existing condition by the Ampang Line users in terms of air-conditioning and lighting, cleanliness, ticketing, fare rates, concession fares, park and ride facilities and integration between modes of transportation. Generally we can see users are satisfied with the air-conditioning and lighting, cleanliness of both the trains and stations and also the pedestrian linkages. However there are some dissatisfaction shown in terms of ticketing methods, fare rates, concession fares, park and ride facilities and integration between modes of transportation.

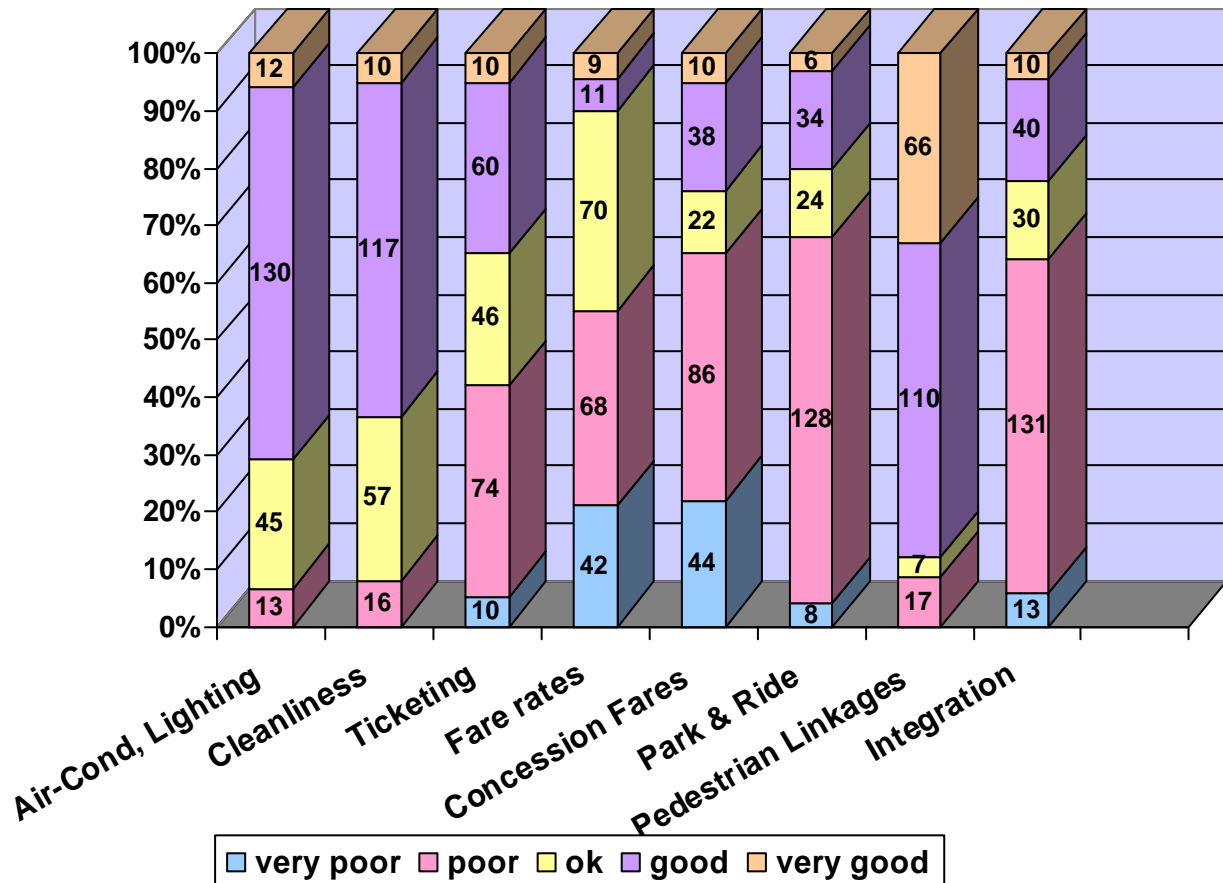


Figure 5: Respondents Ratings

In terms of ticketing, users voiced out the weaknesses, whereby sometimes during peak times only one manual counter is being opened and it causes a long queue and in addition some of the ticket vending machines are always malfunctioning. In terms of fare rates and concession fares, some users felt that the fares are a little expensive, notably when going by a group of people, whereby sometimes the total fare is even more expensive than taking a cab. The same goes for the concession fares whereby the most of the rates are only RM1.00 cheaper than the normal price, which definitely defeats the purpose of having concession fare rates.

In terms of park and ride facilities, it is poorly done whereby there is not enough parking space and some of the parking spaces have been reserved for RapidKL employees. Besides that, there's no allocation for bicycle parking and we can see bicycles are locked everywhere, from street signs to bus stops etc.

Non Ampang Line Users

Out of the total of 200 respondents of non Ampang Line users, 64% of them are males. Among the 200 respondents, 38% of them are from the age group of 16-25 year-old, (refer Table 3). This indirectly indicates this group of people are very influential as at the same time, they are also the ones who are using the Ampang Line the most.

Table 3: Gender and Age Group of Non Ampang Line Users

GENDER	AGE (YEARS OLD)						TOTAL
	<16	16-25	26-35	36-45	46-55	>55	
MALE	4	44	22	18	30	10	128
FEMALE	-	32	22	10	6	2	72
TOTAL	4	76	44	28	36	12	200

Figure 6 shows the scale of influence in deterring non-users from using the LRT in terms of punctuality, waiting time, in-and-out of vehicle time, distance, air-conditioning and lighting, and supporting facilities. Generally we can see that the factors which are more influential in deterring the use of Ampang Line are the long waiting time at the station, the unpunctual service, the in-and-out of vehicle time and the distance between home to LRT station and LRT station to school/workplace.

In terms of unpunctuality, most of the non-users felt that the LRT doesn't run on time. Besides that they feel that the current frequency is not suitable and they should shorten the current waiting time at the station. Besides that, the in-and-out of vehicle time plays a very important role. Some non-users felt that sometimes driving is even much faster than taking LRT as sometimes the actual journey with LRT takes much longer time. Besides that some LRT stations are being located far away and the great distance between home and LRT station or LRT station with school/workplace will discourage the public from using LRT.

Figure 7 shows the scale of influence in deterring non-users from using the LRT in terms of the crowd in the train, fare rates, route coverage, integration between modes of transportation, cleanliness, park and ride facilities, lack of available information and lack of safety measures. Generally we can see that the factors which are more influential in deterring the use of Ampang Line are the crowd in the train, fare rates, route coverage and integration between modes of transportation.

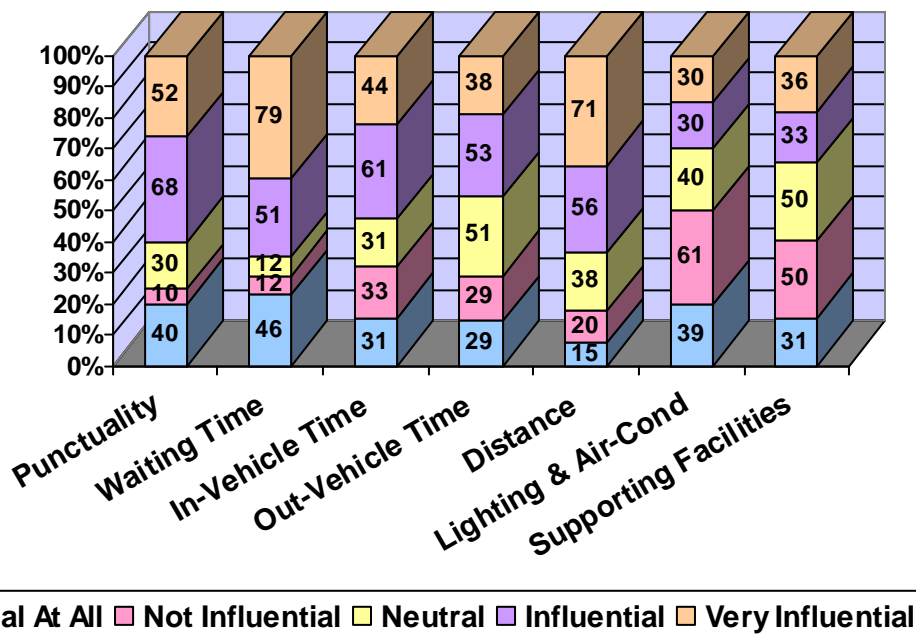


Figure 6: Factors deterring non-users from using Ampang Line

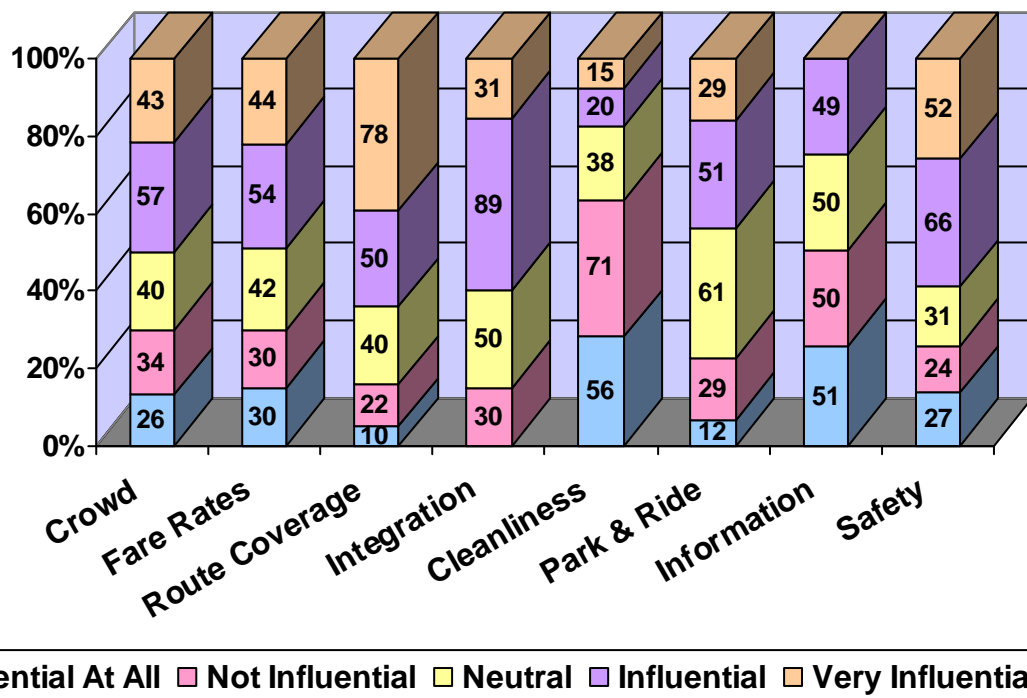


Figure 7: Factors deterring non-users from using Ampang Line

In terms of crowd in the train, there's a need to improve the crowdedness in the train as some of the non-users would rather go with private cars as the train is always too packed at certain rush hour with people which causes uncomfortable. Besides that non-users too would rather use their private vehicles as some of the fare rates are deemed a little expensive especially if it involves a family outing, which ends up costing as much as driving cars. In terms of route and coverage, some important routes are not being covered by the LRT routes, for example places like Subang Jaya and Damansara whereby the demand from these places are high. In terms of integration, non-users felt that there's a lack of integration between modes of transportation. Some LRT station are not being compliment with proper bus service and even integration between urban rail services are not really integrated as being shown in KL Sentral whereby the KL Monorail station is outside the KL Sentral building and the Ampang Line did not even reach KL Sentral.

The scale of influence rated by non-users indirectly signifies the factors which are deterring them from using the LRT service. Therefore we can conclude that factors which deter private transport users from utilizing public transport particularly the Ampang Line are LRT is not punctual and does not run on time, long waiting time at station, long in and out of vehicle time, great distance between home and LRT station or LRT station with school/workplace, crowd in the train, expensive fare rates, desired routes not covered by LRT and lack of integration between modes of transportation.

Figure 8 shows the trade off non-users who are willing to make to switch from private vehicles to public transport. Other aspects are assumed constant when one of the following aspects is being changed. From the graph shown below, non-users are willing to make a switch when there's a travel

time reduction, better park and ride facilities, better coverage of LRT and better integration between modes of transportation.

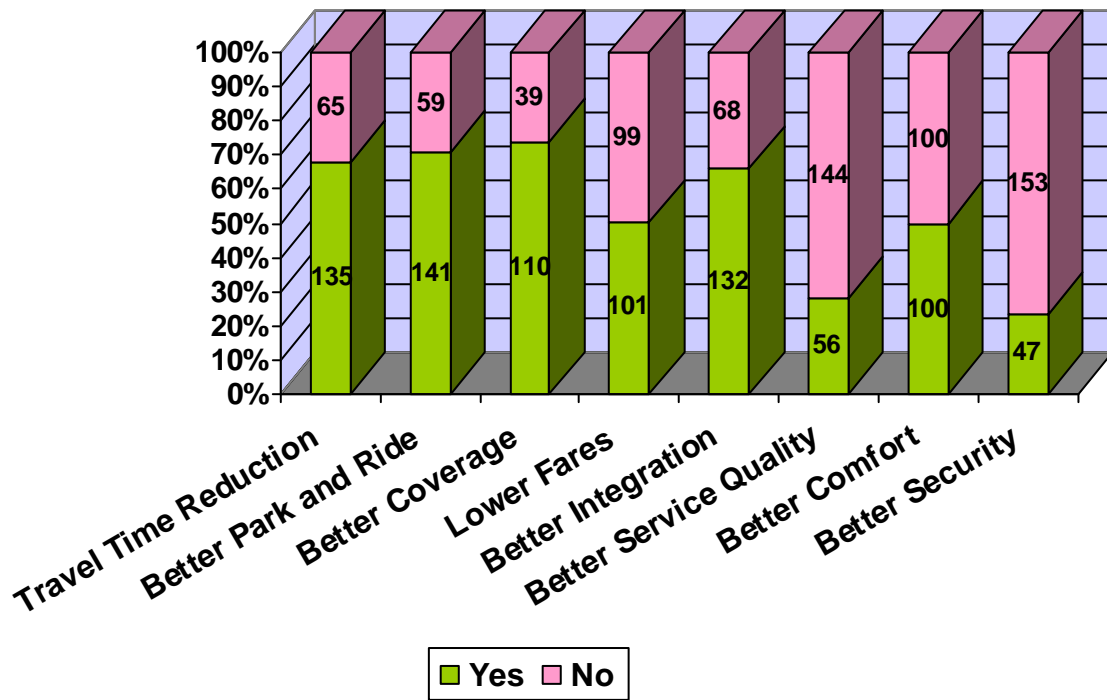


Figure 8: Trade Off for Non-users

In terms of travel time, 67.5% of non-users are willing to switch and use Ampang Line if there’s a total travel time reduction. Among the 135 respondents who responded positively, the maximum time they are willing to spend on a one-way LRT journey is no longer than 40 minutes. As for lower fares, 101 respondents who responded positively stated that maximum fare amount they are willing to spend per month does not exceed RM100.00.

Therefore from this graph, we can conclude that the important variables which are likely to encourage private transport users to use the Ampang Line are travel time reduction, better park and ride facilities, better coverage of LRT and better integration between modes of transportation.

CONCLUSION

This paper attempted to get a better understanding of choice behaviour of travellers and determined the trade-offs travellers make when considering the choice of their mode of transport. The choice behaviour of travellers was studied to determine the important reasons behind the choice of a particular mode and the circumstances, which might cause travellers to stay or change with their choice. This paper examined the characteristics of trips such as travel time, travel cost, demographic and socio-economic characteristics to determine the relative influence of demographic, socio-economic variables and mode attributes on mode choice behaviour.

In order to promote greater use of public transport, this paper was aimed to answer 3 objectives which are:

- To identify factors that has a significant effect on transit rider ship.
- To identify factors that deters private transport users from utilizing public transport.
- To determine the trade off users make, when considering the choice of their transport mode.

The first part was to determine factors which have significant effect on transit rider ship. Results were gained from response of users in pointing out the weaknesses of the current state of the Ampang Line. These weaknesses indirectly indicate the effect they have on rider ship pattern. Among the factors are; the weak off-peak service, uncomfortable seats, the crowdedness in train, expensive fare rates and inadequate park and ride facilities.

The second part was to examine the deterrents of private transport users towards utilizing public transport. Findings revealed that unpunctual LRT, long waiting time at station, long in-and-out of vehicle time, great distance between home and LRT station or LRT station with school/workplace crowd in the train, expensive fare rates, desired routes not covered by LRT and lack of integration between modes of transportation are among the deterrents.

The third part was to examine the choice travellers make when trade-offs of certain criteria are being used. The results suggest that travel time reduction, better park and ride facilities, better coverage of LRT and better integration between modes of transport are characteristics that will encourage the use of public transport.

Findings revealed that these parameters above were significant in explaining mode choice behaviour. For the car mode, bus and train alternative comparison, the results of model estimation revealed that lower travel time and lower travel cost are the major barriers for car users in not choosing the bus mode. In order to promote greater use of public transport and less dependence on car, an efficient public transport system is clearly needed.

In a nutshell, the factors and variables listed above in the end all boils down to 3 main concepts which are comfort, convenience and cheap (**3Cs**). Although overall the public gave a good rating for the Ampang Line service, there are still plenty of rooms for improvements and RapidKL should pour in more effort to improve the current service standards to make sure it provides a better, effective and efficient service to the public. Therefore, currently the most important for RapidKL is that they keep upgrading and improvising their strategies to fulfill the ever changing environment and the changing demand of people.

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HC(01)

WOMEN AS CAREGIVERS OF THE ELDERLY IN MALAYSIA

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ABSTRACT

Malaysia is undergoing the second phase of transition to an ageing population. Due to this move, the study aims to look at the demographic and socio-economic profiles of a portion of Malaysia's population who plays an important role in taking care of the elderly in the Malaysian population. They are the women caregivers of the elderly. Data are obtained from the 3rd Malaysian Population and Family Survey (MPFS-3). Data were analyzed to determine association between caregiving and socio-economic status of a woman and to make comparison between caregivers and noncaregivers. Results from the study shows labour force participation among caregivers and most of them earned less than RM500 per month. Majority of caregivers were married at the time of the survey and resided in rural areas. Association was also found between caregivers and age-group, geographic location, ethnicity, working status, and employment status. From the findings, patterns of caregivers can be found which are mostly women. But the new cohort of women, most of them also contribute to the labour force. This indicates working women who are working will also be burden with the role of caregiving.

Keywords: caregivers, elderly, ageing population

INTRODUCTION

Malaysia is in the midst of demographic transition where substantial demographic structure has changed in the last two decades. The mortality rates have declined significantly in the 1990's and the total fertility rate has also been falling rapidly. Between 1991 and 2000, the total fertility fell from 3.4 to 2.9 per woman, and it is projected to reach replacement level by 2015 (Leete, 1996). Concomitant with declines in mortality and fertility, life expectancy at birth has also increased from 68.9 and 73.5 years in 1990 to 70.4 and 75.3 years respectively in 2002 for men and women respectively (National Population and Family Development Board, NPFDB 2005). Furthermore, median age of the total population had increased to 23.6 years in 2000 from 21.9 years in 1991 with women's median age is slightly higher than the men. These demographic changes are a clear indication that demographic ageing is taking shape in Malaysia.

According to the Department of Statistics' 2000 Census (DOS, 2000), from a total population of 23.27 million in 2000, about 6.2 percent were aged 60 and above, up from 5.9 percent in 1991. In absolute terms, there are slightly more than a million persons aged 60 and above in Malaysia. The age used to define the elderly in Malaysia is similar to the cut-off adopted by the United Nations (UN) of 60 years old and above. This proportion indicates that the population of this country is still young. According to the UN definition, only a population with 7 percent aged over 65 will be considered as an ageing population. For Malaysia, proportion of persons aged 65 and older is projected to reach the 7 percent mark only in the year 2025 (DOS, 2000).

Ageing of a population, however, should not be looked at only in terms of proportion but also absolute numbers because each and every one of these elderly has their own needs and problems. Today, as more and more people live longer into old age, questions have been raised about their care and well being. Who should care for them and what are their needs and problems? And even greater concern is whether the traditional bastion of support for the elderly – the extended family – will still be able to function effectively to provide the care needed.

Malaysians have a long tradition of filial piety where it is the general responsibility of the family to provide care and financial support of the elderly. Elderly who do not have any relatives will be taken care of by institutions. However, there is no guarantee that the family will be able to keep up with their traditional role of caring for their elderly as a result of migration, urbanization, and industrialization. The modernization process and the effects of urbanization and migration for work have created a situation where young adults live apart, thus affecting their ability to provide care for their parents.

In addition, the dramatic shift in the age structure of Malaysian population has resulted in more people living into their 60's and 70's, but at the same time, fertility rates fell and smaller family sizes were produced. That is, the Malaysian family is expanding vertically (more generations living per family) and shrinking horizontally (fewer individuals per generation). Thus, as life expectancy increases, there are fewer numbers of siblings to share both social and financial responsibilities in caring for elderly parents. Also, family care for elderly parents in Malaysia has been deteriorated due to the breakdown of the extended family system. Data from the 1991 and 2000 Population Censuses (DOS, 1991 and 2000) show that the proportion of extended families has declined further to 19.1 percent in 2000, from 26.3 percent in 1991. On the other hand, the proportion of nuclear families has increased from about 60 percent to 66 percent during the same period.

The terms 'caregiver' and 'carer' have been used broadly to describe a variety of situations in which one person provides assistance to another (Silliman & Sternberg, 1988). In a research article by Biegel, Sales, and Schulz (1991), they have described informal caregivers as people who provide unpaid care for elderly people in the home, involving much time and energy for long periods and requiring assistance with tasks that may be physically, emotionally, socially, or financially challenging.

For the purpose of this study, a woman caregiver is defined as a co-residential caregiver who provides any informal assistance to their sick, frail or disabled elderly parents and aged between 15 to 49 years old.

There is strong evidence that women are more involved in caregiving than men. This includes the proportion of women involved in caregiving, the greater likelihood that women will be primary caregivers, and the hours women spend on their caregiving tasks. The interaction of the ageing of populations, differential longevity for women and men, and women's increased labour force participation will inevitably lead to conflicting demands and increased stress placed on women as elder carers.

Early gerontological studies were primarily interested in women's other roles for their impact on women's availability for elder care. Subsequently, studies of "caregiver stress," or "caregiver burden" examined the effect of the elder care role on the caregiver.

The impetus for this study originated from the researcher concern for the potential economic and social consequences of women caregiver in Malaysia, particularly as their role in caregiving for the elderly cannot be taken for granted. Various researchers report that in elderly care, women are more likely to be the caregivers than men (Baldock, 2002; Chen, 1987; Haaga et al., 1990; McGoldrick, 1989; Remnet, 1987). They form the majority in every category; spouse caregivers, offspring caregivers, daughters in law, sibling caregivers and friends.

However, there is some literature suggest that women react to caregiving with a greater tendency to become depressed, distressed and to feel burdened by caregiving. Women also bear greater financial costs of caregiving as it often further interrupts their working life and reduces their opportunity to save for retirement which in many cases is longer than that of men. Anecdotal research is consistent with the view that women disproportionately carry the personal and financial costs of caregiving (Baldock, 2002; Carpinter, et al., 2000; Carter, 1993; Cicirelli, 1995; Donato & Wakabayashi, 2001; McGoldrick, 1989; Remnet, 1987; Ungerson, 1990).

Caregiving is likely to disadvantage women's long term economic position due to the interruption in earnings as the time spent taking care for the elderly parents is likely to compete with women's employment opportunities, creating losses in work hours and earnings. The cumulative effect of this scenario contributes to elderly women's disproportionately higher risk of living in poverty. The report thus focuses on the socio-demographic status of women caregivers and comparison of these factors with noncaregivers.

This paper discusses the phenomena of women as caregiver of the elderly in Malaysian. It also tries to identify the profiles of caregivers and non-givers specifically according to their socio-economic status.

This paper discusses the background of the study in the second section and followed by the research methodology in the third section. In the fourth section, analysis and findings. Finally its implication and conclusion in the last section.

BACKGROUND OF THE STUDY

Family care: Definitions, Roles and Functions

According to Cantor (1989), those closest and most involved in the daily life of an older person are the individuals who compose the innermost circle; the informal support of kin, friends and neighbours. Studies show that families are responsible for 70 to 80 per cent of the care received by elderly persons who are in need of help (see Abrams, 1986; Brody, et al., 1987; Cantor, 1989; Mendel, 1979). Indeed, there is little evidence that members of the "community" outside the family provide a substantial amount of care.

Walker (1982) has classified family care as one form of “community care” and he further defined “community care” as the “help and support given to individuals, including children, people with disabilities and elderly people in non-institutional settings”. Family caregiving occurs when one or more family members aid or assist other family members beyond what is required as part of normal, everyday life (Walker, Pratt, & Eddy, 1995). Caregiving is distinguished from intergenerational, interspousal, or other interfamilial aid by the criterion of “dependence on another person for any activity essential for daily living” (Walker, et al., 1995).

Elderly care around the world

Caring for frail, older adults has been the most researched gerontology issue for the past two decades (Lawton, 1996). For many, caring for an elderly adult, generally a spouse or a parent has become a normal life event (Brody, 1985). Given the greying of most western societies, gerontological research on the caregiving needs of older people and the contribution made to this by their adult children, has become an important policy concern and there is considerable empirical research on the issue (e.g. Aldous & Klein, 1991; Cicirelli, 1995; Remnet, 1987). Following that, a number of studies have been made regarding the family role in elderly care in Malaysia (see Chen, 1987; Haaga & John, 1990; NPFDB, 1989; ESCAP, 1989, Tey & Cho, 1991).

Women as caregivers of the elderly: Issues around the world

There is a large volume of works reflecting society concern about the burden of caregiving falling on women due to societal expectations about women’s role as caregiver and nurturer. Overseas’ research on the caregiving of the elderly support the view that caregiving is gendered; carried out by daughters and daughters’ in-law (Baldock, 2002; Cicirelli, 1995; McGoldrick, 1989; Remnet, 1987; Ungerson, 1990). Apparently, the same goes for Malaysia when the research done by Chen (1987), ESCAP (1989), Haaga et al. (1990), NPFDB (1989) and Tey et al. (1992) revealed that the primary caregivers for the elderly are women. They form the majority in every category; spouse caregivers, offspring caregivers, daughters in law, sibling caregivers and friends.

A group of New Zealand studies explored the reasons why there are more women in a caregiving role than men (Collings & Seminuik, 1998; Milligan, 2004; Winder & Bray, 2005; Weaver, 1999). Some demographic reasons are that women tend to live longer, there are more women than men, and women tend to marry men older than themselves. However, the socially constructed and gendered nature of care informs familial ties and obligations, as well as creating social expectations of women. The typical pattern is that sons offer financial assistance, and daughters and daughters-in-law provide the time-consuming, hands-on care (Hooyman & Gonyea, 1995).

Professional gerontological literature in the 1980s has addressed the prevalence of the “sandwich generation” phenomenon (e.g. Brody, 1981; Himes, 1994; Rosenthal, Matthews & Marshall, 1989; Spitze & Logan, 1990). It described the middle-age generation, most typically middle-aged women, as “caught in the middle” between two important tasks: caring for children and caring for adult parents. Early literature (e.g. Brody, 1981) described this condition of dealing with multiple competing

demands, along with paid work and being married, as detrimental to the well-being of middle-aged women as well as possibly to their ageing parents, who might not have their needs met by their overburdened daughters.

However, these reports were usually based on convenience samples (Spitze, et al., 1990) and the results could not therefore be generalized to the broader population. In fact, demographic studies in 1980's and 1990's suggested that the likelihood of women being caught in the middle between care for young children and care for ageing parents was small (Himes, 1994). Rosenthal et al. (1989), using a small probability sample in Canada, and subsequently Spitze et al. (1990), using a larger probability sample in the United States, concluded that the sandwich generation is not a typical state for middle-aged women.

Although sandwich generation might not be a typical state for middle-aged women, working full time and caring for an elderly parent, in addition to filling the roles of wife and mother, can be an overwhelming burden to women caregivers (Lewin, 1989; Huston, 1990; Sherman, Ward & LaGory, 1988). Women caregivers are forced to cope with the burden of caring for elderly parents in addition to the usual demands of work and family. They spend less time with their husbands and children and the resulting resentment and frustration may ultimately threaten the structure of family life. Perkins (2006) pointed out that caregiving is harder if it conflicts with work and other activities.

A study by Worrall (2005) of 323 women caregiving for their elderly parents found that over half of the respondents reported a change in employment status linked to their caregiving status. This included both who had returned to work to cover the costs of caregiving and those who gave up work to cope with caregiving. Davey (2004) found that women are five times as likely to retire from paid work when they are responsible for caregiving for a dependent spouse or elderly relatives. Other studies report anecdotal evidence of changes in employment status due to taking on caregiving role (Carpinter et al., 2000; Davey, 2004; Lungley, et al., 1995; Nikora, et al., 2004; Opie, 1990; Patterson, 1997; Worrall, 2005).

Arksey and colleagues (2005) explored the relationship of informal caregiving and employment decisions based on a literature review and research with 80 caregivers from a range of occupations. They found an inverse relationship between the hours spent on caregiving and participation in paid employment (i.e. the more hours spent on caregiving, the less hours spent on paid work). According to this study, being a co-resident caregivers has reduces the probability of women working full-time in paid employment. The literature review found that difficulties in maintaining employment status constituted the major impact of being caregiver

However, there are few researchers has noted that employment are positively related to the likelihood of caregiving (Cantor, 1985; Lewin, 1999; Robinson, Moen, & Dempster, 1990; Scott, Roberto, & Hutton, 1986). In 1990, Robison et al. conduct a study to assess the likelihood of women becoming caregivers in the USA and they found that women with more traditional lifestyles are more likely to become caregivers; however, potentially competing roles, such as employment, do not seem to

decrease, and actually are positively related to the likelihood of caregiving. Research done by Cantor (1985) suggests that "women in the middle" appear to be extending themselves further to assume the multiple roles of caring for their own families and for aged parents, in addition to working at paid jobs.

According to a study done by Donato and Wakabayashi (2001), women caregivers were somewhat more likely than noncaregivers' women to have less than a high-school education and were 2.5 times more likely than noncaregivers' women to live in poverty. They noted that the potential economic and social consequences of informal elder care for these women may be enormous as the time spent taking care for the elderly parents is likely to compete with women's employment opportunities, creating losses in work hours and earnings.

Few research studies examine the impact of income or socio-economic status on caregiver outcomes although some studies include income in the analysis as a potential confounding factor. The research that could found suggests poverty reduces the capacity of caregivers to cope with the impacts of caregiving, having more income increases the choices open to caregivers; poverty may distort choices about residential care if costs are involved and increase social isolation yet those who are poor may have the most difficulty accessing services (see Argyle, 2001; Cameron, et al., 2006; Horsburgh, 2002; Lungle, et al., 1995).

Positive and negative outcomes of caregiving

Caregiving can have both positive and negative outcomes. Overall, caregivers as well as those caring for cognitively impaired individuals, experience the most negative outcomes (see Walker et al., 1995). Among the documented negative outcomes are social and emotional problems (e.g., isolation, stress, depression, irritability); physical fatigue; conflicts between responsibilities related to work, family, and caregiving; interference with family and employment roles; and loss of freedom and privacy. These outcomes often contribute caregivers suffering declines in their own health. Financial strain related to medical bills, purchase of assistance, and interrupted work (absenteeism and cessation of work) may also result to the stresses of caregiving.

Positive outcomes of caregiving have been largely disregarded in studies and are far less understood than the negative outcomes. Individual caregivers have reported emotional satisfaction, personal growth, and closer relationships derived from the caregiving experience. Caring for an older relative may provide families with a shared purpose and focus, as well as an opportunity to cooperate and communicate (Singer, 1996). In interviews with children who care for frail parents, there emerges a deep sense of moral obligation on the children's part to both their own families and their older relatives. The dilemma of conflicting demands, in most cases, is handled not by denial of responsibility but through considerable personal sacrifice (Bourgeois & Johnson, 2006).

Literature suggests the personal gains that caregivers receive may be insufficient to offset the economic, social, and psychological costs of caregiving (Arno, Levine, & Memmott, 1999). Informal caregiving, according to Arno and colleagues, may not only strain individual and family resources of the caregiver, but also may increase the caregiver's risk poor health, family destabilization, and

impoverishment. Research indicates that caregiving is a known risk factor for women's hypertension, mortality, low immunity levels, and low levels of physical activity (Grason, Minkovitz, Misra, & Strobino, 2000).

RESEARCH METHODOLOGY

Source of data

Malaysian Population and Family Life Survey (MPFS) is a series of national household survey conducted by National Population and Family Development Board (NPFDB) systematically for every ten years since 1974. The first three series of the survey which are; Malaysian Fertility and Family Survey (1974), Malaysian Family Life Survey (1984) and Malaysian Population and Family Survey (1994) cover the sample from Peninsular Malaysia only. For the first time, MPFS-4 was held in 2004 covering eligible respondents from all across the country.

For the purpose of this study, the researcher was only able to make use of the 3rd series of survey which is MPFS-3 due to constraint by the department. MPFS-3 was conducted from November 1994 until March 1995 to gather detailed information on nuptial, child rearing, family planning and other aspects of family life. The general purpose of the survey is to examine the fertility differentials across the various sub-groups of the Malaysian population and factors affecting such differential. It is aimed at providing further insights on the country's demographic scenario. Therefore, results from the survey have provided useful database for this study.

Sampling

A group of trained interviewers from the NPFDB had undergone the fieldwork to conduct the interviews. Each respondent were interviewed in her home based on the questionnaire provided. The questionnaire was designed by NPFDB based on the core questions agreed upon by the research team with some modifications to suit the needs of the study on this particular group of people.

The population of interest for this study is ever-married women aged between 15-49 years old in Malaysia and the method used in sample selection is a multistage stratified sampling. The sampling processes were made and prepared with the help from Department of Statistics, Malaysia. Sample had been selected from two stages which are: Enumerations Blocks then Living Quarters.

From the selected living quarters, the eligible respondents were identified from the household. The representative sample for the study is 4444 ever-married women in Peninsular Malaysia aged between 15 to 49 years old.

ANALYSIS AND FINDINGS

Demographic Profile

Out of 4444 respondents, only 4.3% assumed the role of caregivers for the elderly. This was quite surprising because majority of the respondents have at least one of their parents or parents' in-law still alive (refer to table 1). Whereby those living in the rural areas, 5.2% are caregivers and 3.6% living in

urban areas assumed the roles of caregivers. This is expected as women with more traditional life styles are more likely to become caregivers. The chi-square test also shows that at 5% level of significance, women in the rural areas are more likely to become caregiver. The fact is that family in the rural areas are extended family, moreover, majority of the elderly lives in rural areas. Their children migrated to the urban areas to find job opportunities leaving their elderly in their “kampong”. Indirectly the children who lives nearby will have to take care of their parents.

Table1 : Distribution of Elderly Living Status Among Respondents

Elderly category	Number	Percentage
Own Parents		
Only mother still alive	1344	30.2
Only father still alive	289	6.5
Both alive	2150	48.4
Both dead	661	14.9
Total	4444	100.0
Parents In-Law		
Only mother still alive	1308	29.4
Only father still alive	259	5.8
Both alive	1734	39.0
Both dead	1143	25.7
Total	4444	100.0

Mean age of caregivers was 37.1 years old. In terms of age group distribution, 44.6% of caregivers aged 30-39 years old, 41.5% aged 40-49 years old and the remaining 13.9 % aged 20-29 years old. There are no caregivers recorded for age group of 15-19 years. Looking at the age of these women which are considered young, it can explain that probably their parents are the “young-old” (aged 50-65) and at that moment had no health problems. Using the chi-square test, There is association between age and caregiving. This can be explained by the fact that as the women age increase, their parents ages also increases. As they become older, they becomes frail or disabled and need more assistance and care from their caregivers.

Using two-samples Student’s t-test, the mean age of caregivers and non-caregivers seems to be significantly different. This finding is consistent with the previous findings that caregiving role increases with age.

Ethnically, 6.0% of Malay women are caregivers, 1.5% Chinese and 2.9% Indian women are caregivers. Testing at 5% significance level, using a chi-square test indicates that relatively there are more Malay who assumed the role of caregiving compare to other ethnic groups. It can be presumed that it is the teachings of Islam, the religions of the Malays, to take care of their parents when they are in need.

Socio Economic Profile

The education attainment of the caregivers would have some bearings on their socio-economic status. A high proportion of 44.6% of women caregivers in the survey received only primary-school education while 9.8% do not have any formal education at all. The remaining 40.4% received secondary education and 5.2 % received tertiary education. Women aged 20- 34 years are more educated than the middle-aged 35-49, reflecting the attitude of parents towards formal education back in the fifties and the sixties. The proportion of those with no education among young women aged 20-34 is 21.15 whereby among the middle-aged is 79%. The educational status of these women do influence the type of economic and social activities they are engaged in life. This is reflected by their income and employments. About 60.1% of the caregivers were not working. For those with tertiary education, 70% are working.

Using two-sample Student's t-test, mean income of non-caregivers and caregivers were not significantly different. This indicates that whether a caregiver or non-caregiver, it will not influence the income level.

- Findings on marital status indicates 93.3% were currently married during the survey. About 66.7% of caregivers aged 40 and above were widowed, while 33.3% were widowed among women aged 15-39 years. This gives impact to their social and economic position. Single divorced or widowed women would mean that they have lost the emotional and economic support from their spouse despite the increasing burden of caregiving. The outcomes of these situations often contribute to health and financial problems.
- Majority of the caregivers, 63.6%, earned less than RM500 per monthly, whereas only 19.5% earned between RM500 to RM999 per month. Only 3.9% earned more than RM2000 monthly. This findings is consistence across through the ethnic groups.
- Therefore it is important that the government and NGOs provide some support and assistance in reducing the burden of caregiving.

CONCLUSIONS AND RECOMMENDATIONS

The results identified some significant elements of caregivers among women in Malaysia within the scope mentioned earlier.

As women aged they might have to assumed the role of caregivers, be it to their own parents or to their parent's in-law. Parallel with the ageing of populations, women are entering the labour force in growing numbers worldwide, in Malaysia too, - both by choice and by necessity. This trend toward more working women is certainly influenced by the increase in economic needs and demands in workforce. Due to these scenarios, there will be less women available as caregivers. This study shows that traditional source of family care for the elderly is inevitably affected as there are only one out of twenty-five women in Malaysia took the role as caregivers.

Focus of this study is on the socio-economic status of women caregivers and comparison of these factors with non-caregivers. Descriptive analysis showed that women caregivers are more likely to have traditional lifestyles as majority of them are staying in the rural areas with low education.

Study on the socio-economic status associated with caregiving, revealed that caregiving responsibilities are associated with age-group, geographic location, and ethnicity. Malays have a greater tendency of becoming a caregivers compared to other ethnic groups. While comparing the socio-economic between caregivers and non-caregivers, it can be concluded that the age is significantly different while the inverse goes for the income. This is consistent with the cross-sectional, population based study done by McCann et. Al. (2000) where they noted that possibility of caregiving increases with age.

From the study, the public at large, and the government specifically, should appreciate the task being done by the caregivers of taking care of the elderly. Women caregivers should be recognized as a public concern since it reduces the public expenses by taking care of the elderly instead of putting them in an institution whereby the government will have to incur all the cost involved. It is important to recognize that, as family shrinks, the number of caregivers availability in any given family will be reduced. Then the government might have to pick up the burden. Due to this scenario, a system is needed to reduce burden of taking care of the elderly. This is to encourage family members to be caregivers of the elderly in order to avoid nursing homes placements.

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THE RELATIONSHIP BETWEEN ANTECEDENTS OF PSYCHOLOGICAL EMPOWERMENT AND INNOVATIVE BEHAVIOUR: TESTING THE MEDIATING ROLE OF PSYCHOLOGICAL EMPOWERMENT

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ABSTRACT

This cross sectional study utilizing ex-post facto research methodology and descriptive-correlational in nature was carried out to study the relationship between antecedents (i.e access to information, resources, organizational support, opportunity to learn and develop, and trust) and psychological empowerment. Survey data was analyzed using correlation analyses to study the relationship between antecedents and psychological empowerment. Regression analyses were used to identify the most effective antecedents of psychological empowerment to predict lecturers' innovative behavior. The mediating role of psychological empowerment between antecedents and innovative behaviour is analysed using multiple regression analysis. Second-order confirmatory factor analysis is also carried out using structural equation modeling to verify the existence of four dimensions of psychological empowerment. This study involves a total of 312 lecturers from 25 non-university private higher education institutions (PHEIs) in three states (Penang, Kedah and Kelantan) in Malaysia as respondents. Implications of the findings are discussed as well as the suggestions and directions for future research.

Keywords: *antecedents, psychological empowerment, innovative behaviour*

INTRODUCTION

In 1991, the Malaysian government unveiled its Vision 2020, the year by which Malaysia would achieve the status of an industrialised and developed country in terms of its economy, national unity, social cohesion, social justice, political stability, system of government, quality of life, social and spiritual values, national pride and confidence. Under the rubric of Vision 2020, liberalization of education policies leads to democratization, privatization and decentralization of Malaysian educational system. Decentralization of educational administrative system is to encourage institution-based management and empowerment of teachers (Lee, 1999). According to the Head of Department of Education Foundation, Faculty of Educational Studies, Universiti Putra Malaysia, Associate Professor Dr. Mohd. Majid Konting, institution-based management provides empowerment to educational institutions because the institutions' leaders or headmasters know their own needs and requirements better (Marzita, 2005). Gamoran, Porter and Gahng (1994) state that empowerment of teachers is a key element in the educational reform strategies.

The development and changes in education make the educational administration and management could not be effectively done at central level. Decentralization also could overcome bureaucracy and enable decisions and actions, especially those that are not related to policy making, to be carried out at

the lower level (Bahagian Perancangan dan Penyelidikan Pendidikan, 1995). Lecturers at the PHEIs are not given much opportunity to be empowered. According to Lee (2004), lecturers do not have much say in the governance and management of their institutions. These private institutions are often governed by a board of governors or directors, usually comprised representatives from stakeholders (Lee, 2004). The academic lecturers also are losing autonomy despite facing more demands towards accountability (Lee, 2002; Middaugh, 2001; Taylor, 1999). If the level of lecturers' empowerment is still low, lecturers should be given more opportunity to express their opinions and to determine their own way of doing their job in the effort to encourage empowerment among lecturers.

Empowerment is defined by the Ministry of Education as 'a professional practice of the educational administration and management'. The practices of empowerment has actually being implemented long ago at all levels in the Malaysian Ministry of Education (Bahagian Perancangan dan Penyelidikan Pendidikan, 1995). These empowerment practices include those related to the smooth and efficient implementation of education policy; teachers' and teaching autonomy; and the sharing of power by the leader of the institution with its subordinates (Bahagian Perancangan dan Penyelidikan Pendidikan, 1995).

The concept of empowerment carries different meanings in different context (Zimmerman, 1990). Hence, to study the concept of empowerment at the workplace, Spreitzer (1995a) used the intrapersonal concept specifically for workplace as described by Thomas and Velthouse (1990). This psychological perspective of empowerment focuses on the perception of employee on empowerment (Spreitzer, 1995b, 1997; Thomas & Velthouse, 1990). When they view their work environment as providing opportunities for, rather than constraints on, individual behavior, they feel empowered (Spreitzer, 1995a). Traditional bureaucratic social structures which are characterized by hierarchy, formalization, and centralization, are likely viewed as constraining due to extensive rigidity (Spreitzer, 1995a).

Conger and Kanungo (1988) defined psychological empowerment as the process of enhancing the feeling of self-efficacy among the members of an organization through the identification of condition that foster powerlessness and also through their reduction. The state of powerlessness can be reduced by formal organizational practices and informal techniques of giving self-efficacy information (Conger & Kanungo, 1988). The psychological approach to empowerment focused on the intrinsic motivation and not on the managerial practices that are used to increase the level of power owned by the employees (Dee, Henkin & Duemer, 2003).

Certain structural factors such as access to information, organizational support, resources and opportunity to learn and develop are empowering and enhance employees' power to accomplish work within an organization (Kanter, 1977; 1983). These factors are referred to as antecedents to psychological empowerment.

Dimensions of psychological empowerment

Based on the definition given by Conger and Kanungo (1988), Thomas and Velthouse (1990) and Spreitzer (1995b) expanded the concept by identifying four main attributes or cognitions of psychological empowerment i.e. meaning (perceived value of work objectives), competence (feelings of self-efficacy), choice (feeling of self determination or autonomy) and impact (one's perception of his capability to influence). Conceptually, psychological empowerment is a multi-dimensional construct that comprised of the four cognitions (Spreitzer, 1995b; 1996). This study attempts to verify the existence of these dimensions through second order confirmatory factor analysis using structural equation modeling as illustrated in Figure 1.

Meaning is defined by Thomas and Velthouse (1990) as the value of work goal and purpose, in relative to the individual's own value and standard. Spreitzer (1995b) defines meaning as the value of work goal and purpose as perceived by the individual in relative to his own personal mission and expectation. When the organizational mission and goal are congruent to their own value system, employee will feel that their work is important and they care about whatever they do (Spreitzer, 1995b; Thomas & Velthouse, 1990).

Through the competence dimension, employees that are empowered feel that they are efficient and able to influence their work and organization meaningfully (Spreitzer, 1995b). Competence refers to the self-efficacy specific to work i.e. ability of an individual to perform his/her job activities with the needed knowledge and skill (Spreitzer, 1995b). Autonomy or self-determination refers to the feeling of choice possessed by an individual in initiating and controlling his/her actions (Deci, Connell & Ryan, 1989). Employees that have autonomy will make more rational choices, ignite and arrange their own actions (Deci et al., 1989). Autonomy can be seen in making decision especially concerning work methods, procedure, time and effort (Spreitzer, 1995b). Lastly, impact refers to the extent that an individual can influence its work outcome (Ashforth, 1989). It refers to the extent that an individual feel that his work can affect the overall goal achievement (Thomas & Velthouse, 1990) and how far that an individual believe that he/she can influence the strategic output, management and operation in the workplace (Spreitzer, 1995b). Hence, psychological empowerment can be defined as the feeling of being enabled to carry out tasks in the workplace according to an individual's own value and standard or to influence the work outcome by having autonomy and competence.

Antecedents to Psychological Empowerment

Access to Information

Information is vital to employees who are empowered (Kanter, 1983; Blanchard, Carlos & Randolph, 2001b). When a leader is willing to share information, either good or bad, they have the employees' trust. Employees, on the other hand, will feel that they have the attention from the leader and they are being trusted by the leader (Blanchard et al., 2001b). Employees who are empowered has to have a clear vision (Spreitzer & Quinn, 2001; Cartwright, 2002) about the organization's goal and role. Vision will become reality when each employee feel that his/her contribution affect the organization (Blanchard, Carlos & Randolph, 2001a). Information sharing is a mechanism that enable employees to be responsible to achieve the goal and achieve it at a higher level (Blanchard et al.,

2001b). Actions to limit information that is available to employees will give the notion that employees cannot be trusted or too stupid that they are willing to misuse the information (Spreitzer & Quinn, 2001).

Access to Resources

Resources mean person or material that exist in the institution community that can help the organization to achieve its goal (Saxe, 1975). Resources required may be in the form of funds, material, space and time (Blanchard et al., 2001b; Spreitzer, 1996). These resources may be individualistic such as experience, expertise in the field and teaching skill or may be collective such as collegial relationship with other teachers and opportunity to cooperate with other teachers (Gamoran et al., 1994). The effect of empowerment on teachers may depend on the availability of resources for the use of teachers. The easier the teachers get access to the resources, the stronger the effect of empowerment (Gamoran et al., 1994).

Access to Organizational Support

Organizational Support Theory states that employees in an organization developed a global trust about the extent the organization value the employees' contribution and care about their well-being (Eisenberger, Huntington, Hutchinson & Sowa, 1986). According to this theory, actions taken by the management or organization's agents is regarded as the indicator for the organization's intention. For example, employees may perceived the good or bad orientation of the supervisor towards them as the level of organizational support (Eisenberger, et al. 1986). Perceived organizational support also result in feelings of responsibility to help organization achieve its objectives including participating in extra-role behavior such as helping other employees (Eisenberger, Armeli, Rexwinkle, Lynch & Rhoades, 2001). Work environment that promote relationship based on support can empower employee (Corsun & Enz, 1999). An effective leader should promote culture that support empowerment so that employees are not afraid of making decisions, not covering mistakes but looking for opportunities to overcome problems, instead (Cartwright, 2002).

Access to Opportunity to Learn and Develop

A diversity of individual needs can be satisfied through training and education. For example, exposure to interaction skills with others will make the person as an effective motivator and leader to others (Ang, 1999). Training in the aspects of facilitative leadership, teamworking and change management can facilitate the transfer of knowledge required in the collaborative problem solving process (Strauss, 2002). Training also can give teachers the competence and knowledge to use the learning materials available (Neagley, Evans & Lynn, 1969). Professional development is also important to facilitate empowerment. Professional development include all processes and activities designed to improve professional knowledge, skills and teacher attitude to increase students' learning (Guskey, 2000). Likewise, Maeroff (1988) believes that helping teachers to be knowledgeable in teaching and helping them to develop strategies to teach is a requirement in the effort to empower teachers.

Trust

There are several definitions of trust. For example, Spreitzer and Quinn (2001) define trust as an assumption that other people can be relied on that they will do what they say they would do. Trust also means believing that other people is honest in saying what they mean and mean what they say. This definition is different from that of Hart and Saunders (1997) that suggest that trust is an individual's willingness to be vulnerable to another based on the belief that the other party is competent, honest, reliable, and concerned about the individual's own interest. Trust has been proven to be a significant variable affecting organizational's productivity (Prusak & Cohen, 2001), work attitude and job satisfaction (Aryee, Budhwar & Chen, 2002). On the other hand, the study conducted by Melhem (2004) finds that trust has significant impact on empowerment.

Behavioral Outcome of Psychological Empowerment: *Innovative Behavior*

Innovative behavior can be defined as the ignition, promotion and realization of new ideas in the intended work role (Kanter, 1988; West, 1987; West & Farr, 1989; Woodman, Sawyer & Griffin, 1993). Janssen (2000) defined innovative work behavior as the creation, introduction and application of new ideas intended in the work role, group or organization for the sake of the role, group and organization performance. The basis of all innovative improvement is idea (Scott & Bruce, 1994) and ideas are developed, proceeded, reacted upon and modified by employees individually (Van de Ven, 1986).

RESEARCH OBJECTIVES

This research is carried out to:

- 1) Identify the validity and reliability of the psychological empowerment scale that comprised four dimensions based on Spreitzer's theory (1992).
- 2) Study the relationship between antecedents (access to information, organizational support, resources and opportunity to learn and develop and trust) and psychological empowerment of lecturers.
- 3) Identify the most effective antecedents of psychological empowerment to predict lecturers' innovative behavior.
- 4) Study the role of psychological empowerment as a mediator between antecedents and lecturers' innovative behavior.

Conceptual Framework

Psychological empowerment comprises of four different cognitive dimensions, namely meaning, competence, autonomy and impact (Spreitzer, 1995b; Thomas & Velthouse, 1990). These dimensions reflect the individual orientation towards his task role (Thomas & Velthouse, 1990) and are the basic core for psychological empowerment in the workplace (Houghton & Yoho, 2005).

According to Kanter (1977, 1993), an organizational structure that provides access to information, organizational support, resources and opportunity to learn and develop is important for empowerment

growth. Apart from that, trust is also vital for true empowerment to occur and to utilize the staff potential fully (Cartwright, 2002). This paper will study these factors as antecedents to empowerment. Psychological empowerment is said to bring about some positive outcomes or effects. Empowerment has impact on individual effectiveness and innovation in the organization (Quinn & Spreitzer, 1997; Spreitzer, 1995a). Teachers that enjoy higher empowerment show high enthusiasm towards realizing new ideas, striving more to improve students' learning condition and active in institutional activities and tasks (Short et al., 1994). Based on the work of Thomas and Velthouse (1990), Spreitzer (1992, 1995a) and Kanter's theory (1977, 1993), a comprehensive conceptual framework is developed for the purpose of this study (see Figure 1).

Research Design

This cross sectional study utilizing ex-post facto research methodology and descriptive-correlational in nature was carried out in 25 private higher education institutions in three states in Malaysia, i.e. Penang, Kedah and Kelantan. The sample comprised 312 lecturers. The researcher used multi-stage sampling method to select the states, the institutions and respondents. Random sampling method was used to select the institutions from the list provided by the Department of Higher Education Institution (Private) Administration while convenience sampling was used to select the respondents as the researcher did not have any influence in the selection process. Cochran's (1977) sample size formula and finite population adjustment (Lohr, 1999) was used to determine the sample size.

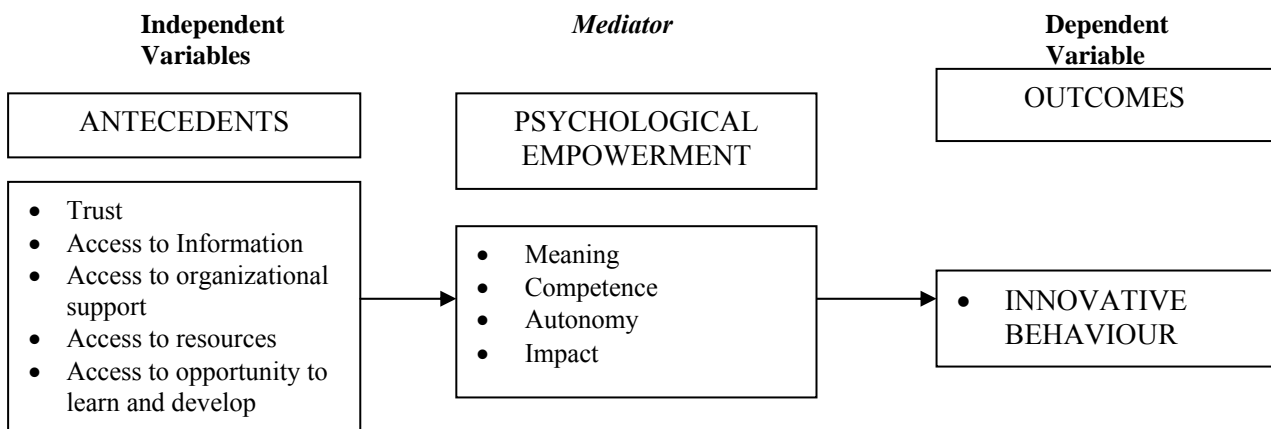


Figure 1: Antecedents and Outcome of Psychological Empowerment

Measures

Psychological empowerment was measured using 12 items from Spreitzer (1992, 1995b) based on four dimensions, namely meaning, competence, autonomy and impact. The scores from these dimensions are averaged to form an overall score for psychological empowerment for each respondent. To measure trust, the subscale of trust to principal from the Omnibus T-Scale (Hoy & Tschannen-Moran, 2003) was used. Four items from the instrument used by Spreitzer (1996) was modified to measure access to information. Five items was modified from the short form of Perceived

Organizational Support Scale developed by Eisenberger et. al. (1986) to measure access to support. Three items from Spreitzer (1996) to measure access to resources was modified and two new items were added to include access to teaching materials, equipments, funds, work space and time as resources. Four items from Short and Rinehart (1992) was modified to measure access to opportunity to learn and develop. Lastly, to measure innovative behavior, nine items with three subscale i.e ignition, promotion and realization of new ideas based on Janssen (2000) was used.

Results of the Analyses

1. The study verifies that psychological empowerment comprised four dimensions as suggested by Spreitzer (1992). The second order confirmatory factor analysis, as shown in Figure 2 below, has acceptable fit indices (RMSEA = .08, TLI = .94, CFI = .96, NFI = .94, $\chi^2/df = 2.96$). Factor loadings between .34 and .85 show that the relationships among the dimensions of psychological empowerment are significant and positive. This proves that psychological empowerment is the variances shared among the four dimension, i.e psychological empowerment is the combination of the four dimensions.

2. Analysis of correlation finds that all antecedents under study have significant relationship with psychological empowerment at .01 significance level. Based on the correlation values, trust, access to information and access to organizational support has a low positive relationship ($r = .20, .24$ dan $.26$ accordingly) with psychological empowerment while access to resources and opportunity to learn and develop has a moderate positive relationship ($r = .34$ and $.35$ accordingly) with psychological empowerment.

In terms of its dimension, trust does not have any significant relationship with meaning and competence, but has low positive relationship with autonomy ($r = .24$) and impact ($r = .198$). Access to organizational support also does not have any significant relationship with meaning and competence but has low positive relationship with autonomy ($r = .21$) and impact ($r = .29$). Access to information has low positive relationship with meaning, autonomy and impact ($r = .19, .19$ dan $.23$ accordingly) but does not have any significant relationship with competence.

Standardized estimates
 Chi-square = 148.11
 df = 50
 RMSEA = .08
 TLI = .94
 CFI = .96
 NFI = .94
 p = .000

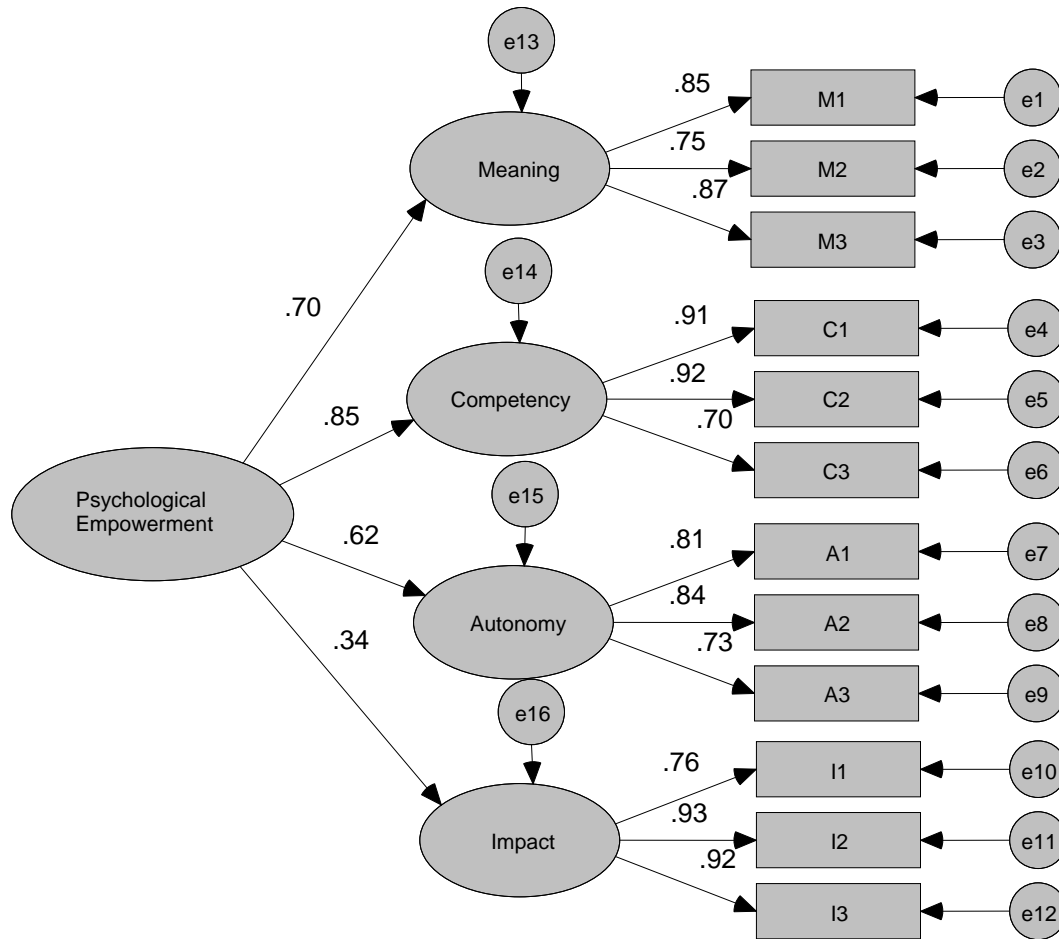


Figure 2 Psychological Empowerment: Second-order Confirmatory Factor Analysis

Access to resources has moderate positive relationship with autonomy ($r = .34$) but low positive relationship with meaning ($r = .23$), competence ($r = .19$) dan impact ($r = .22$). Access to opportunity to learn and develop has moderate positive relationship with impact ($r = .30$) but has low positive relationship with meaning ($r = .21$), competence ($r = .18$) dan autonomy ($r = .29$). All five antecedents under study has significant relationship with the dimensions of autonomy and impact. Table 1 illustrates the Pearson Correlation Coefficient of the antecedents in relation to the dimensions of psychological empowerment and overall psychological empowerment.

Table 1: Pearson Correlation Coefficient of Antecedents to Psychological Empowerment

	Psychological Empowerment				
	Overall	Meaning	Competence	Autonomy	Impact
Trust	.20(**)	.08	-.01	.24(**)	.20(**)
Access to information	.24(**)	.19(**)	.07	.19(**)	.23(**)
Access to organizational support	.26(**)	.10	.07	.21(**)	.29(**)
Access to resources	.34(**)	.23(**)	.19(**)	.34(**)	.22(**)
Access to opportunity to learn and develop	.35(**)	.21(**)	.19(**)	.29(**)	.30(**)

** correlation is significant at .01 level (2-tails).

3. The regression analysis finds that the antecedents have significant relationship with innovative behavior, $F_{5, 306} = 9.05$, $p < .001$. The multiple correlation (R) = .34 and $R^2 = .13$ while adjusted $R^2 = .12$. The multiple regression analysis shows that access to information ($t_{311} = 4.86$, $p < .001$) is the only significant predictor of innovative behavior, $\beta = .42$. Trust, access to organizational support, resources and opportunity to learn and develop are not significant predictors of innovative behavior, $\beta = -.17, -.03, -.02$ and $.14$ and $t = -1.66, -.25, -.23$ dan 1.80 . Table 2 below shows the result of the regression analysis. Based on the regression coefficient, the following regression equation is derived:

$$Y = .39 X_2 - .15 X_1 - .02 X_3 - .02 X_4 + .15 X_5 + 2.91$$

where: Y = innovative behavior X_3 = access to organizational support

X_1 = trust

X_4 = access to resources

X_2 = access to information

X_5 = access to opportunity to learn and develop

Table 2 Multiple Regression Analysis: Antecedents to Innovative Behavior

Variable	B	β	t	p
Constant	2.91		9.00	.000
Trust	-.15	-.17	-1.66	.099
Access to information	.39	.42	4.86	.000
Access to organizational support	-.02	-.03	-.25	.804
Access to resources	-.02	-.02	-.23	.822
Access to opportunity to learn and develop	.15	.14	1.80	.072

$R = .36$

$R^2 = .13$

Adjusted $R^2 = .12$

Standard error = 1.07

Note: Innovative behavior is the dependent variable.

4. To prove that psychological empowerment functions as a mediator between antecedents and innovative behaviour, the researcher uses the multiple regression analysis as suggested by Baron and Kenny (1986). First, when psychological empowerment is regressed to antecedents, unstandardized beta value ($B = .218$) relating to the effect of antecedents on psychological empowerment is significant ($t = 5.98$, $p < .001$). Therefore, path a in this study is significant. This shows that the condition that there exist significant relationship between predictor (antecedents) and the presumed mediator (psychological empowerment) is met.

Second, the output variable is regressed to predictor (antecedents) to test for the mediating effect. Unstandardized beta value ($B = .310$) relating to the effect of antecedents to innovative behaviour is significant ($t = 5.05, p < .001$). Therefore, path c in this analysis is significant. This shows that the condition that there exist significant relationship between predictor (antecedents) and output (innovative behaviour) is met.

Third, when regression is run simultaneously between innovative behaviour and psychological empowerment and antecedents, unstandardized beta value ($B = .454$) relating to the effect of mediator (psychological empowerment) to innovative behaviour is significant ($t = 4.92, p > .001$). Therefore, path b in this study is significant. This means that the condition that significant relationship between presumed mediator (psychological empowerment) and outcomes (innovative behaviour) is met. The third step also provide estimates for path c' i.e the relationship between antecedents and innovative behaviour while controlling psychological empowerment. According to Baron and Kenny (1986), if path c' is zero, complete mediation exists. Unstandardized beta value, $B = .211$ relating to the effects of antecedents to innovative behaviour is significant ($t = 3.38, p < .01$). Therefore, path c' in this study is significant. Baron and Kenny (1986) state that the influence of independent variable on dependent variable must be less in the third equation than the second. As B value decreases from $.310$ to $.211$, then this condition is met. It can be concluded that psychological empowerment functions as a mediator between antecedents and innovative behaviour of lecturers. Table 3 displays the result of the multiple regression analysis carried out to test the mediating effect of psychological empowerment between antecedents and innovative behaviour of lecturers.

Table 3 Testing the Mediating Effects Using Multiple Regression: Innovative Behaviour

Test Steps	B	SE B	95% CI	t	β
<i>First step: (Path a)</i>					
<i>Mediator: Psychological empowerment</i>					
<i>Predictor:</i>					
Antecedents	.218**	.036	.15, .29	5.98	.32
<i>Second step: (Path c)</i>					
<i>Output: Innovative Behaviour</i>					
<i>Predictor:</i>					
Antecedents	.310**	.061	.19, .43	5.05	.28
<i>Third step: (Path b and c')</i>					
<i>Output: Innovative Behaviour</i>					
<i>Mediator:</i>					
Psychological empowerment	.454**	.092	.27, .64	4.92	.27
<i>Predictor:</i>					
Antecedents	.211*	.062	.09, .33	3.38	.19
Note:	**	p < .001			
	*	p < .01			

To determine if the reduction in B value from .310 to .211 is significant or not, the researcher uses the method suggested by Baron and Kenny (1986). As the reduction in B value of .099 is equivalent to the product of regression coefficient B for path a and b, the significance of the difference between path c and c' is determined by testing the significance of path a multiplied with path b. The product of path a and path b is then divided by the value of standard error. The value of standard error for indirect effect or ab is determined using the square root formula for the sum $b^2s_a^2 + a^2s_b^2 + s_a^2s_b^2$ as outlined by Baron and Kenny (1986). The value of a and b is the unstandardized regression coefficient for path a and b while s_a and s_b is the standard error value for path a and b. In this analysis, the standard error value for the indirect effect is .026.

The mediating effect in this analysis is the product of the correlation coefficient for path a and b i.e .218 multiplied by .454 which produces .099. This mediating effect (.099) when divided by the value of standard error for indirect effects (.026) produces Z-score of 3.808, which is more than 1.960. Therefore, the reduction of B value from .310 to .211 is significant. This dictates that psychological empowerment is a strong mediator between antecedents and innovative behaviour.

Discussion

This study proves the validity and reliability of the psychological empowerment scale (Spreitzer, 1992) in the work context of private higher education institutions. This finding is consistent with those empirical studies of Thomas and Tymon (1993), Gomez and Rosen (1994), Sparrowe (1994), Spreitzer (1995b, 1996), Kirkman and Rosen (1996), and Carless (2004). Therefore, this finding verifies that the scale developed by Spreitzer (1992) can be used in the context of private higher education institutions in Malaysia.

This finding suggests that management ought to evaluate the level of psychological empowerment at their institution to get information on the lecturers' perception about the structure of psychological empowerment. The management should also examine each dimension of psychological empowerment and play active role to increase psychological empowerment by focusing on dimensions that are poorly evaluated by lecturers.

According to Thomas and Velthouse (1990), psychological empowerment can be increased by changing the psychological environment or climate. This statement is supported by Spreitzer (1992) who states that empowerment is a dynamic phenomenon that is influenced by the context surrounding an individual. The feeling of empowerment can be encouraged or constrained by the things that happen in the environment (Spreitzer, 1992).

The management can increase lecturers' access to opportunity to learn and develop by encouraging mentoring among experienced and novice lecturers. This will facilitate the sharing and development of skills and knowledge among lecturers. Lecturers should also be given opportunity to attend courses, seminars and training to increase their knowledge and skills. These courses, seminars and training can be held either inside or outside of the institution and can be handled by lecturers, speakers or facilitators from the institution itself or from other agencies. The participation of lecturers in courses,

seminars and training held outside of the institution will give them opportunity to develop new knowledge and build relationship network with other people that are supportive either from inside or outside of the institution. Discussions and forum can also be held from time to time to facilitate the sharing of knowledge and brainstorming among lecturers. An open channel of communication such as periodical bulletins, newsletters and notice boards can facilitate the flow of needed information to increase the level of lecturers' knowledge.

Suggestions for Future Research

This study is carried out in three states in Peninsular Malaysia. The same study is hoped to be carried out in other states as well as in Sabah and Sarawak in order to enable generalizations made to all private higher education institutions in the country. Future studies should also consider other antecedents based on the literature review. Future researchers should combine the quantitative and qualitative methods to gather holistic information on certain variables. Innovative behavior, for example, can be verified through observations. This can reduce bias in data collecting and findings with higher validity and reliability can be produced. Future research could also compare the level of psychological empowerment and innovative behavior of lecturers from private higher institutions with those from the public higher education institutions.

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THE RELATIONSHIP BETWEEN GENDER AND LEADERSHIP STYLES OF UITM LECTURERS

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ABSTRACT

This study focus on the leadership styles of the lecturers at Universiti Teknologi Mara. To examine the leadership styles, a model contributed by Bass and Avolio is used. Respondents were given a set of questionnaires from the Multifactor Leadership Questionnaire (MLQ) to identify their leadership styles. Apart from determining the leadership styles of the lecturers, the study also tried to search for any distinct relationship (if there exist) between gender and the leadership styles. And it is found that, the leadership styles of these lecturers are more towards transactional leadership or task-oriented. The study shows no correlation between gender and leadership style, which can be interpreted as gender does not affect leadership styles of lecturers of UITM.

Keywords: Leadership, styles, gender, lecturer

INTRODUCTION

Over the years, leadership styles have been studied extensively in various contexts and with various theoretical foundations. While leaders have been traditionally seen in many cultures as those who have been advantaged by their heritage, current theorists and researchers view leadership as learned behaviours (Bernard, 1926; Blake, Shepard, Mouton, 1964; Fiedler, 1967; House, & Mitchell, 1974).

Most studies of leadership focus on how a person identified as a leader is behaving or interacting with a group of subordinates. In some cases, this group of subordinates is so large that it comprises an entire organisation, and in this way a few studies have looked at the leader's influence on organisational performance.

During recent years, many authors have proposed a distinction between managers who rely on their formal position and work mostly with bureaucratic processes, such as planning, budgeting, organising, and controlling, and leaders who rely on their personal abilities, visions, agendas, and coalition building and who mainly affect people's feelings and thinking by non coercive means (Kotter, 1985; Zaleznik, 1989). If we look at the two definitions of management and leadership close together by Judge and Robbins (2004) stated that,

Management can get things done through others by the traditional activities of planning, organising, monitoring, and controlling-without worrying too much what goes on inside people's head. Leadership by contrast, is vitally concerned with what people are thinking and feeling and how they are to be linked to the environment, to the entity and to the job/task.

Leadership is therefore not seen as standing above but rather as trying to influence people's minds. While there are many leadership theories, two that have dominated the literature since the 1980s are Transformational Leadership and Transactional Leadership.

Burns (1978) was one of the first to provide an explicit definition of Transformational Leadership. He proposed that the leadership process occurs in one of two ways, either transactional or transformational. Transactional Leadership is based on bureaucratic authority and legitimacy within the organisation. Transactional leaders emphasise work standards, assignment, and task-oriented goals. They also tend to focus on task completion and employee compliance and rely quite heavily on organisational rewards and punishments to influence employee performance.

In contrast, Burns characterised Transformational Leadership as a process that motivates followers by appealing to higher ideals and moral values. Transformational leaders must be able to define and articulate a vision for their organisations, and the followers must accept the credibility of the leader. More recently, Bass and Avolio (1994) have developed a theory of Transformational Leadership that is a culmination and extension of earlier work by Bennis (1985), Burns (1978), and others.

Bass and Avolio (1994) proposed that Transformational Leadership comprises of four dimensions. The first dimension is idealised influence. Idealised influence is described as behaviour that results in follower admiration, respect, and trust. Idealised influence involves risk sharing on the part of leaders, a consideration of follower needs over personal needs, and ethical and moral conduct. The second dimension is inspirational motivation. This dimension is reflected in behaviour that provides meaning and challenge to followers' work. It includes behaviours that articulate clear expectations demonstrating commitment to overall organisational goals. In addition, team spirit is aroused through enthusiasm and optimism. The third dimension is intellectual stimulation. Leaders who demonstrate this type of Transformational Leadership solicit new ideas and creative problem solutions from their followers, and encourage new approaches to job performance. The fourth dimension is individualised consideration. This is reflected by leaders who listen attentively and pay special attention to their follower's achievements and growth needs.

Although the research on Transformational Leadership is relatively new, there is some empirical support for the validity of Bass and Avolio's Transformational Leadership model. Using the Multifactor Leadership Questionnaire (MLQ), Bass and Avolio have found significant relationships across a number of settings between a subordinate's ratings of leader effectiveness and satisfaction with their leaders who are using transformational methods. In addition, there is some evidence that Transformational Leadership is significantly related to other relevant outcomes variables, such as follower's perceptions of role clarity, mission clarity, and openness of communication (Hinkin & Tracey, 1994).

Bass (1990) defines Transformational Leadership as:

- a) idealised influence (attributed and behaviour): inspirational motivation: communicate high expectations, uses symbols to focus efforts, expresses mission and sense of mission, instils pride, gain respect and trust
- b) provides important purposes in simple ways,

- c) intellectual stimulation: promotes intelligence, rationality, and careful problem solving,
- d) Individualised consideration: gives personal attention, treats each employee individually, coaches, advises.

Bass (1990) defines Transactional Leadership as:

- a) contingent reward: contracts exchange of rewards for effort, promises rewards for good performance, recognises accomplishments,
- b) management-by-exception (active): watches and searches by deviations from rules and standard, takes corrective actions
- c) Management by exception (passive): intervenes only if standards are not met.

PROBLEM STATEMENT

The model of transformational leadership includes a continuum of transformational, transactional, and laissez-faire forms of leadership. Each form characterises aspects of the dynamic process of interaction between leader and follower and also identifies certain patterns and features to distinguish transformational leadership from transactional and laissez-faire styles (Avolio, 1999). The transformational leader pays particular attention to other's needs, which, in turn, raises followers' levels of motivation (Avolio, 1999; Bass, 1998). Furthermore, a leader of this type encourages others to reach their full potential while also adopting strong ethical characteristics. Whereas, transactional leaders' approaches followers with an eye to exchanging one thing for another" (Burns, 1978) with the leader's use of either reward or punishment contingent on the follower's completion or non-completion of assigned tasks. Laissez-faire leadership involves indifference and avoidance as a leader with this profile will "avoid making decisions, abdicate responsibilities, divert attention from hard choices, and will talk about getting down to work, but never really does" (Bass. 1998). Hence, using Bass and Avolio's Multifactor Leadership Questionnaire (MLQ), this study tends to measure the intensity or the depth of transformational and transactional leadership style among UITM lecturers. Apart from that, the researcher will also look at how far the leadership styles affect their way of coping with the demands of their career in academic fields and building interpersonal relationship with their peers and whether these are or are not affected by their gender.

OBJECTIVE OF STUDY

The main objectives of this study are:

- a) To identify the leadership styles of UITM lecturers using Bass and Avolio's Multifactor Leadership Questionnaire (MLQ).
- b) To determine whether gender affects leadership styles of UITM lecturers

SIGNIFICANCE OF STUDY

There are certain basic qualities or characteristics that most people associate with leadership. Some of these include self-reliant, independent, assertive, risk taker, dominant, ambitious, and self-

RESEARCH QUESTIONS

This study tends to find the answers to these research questions:

- (i) What are the leadership styles of the majority of UITM lecturers?
- (ii) Does gender affect or determines the difference in the leadership styles of these lecturers?

RELATED LITERATURE

Leadership

Defining what we mean by the term leadership can be particularly problematic. Many authors have attempted to conceptualise leadership but it appears that leadership itself is most frequently defined by the standpoint taken. In other words, leadership is defined principally by the models, roles and behaviours which are used to describe it. The majority of authors however, would agree that:

- leadership is the process of influencing
- leadership can be exercised by people in organisations who do not possess formal authority
- leadership implies followers
- leadership involves the achievement of goals or objectives

The final two features are inextricably linked in the sense that followers are only followers for the period of time for which they are engaged in the achievement of task for which they are being led. In other words, the leadership-follower relationship is transitory and likely to mutate as the demands of the common task require.

While it is far from easy to define what leadership is, most authors appear to be fairly clear about what leadership is not. The idea that leadership is not the same as management enjoys widespread consensus. Leadership may be best seen as the exercise of influence to move an organisation forward whereas; management is concerned largely with the maintenance of existing systems and structures. Leaders are generally people who do the right things, whereas managers are people who do the right things right. Michael Fullan (2004) draws the following distinction:

Leadership relates to mission, direction, inspiration. Management involves designing and carrying out plans, getting things done, and working effectively with people.

Leadership then is the process of influence with the purpose of enabling groups and individuals to achieve goals or objectives. It contrasts with the process of management to which it is closely related by virtue of the fact that it is dynamic, involving organisational change – changes to systems, structures and to ways of working.

What does Leadership Look Like?

Approaches on how to be a good, effective leader, have evolved over time in parallel with the development of theories of organisations and management. Fifty or more years ago, leadership was thought of as a set of individual qualities or traits – “the right stuff”. According to the classical theory of leadership, leaders were born, not made. Leadership is now more commonly thought of as either a set of behaviours, or as process, or as a combination of both. Researchers were interested in personality, social and physical characteristics (traits) that influence whether a person acted as a leader.

While original research on trait theory assumed that leaders were born, more recent research assumes that leaders can learn the required skills and traits (Gordon, J. 1995; Yukl, 1989). Yukl (1989) identified the following traits and skills of successful leaders:

Traits of successful leaders

1. adaptable to situations,
2. Alert to social environment,
3. ambitious to achievement oriented,
4. assertive,
5. Cooperative,
6. decisive,
7. dependable,
8. Dominant (desire to influence others)
9. Energetic (high activity level),
10. persistent,
11. self-confident,
12. Tolerant of stress, and
13. Willing to assume responsibility.

Skills of successful leaders

1. clever,
2. Conceptually skilled,
3. Creative,
4. Diplomatic and tactful,
5. fluent in speaking,
6. knowledgeable about group tasks,
7. Organised (administrative ability),
8. Persuasive, and
9. Socially skilled.

Transformational and Transactional Leadership

Transformational leadership, a current approach, describes leadership that transforms organisations and individuals and leads change proactively. Transformational leadership raises the level of motivation in both the leader and the followers. It signals a basic and fundamental change in the organisation. Charisma is an integral part of Transformational leadership (Burns, 1978). Mahatma Gandhi is an example of a transformational leader. Effectiveness of leadership among other things is characterised by the abilities to motive people, build relationships and influence outcomes. The behaviour that is modelled by the leader and the top management profoundly shape and thereby determine competency level of their juniors. Transformational leader as compared to transactional

leaders has a major impact on the quality efficiency level of their subordinates (Burns, 1978; Bass, 1985; and Bycio, Hackett and Allen, 1995).

Transactional leadership operates mainly through an economic exchange process and is based on the notion that the leader provides rewards in return for the followers' effort and performance (Bass, 1985). Transactional leaders clarify the followers' responsibilities, the expectations that the leader has of the followers, the tasks that must be accomplished, and the benefits derived when followers comply with these responsibilities. Furthermore, transactional leaders are seen as reactive rather than proactive. Bass characterised the transactional leaders as working within the existing system or culture, having a preference for risk avoidance, paying attention to time constraints and generally preferring process over substance as a means for maintaining control. Compared to the transactional leader, the transformational leader moves followers beyond the basic economic exchange process (Bass, 1985). Influencing subordinates not only through the use of logic and reasoning but also through the use of emotion, these leaders communicate high expectations and an appealing vision of the future to the followers. While conveying a powerful presence, transformational leaders show enthusiasm as well as dedication and thus inspire followers to reach their goals. Unlike transactional leaders, these leaders transform subordinate motivation and improve unit performance beyond initial expectations. They seek to gain the trust and appreciation of followers. With trust from followers, transformational leaders may directly promote positive organisational behaviours such as organisational citizenship behaviour (Pillai, Schriesheim & Williams, 1999).

Bass, (1985) viewed transformational and transactional leadership styles as complementary. In other words, a given manager can be viewed as exhibiting both leadership styles. Bass and Avolio (1993) argued that the most effective leaders are indeed both transactional and transformational. This may explain why many studies have consistently shown high inter-correlations between transformational and transactional leadership measures.

Leadership and Gender

The growing impact of women in the workforce has kept the leadership style of women on the research agenda. Hence, the study of leadership and leadership styles in searching for prominent differences among gender. Studies done by Pounder and Coleman in 2003 found that, in education field, it still "it depends". They found that male and female leaders are complement to each other. Only stereotyping set male and female leadership styles to be different and distinct from one another. Bartling and Bartlett (2005), in their studies on Leadership Characteristics of Adult Educators found that, there are no significant age and gender differences in transformational leadership and it is generally consistent with literature (Bass, 1998). Academic leadership researchers have argued that gender has little relation to leadership style and effectiveness (Dobbins & Platz, 1986; Powell, 1990)

Contradicting the above study is a research done in 2003 by Eagly and Carli, both from Northwestern University and Wellesly College, USA respectively. According to them, women are more likely to lead in a style that is effective under contemporary conditions.

After years of analysing what makes leaders most effective and figuring out who's got the "right stuff", management gurus now know how to boost the odds of getting a great executive was to hire a female (Sharpe, 2000, in Business Week). The idea that women are effective leaders has jumped from the writers of feminist trade books on management (e.g. Helgesen, 1990; Rosener, 1995) to the mainstream press and is steadily making its way into the popular culture.

This research then is trying to put a step forward, if not changing the existing findings, to identify whether gender affects the leadership styles of lecturers in UITM.

METHODOLOGY

Data Collection

Questionnaires are distributed to the Universiti Teknologi Mara lecturers through the local area network (LAN). Two hundred lecturers from campuses all over Malaysia responded. The questionnaires contain 18 questions based on Bass and Avolio's Multifactor Questionnaire. Data collection takes 3 weeks.

Procedure for Data Analysis

This study is a descriptive study and data is analysed using SPSS 14. Methods used to analyse the data will based on descriptive statistics and also using Spearman's Correlation and Pearson's *r*.

Findings and Analysis

Leadership Styles of UITM lecturers.

Leadership Styles by Marital Status

			Leadership Styles			Total
			Transformational	Transactional	Both	
Marital Status	Married	% within Marital Status	23.1	53.8	23.1	100.0
		% within Leadership Style	60.0	100.0	100.0	86.7
		% of Total	20.0	46.7	20.0	86.7
	Single	% within Marital Status	100.0			100.0
		% within Leadership Style	40.0			13.3
		% of Total	13.3			13.3
Total	% within Marital Status	33.3	46.7	20.0	100.0	
	% within Leadership Style	100.0	100.0	100.0	100.0	
	% of Total	33.3	46.7	20.0	100.0	

From the above table, it is found that, from the total respondents, 86.7% are married and 13.3% are single. Out of the married respondents, 23.1% shows transformational leadership style, while 53.8% are transactional leaders. As for lecturers who are single, or not married, 100% shows more of a transformational leadership styles. It can also be concluded from the table, that, out of the total respondents having a transformational leadership styles, 60% are married and 40% are single.

Leadership Style by Age Group

			Leadership Styles			Total
			Transformational	Transactional	Both	
Age	34 & <	% within Age	100.0%			100.0
		% within Leadership Style	40.0			13.3
		% of Total	13.3			13.3
	35-39	% within Age	62.5	37.5		100.0
		% within Leadership Style	50.0	21.4		26.7
		% of Total	16.7	10.0		26.7
	40-44	% within Age	10.0	50.0	40.0	100.0
		% within Leadership Style	10.0	35.7	66.7	33.3
		% of Total	3.3	16.7	13.3	33.3
	45 & >	% within Age		75.5	25.0	100.0
		% within Leadership Style		42.9	33.3	26.7
		% of Total		20.0	6.7	26.7
Total	% within Age	33.3	46.7	20.0	100.0	
	% within Leadership Style	100.0	100.0	100.0	100.0	
	% of Total	33.3	46.7	20.0	100.0	

From the table above, it shows that, 100% of respondents aged between 34 years old and less have a transformational leadership styles, 62.5% from lecturers aged between 35-39 years old are transformational leaders, 50% are transactional leaders for lecturers between 40-44 years old, and 75.5% lecturers aged 45 years and more are transactional leaders.

Leadership Style by Educational Attainment

			Leadership Styles			Total
			Transformational	Transactional	Both	
Educational Attainment	Bachelor's Degree	% within Education Attainment	100.0			100.0
		% within Leadership Style	40.0			13.3
		% of Total	13.0			13.3
	Master's Degree	% within Education Attainment	28.6	47.6	23.8	100.0
		% within Leadership Style	60.0	71.4	83.3	70.0
		% of Total	20.0	33.3	16.7	70.0
	PhD/DBA	% within Education Attainment		80.0	20.0	100.0
		% within Leadership Style		28.6	16.7	16.7
		% of Total		13.3	3.3	16.7
Total		% within Education Attainment	33.3	46.7	20.0	100.0
		% within Leadership Style	100.0	100.0	100.0	100.0
		% of Total	33.3	46.7	20.0	100.0

One hundred percent of respondents having a Bachelor's Degree (DM41) are transformational leaders, 47.6% lecturers having a Master's Degree are transactional leaders and 80% lecturers with a PhD or DBA qualifications are also transactional leaders.

Leadership Style by Work Experience

			Leadership Styles			
			Transformational	Transactional	Both	Total
Work Experience (years)	1-5	% within Education Level	87.5	12.5		100.0
		% within Leadership Style	70.0	7.1		26.7
		% of Total	23.3	3.3		26.7
	6-10	% within Education Level	33.3	44.4	22.2	100.0
		% within Leadership Style	30.0	28.6	33.3	30.0
		% of Total	10.0	13.3	6.7	30.0
	11-15	% within Education Level		66.7	33.3	100.0
		% within Leadership Style		28.6	33.3	20.0
		% of Total		13.3	6.7	20.0
	16-20	% within Education Level		66.7	33.3	100.0
		% within Leadership Style		14.3	16.7	10.0
		% of Total		6.7	3.3	10.0
	21-30	% within Education Level		75.0	25.0	100.0
		% within Leadership Style		21.4	16.7	13.3
		% of Total		10.0	3.3	13.3
Total	% within Education Level	33.3	46.7	20.0	100.0	
	% within Leadership Style	100.0	100.0	100.0	100.0	
	% of Total	33.3	46.7	20.0	100.0	

The result shows that 87.5 % of lecturers of 1-5 working experience are more transformational in their leadership styles compared to those who are 6-10 years experience which are more transactional (44.4%). As they gain more experience, they become more and more transactional leaders whereby, 75% of those having working experience between 21-30 years show transactional leadership style.

Leadership Styles by Gender

			Leadership Styles			
			Transformational	Transactional	Both	Total
Gender	Male	% within Gender	40.0	33.3	26.7	100.0
		% within Leadership Style	60.0	35.7	66.7	50.0
		% of Total	20.0	16.7	13.3	50.0
	Female	% within Gender	26.7	60.0	13.3	100.0
		% within Leadership Style	40.0	64.3	33.3	50.0
		% of Total	13.3	30.0	6.7	50.0
Total	% within Gender	33.3	46.7	20.0	100.0	
	% within Leadership Style	100.0	100.0	100.0	100.0	
	% of Total	33.3	46.7	20.0	100.0	

The result shows that, 40% male lecturers are transformational leaders and 60% female lecturers are more inclined towards the transactional leadership style. There are also quite a big percentage of both genders showing both leadership styles whereby, 26.7% of male and 13.3% of female lecturers have both transformational and transactional leadership styles.

Does Gender Affect or Determine Leadership Style?

The second research question explores the relations between gender and leadership styles of UITM lecturers. The answer can be extracted from the simple correlation coefficient run. The simple correlation coefficient is a statistical measure of the co variation, or association, between two variables (Zikmund, 2003). The correlation coefficient *r* ranges from +1.0 to -1.0. If the value of *r* is 1.0, there is a perfect positive linear (straight line) relationship. If the value of *r* is -1.0, there is a perfect negative linear relationship or a perfect inverse relationship. No correlation is indicated if *r*=0. A correlation coefficient indicates both the magnitude of the linear relationship and the direction of the relationship.

The table below shows the values given by Pearson’s R and also Spearman Correlation. The values given in the table shows that Pearson’s R is equal to zero and Spearman correlation is 0.017. From the values given we can conclude that, there is no correlation between gender and leadership styles of UITM lecturers.

Leadership Styles and Gender = No Relationship

		Value	Asymp. Std. Error(a)	Approx. T (b)	Approx. Sig.(c)
Interval by Interval	Pearson's R	.000	.183	.000	1.000(c)
Ordinal by Ordinal	Spearman Correlation	.017	.187	.088	.930(c)
N of Valid Cases		200			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

CONCLUSIONS AND RECOMMENDATION

Conclusion

From the data analysis we can see that, 46.7 percent of UITM lecturers are adapting the transactional leadership style while 33.3 percent are transformational leaders. This means that they are more task-oriented rather than people-oriented. These findings match the demand and the nature of their job, whereby target and strategies exercised in obtaining their teaching and coaching objectives have to run parallel in order to have students graduating with a good grade or CGPA. In terms of relationship between gender and leadership styles, the finding is supported by Bass (1998). This means that, leadership styles of the lecturers in UITM are not determined by gender of the lecturers.

Recommendations

To Other Researchers

The research carried out might have a greater significance if a bigger sample is used. Apart from using gender and leadership styles as variables, studies could also focus in other means of measurement such as cultural aspects of leadership, or by using other instruments such as the Least Preferred Co-worker questionnaire by Fiedler, may produce an interesting finding. Does leadership affect students' outcomes? This is the critical question. Does educational leadership make a difference to student's success? Much of the research into educational leadership has focused on the impact of leadership on student outcomes and/or college effectiveness in a more general sense. There are no recent studies on the impact of leadership on student outcomes in further education done in Malaysia. I suggest that further research is conducted in the area.

To the Lecturers

Based on the study conducted, the leadership styles determined are more of transactional leadership. Transactional leaders are more focused on task and contingent reinforcement or contingent reward. In other words, the leaders' rewards to followers are contingent on their achieving specified performance levels. These positive characteristic are quite relevant for a university scenario, whereby students are rewarded when they have performed well, or achieved certain target. In fact, what I am suggesting is that, lecturers should be adopting both leadership styles accordingly. The reason for this is, transformational leadership is also useful in providing vision, and a sense of mission, instils pride, gains respect, trust and increases optimism. Such a lecturer would excite and inspires the students.

The leader (lecturer) acts as a model for subordinates, communicates a vision and uses symbols to focus efforts. For transformational leadership style, the lecturer coaches and mentors, provides continuous feedback and links organisational mentors' needs to the organisation's mission. Hence, the objective of the university will be captured and at the same time this will satisfy the needs of the students.

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MA(01)

EFFECT OF HYDROGEN EMBRITTLEMENT ON Al-Mg-Si ALLOY IN 3.56 wt% NaCl SOLUTION

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ABSTRACT

Aluminium alloys popular in marine and boat application because it's has a natural protective oxide layer. The presence of magnesium will improve aluminium's resistance to sea water. However, when the hydrogen atoms absorb into the metal lattice and diffuse through the grains of the Al-Mg-Si alloy matrix to form hydrogen molecules, they create pressure from inside the cavity and at the same time the ductility and strength of this alloy will reduce seriously and finally caused cracking and failures below the yield stress level. This paper presents the effect of hydrogen embrittlement on the tensile strength resistance of the Al-Mg-Si alloy. In this experiment, the hydrogen has been charged to the round dumb-bell specimens of Al-Mg-Si alloy in the T6 temper condition of heat treatment process. The specimen was immersed in a slightly acidified-aerated 3.56 wt% NaCl solution at a pH3 containing with 0.1 gpL arsenic at room temperature and it show that the Al-Mg-Si alloy was susceptible to stress effect. The result shows, the effect of small amount of arsenic added to NaCl solution had promoted the penetration ability of hydrogen atoms into the Al-Mg-Si alloy. The stress corrosion susceptibility of Al-Mg-Si alloy is increased with the increased of hydrogen charging.

Keywords: *hydrogen embrittlement, Al-Mg-Si alloy, arsenic, tensile strength*

INTRODUCTION

Al-Mg-Si alloy is one of the most extensively used of the 6000 series aluminium alloys. It is a versatile heat treatable alloy and obtains their strength from an ageing process through the formation of precipitate at grain boundaries. The precipitates reduce slippage between "grains" which in turns increases material strength and hardness. For some metals alloys, the formation of extremely small uniformly dispersed particles of a second phase within the original phase matrix; this must be accomplished by phase transformations that are induced by appropriate treatments For instance, annealing heat treatment improves the ductility and dimensional stability of the Al-Mg-Si alloys through first stage of solution heat treatment followed by quenching preserves a supersaturated solid solution. In the second stage, artificial ageing increases the hardness due to formation of finely dispersed precipitates which called T6 temper.

Al-Mg-Si alloy is considered as medium to high strength capabilities because it's has a greater structural efficiency ratio of stiffness to density. The significant properties of this alloy include excellent corrosion resistance to atmospheric conditions, good corrosion resistance to sea water, immunity to stress corrosion cracking and good weldability. Because of these properties, Al-Mg-Si alloy popular in marine structures and boat application and most commonly used in T6-temper condition. Aluminium has a natural protective oxide layer which can improve by the addition of

alloying elements. In marine application, the presence of magnesium will improve aluminium's resistance to salt-water.

(Altenpohl, 1998) reported that, aluminium oxide, Al_2O_3 , is an insulator that doesn't conduct electrons well and therefore, dramatically hinders the reactions and electric currents that occur during galvanic corrosion. The oxide layer consists of two components, a very thin base layer known as a barrier layer, and an upper hydrated layer. The oxide layer is not totally impermeable, as it contains many pores. Often these pores will be quickly filled by corrosion products of the exposed underlying metal. The oxidation of aluminium alloys is a complex process. It depends upon the composition of the alloy, the temperature of the treatment, and the oxidizing environment. The air-formed oxide film on pure aluminium is typically between 2 and 10 nm thick. Small amounts of magnesium added to aluminium decrease the oxidation rate (Olefjord & Karlsson, 1986), but a high concentration of magnesium causes growth of relatively thick magnesium oxide films on the surface. The amount of magnesium oxides increases with oxidation time and temperature (Nylund et al., 1998). However, an oxide containing iron or copper may be semi-conducting thus making galvanic corrosion possible.

In aqueous environments, atomic hydrogen results from the donation of a proton to a hydrogen ion to form atomic hydrogen on the surface of the material. When the hydrogen atoms absorb into the metal lattice and diffuse through the grains of the Al-Mg-Si alloy matrix to form hydrogen molecules, they create pressure from inside the cavity and at the same time the ductility and strength of this alloy will reduce seriously due to increasing of the dislocations mobility, Ferreira et al., (1999). The common mechanisms effects associated with hydrogen embrittlement include the hydrogen reducing the strength of atomic bonds. When hydrogen combined with a poison for example arsenic in the aqueous solution environment, it will promotes the ability of atomic hydrogen to enter the material and finally caused cracking and failures at stress level below the yield stress.

The objective of the present investigation is to study the effect of hydrogen embrittlement on the Al-Mg-Si alloy in the T6 temper condition of heat treatment process when immersed in 3.56 wt% NaCl solutions at a pH of 3 containing with 0.1 gpL arsenic and 2 mL condensed acid hydrochloric at room temperature and fractured surface developed on the surface of the specimens were observed using scanning electron microscopy.

EXPERIMENTAL PROCEDURE

The Al-Mg-Si alloy was provided in the form of extruded round bar with a diameter of approximately 25 mm by Shanghai Grace Trading Co., Ltd., China having the following chemical composition as given in Table 1. For the purpose of measuring the mechanical properties, two types of specimens were produced which consist of rectangular and round dumb-bell shapes. In this study, two kind of specimens were produced which consist of rectangular shape for hardness and microstructure tests, and round dumb-bell shape specimens for tensile test.

Table 1. Chemical composition of the as-received sample of Al-Mg-Si alloy.

Alloy	Chemical composition (wt%)								
	Mg	Si	Fe	Cu	Zn	Cr	Mn	Others	Al (Balance)
Al-Mg-Si	1.05	0.80	0.70	0.28	0.25	0.21	0.15	0.15	96.41

The extruded round bar was machined to rectangular shape (Figure 1a) with dimension 15 x 15 x 10 mm³ and then followed by polished all the surfaces using oil based and alumina based until achieved the mirror finish quality. Then they were immersed in the ethanol using ultrasonic bath for 5 minutes in order to remove all the dirt. The round dumb-bell shape specimens (Figure 1b) were prepared using the CNC turning machine according to the ASTM standards G 49-85 (ASTM Standards Annual Book 1977). To ensure the roundness of gauge length uniformed and free from any scratches, the specimen was clamped to chuck of the drill bench and abraded with 2000 grit abrasive paper was finished by using polishing powder of 0.3 μm in diameter.

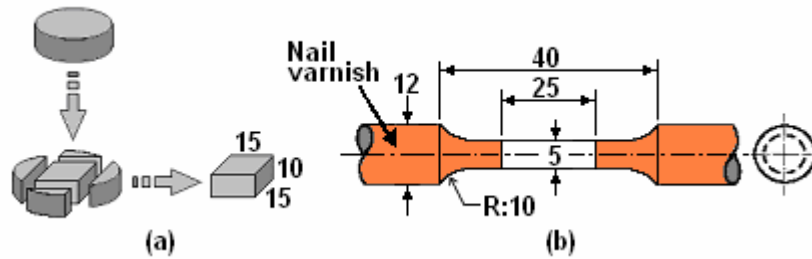


Figure 1. Sketches diagram and detail dimensions of hardness (a) and tensile (b) specimens employed in this study. All dimensions are in mm.

According to Callister (2003), to obtain the T6 temper condition, firstly both rectangular and dumb-bell specimens must be undergoing solution heat treatment process at temperature 4900C for 30 minutes in electric furnace followed by immediate quenched in cold water at room temperature. Secondly, the specimens were annealed at temperature 1200C and soaked about 26 hours in electric oven. After heat treatment, all the samples were cleaned by acetone (supplied by Merck). Finally, the rectangular specimens were etched in Keller's reagent about 10 seconds for optical metallography observation. Electrolytic keller's etchant was obtained with a solution of 5ml HF, 3ml HCl, 5ml HNO₃ and 190 ml distilled water. Immediately after etching, specimens were washed with water and dried by compressed air gun. After metallurgical analyses, all rectangular specimens were once again used for hardness test. The hardness of the sample was measured using Vickers digital micro-hardness tester (diamond indenter) with 4.9035 N load and 20 seconds dwelling time.

Buckley & Birnbaum (2002) suggested that, hydrogen charging was carried out using three methods of cathodic charging in H₂SO₄ or HCl, for example using NaAsO₂ as a hydrogen recombination 'poison,' by etching in NaOH (pH 10–12) containing NaAsO₂ as a hydrogen recombination 'poison,' and by immersion in a H₂ gas plasma at voltages ranging from 0.5 to 1.2 keV. For the hydrogen embrittlement susceptibility test, all the surfaces area of the round dumb-bell Al-Mg-Si alloy specimen except the gauge length surface was coated with nail varnish to ensure that only the gauge length surface exposed to test solution. One end of the specimen was immersed in the 3.56 wt% NaCl solution and the other end was connected to the power supply as cathode. Approximately ± 2 mL

condensed acid hydrochloric (HCl) was added in order to make the NaCl solution reached at a pH of 3. About ± 0.1 gpL arsenic was added into test solution as hydrogen poison. This will inhibit the formation of hydrogen gas from atomic hydrogen that was adsorbed on the specimen surface. In this circuit, lead (Pb) was used as an anode electrode. A constant current DC power supply was used to control the current density approximately 10 mA/cm² for 2 and 8 hours charging time at room temperature. Each specimen was immediately tested after hydrogen charging using the Instron Model 8500 tensile machine. Prior to stress component testing, the 0.2 % strain offset line was constructed parallel to the elastic region of the stress-strain curve which indicates the yield strength of the alloy.

RESULTS AND DISCUSSION

Microstructure Analysis

The specimen was etched in order to differentiate between recrystallized grains (clear) with unrecrystallized grain fragments (dark) as a result of precipitation at boundaries of fine sub-grains. Figure 2 exhibits elongated matrix grain morphology of Al-Mg-Si alloy in the longitudinal (extruded) direction of the round bar. This figure shows that wrought Al-Mg-Si alloy products have highly directional grain structure. The directional effects are related to the direction of extrusion, such as grain or fragment flow. In the longitudinal directions, the round bar have the banded microstructures which have been formed in the extrusion process. Hatch (1995) proposed that the grains size of the microstructures increased proportionately with increasing of time and temperature in the heat treatment process.

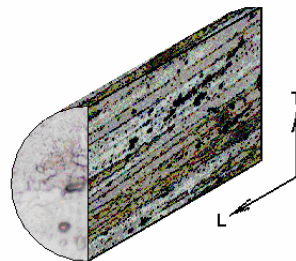


Figure 2. Effect of heat treatment on metallography in difference direction of extruded rod Al-Mg-Si alloy specimen after dilute Keller's etch (Magnification 200).

Ductility Tests

Ductility is a measure of the degree of plastic deformation that has been sustained at fracture. Smith (2004) mentioned that the ductile fracture of a metal occurs after extensive plastic deformation and is characterized by slow crack propagation. Brittle fracture, in contrast, usually proceeds along characteristic crystallographic planes called cleavage planes and has rapid crack propagation.

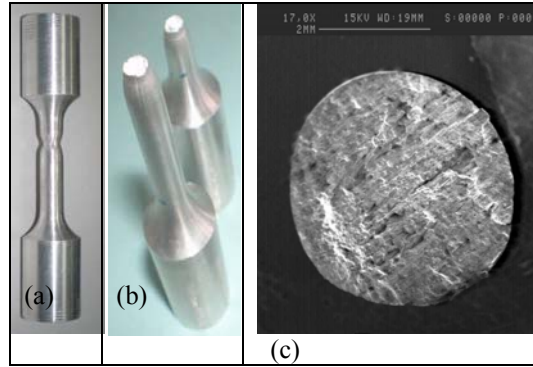


Figure 3. Round dumb-bell specimens for tensile test of as-received specimen (DB1). (a) Formation of necking immediately prior to fracture, (b) Ductile materials formed 'cup and cone' fracture, and (c) The fractured surface of specimen viewed under SEM.

Based on the observation, the formation of 'necking' (Figure 3a) and followed by typical 'cup and cone' fractured (Figure 3b) to the as-received test specimen clearly shown that the Al-Mg-Si aluminium alloy can be classified as a ductile alloy. However, after experienced the heat treatment process to T6 temper condition and followed by 8 hours hydrogen charging immersion test, the Al-Mg-Si alloy test specimen exhibited moderately brittle fracture surfaces.

Normally, a brittle fracture takes place without any appreciable deformation, and by rapid crack propagation. The direction of crack is nearly perpendicular to the direction of the applied tensile stress and yields a relative flat fracture surface. Since aluminium alloys were classified as a ductile materials compared with other hard metal, thus the direction of crack motion was not too nearly perpendicular to direction of the applied tensile stress as shown in Figure 6(e) which is affected by the 8 hours hydrogen charging without arsenic.

Effect of Hydrogen Embrittlement on Stress-Strain Curves

The mechanical properties of tensile tests and hardness results of specimens cut from as-received sample followed by T6 temper condition after they were hydrogen charged for 2 and 8 hours are presented in Table 2. Birnbaum et al., (1997) pointed out that, a small amount of hydrogen which permeates into materials, may hardly affect their plastic deformation. That is behaviour of dislocations, because it hardly affects the stress-strain relationship. Based on stress-strain curves in Figure 4, the penetration of hydrogen into specimen within a short period, for example 2 hours hydrogen charging (DB 2) does not effect the big physical changes where the stress-strain curves of DB1 and DB2 test specimens showed quite similar pattern and magnitude. On the other hand the DB3 and DB4 specimens show high value of tensile strength due to 8 hours hydrogen charging.

Table 2: The mechanical properties of Al-Mg-Si alloy in several test conditions

Specimen	Test Condition	Yield Strength (MN/m ²)	Hardness (HV)	Elongation (%)
DB 1	As-received	270.40	157.50	20.82
DB 2	T6 + 2 hrs charging	303.76	176.93	19.24
DB 3	T6 + 8 hrs charging	504.64	293.84	10.44
DB 4	T6 + 8 hrs charging with arsenic	510.32	297.45	8.47

Daniel and Alan (2001) informed that, the increasing of yield strength can generally be expected, then to increase the susceptibility to failure by brittle fracture. The effect of small amount of arsenic added into the NaCl solution was increased the formation of hydrogen embrittlement in the specimen of Al-Mg-Si alloy. It can be seen clearly in Figure 4, where the stress-strain curve of specimen DB4 is slightly higher than the specimen DB3.

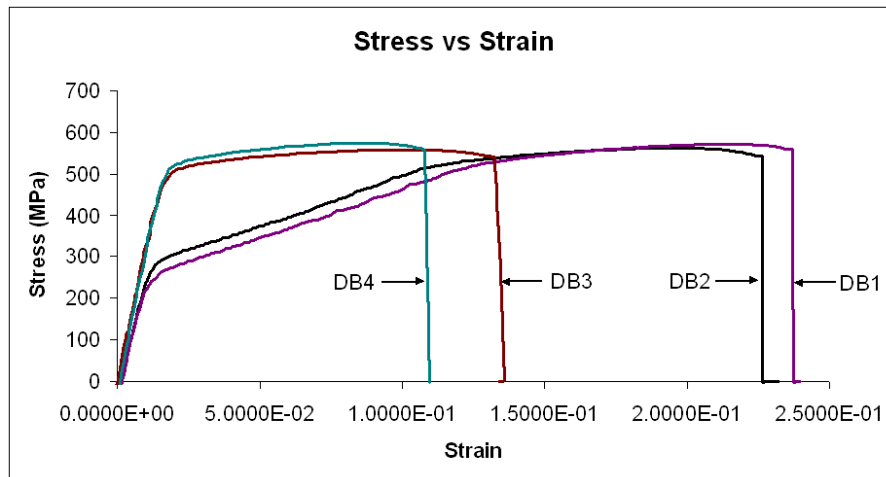


Figure 4: The stress - strain behaviours of Al-Mg-Si alloy with different test condition procedures.

Tsai and Chung (1996) mentioned that, if the value of elongation is larger, it means that the stress corrosion cracking resistance of the specimen is higher. However, after 8 hours of hydrogen charging, the specimen significantly became more brittle indicated by about 59.32% decreasing in elongation as shown in Figure 5(a). The increasing of yield strength can generally be expected, then to increase the susceptibility to failure by brittle fracture (Daniel and Alan, 2001). According to Cheng Liu (2004), the tensile strength decreases with decreasing hardness reducing since them both are indicators of a material resistance to plastic deformation. Figure 5(b) shows the relationship between yield strength and hardness for the specimens tested. Generally, correlated.

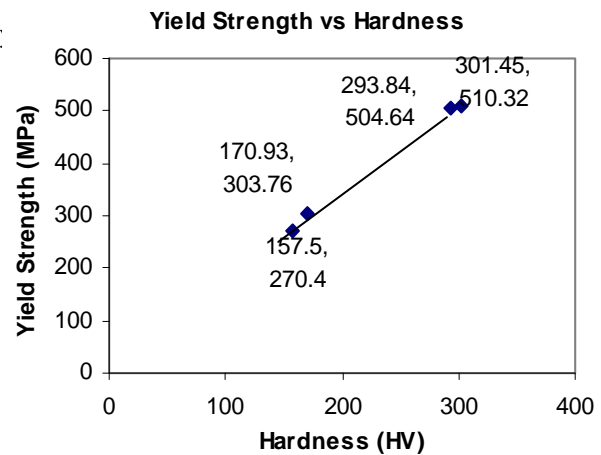
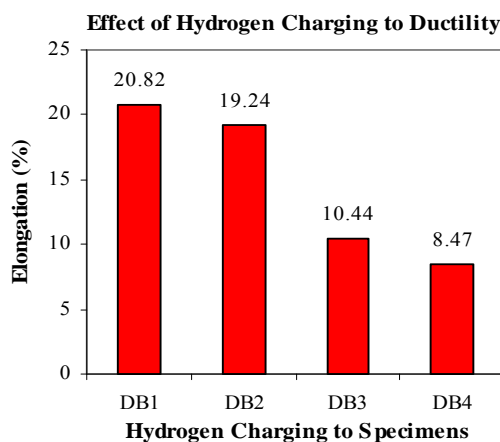


Figure 5: Effect of the hydrogen charging to round dumb-bell test specimens of Al-Mg-Si alloy (a) The ductility test and (b) The relationship of yield strength to hardness.

Results of Surface Fractured

The surface fractured of round dumb-bell specimens were viewed under scanning electron microscopy (SEM) to observe the size of cavities or microvoids present and the direction of striation of crack propagations. Figure 6(a) and (c) reveal the crack grew continuously in a direction that is parallel to a major axis of microvoids, it shows the possibility of ductile fracture to a specimen. The large amounts of microvoids in these test specimens are contributed to the lowest yield strength.

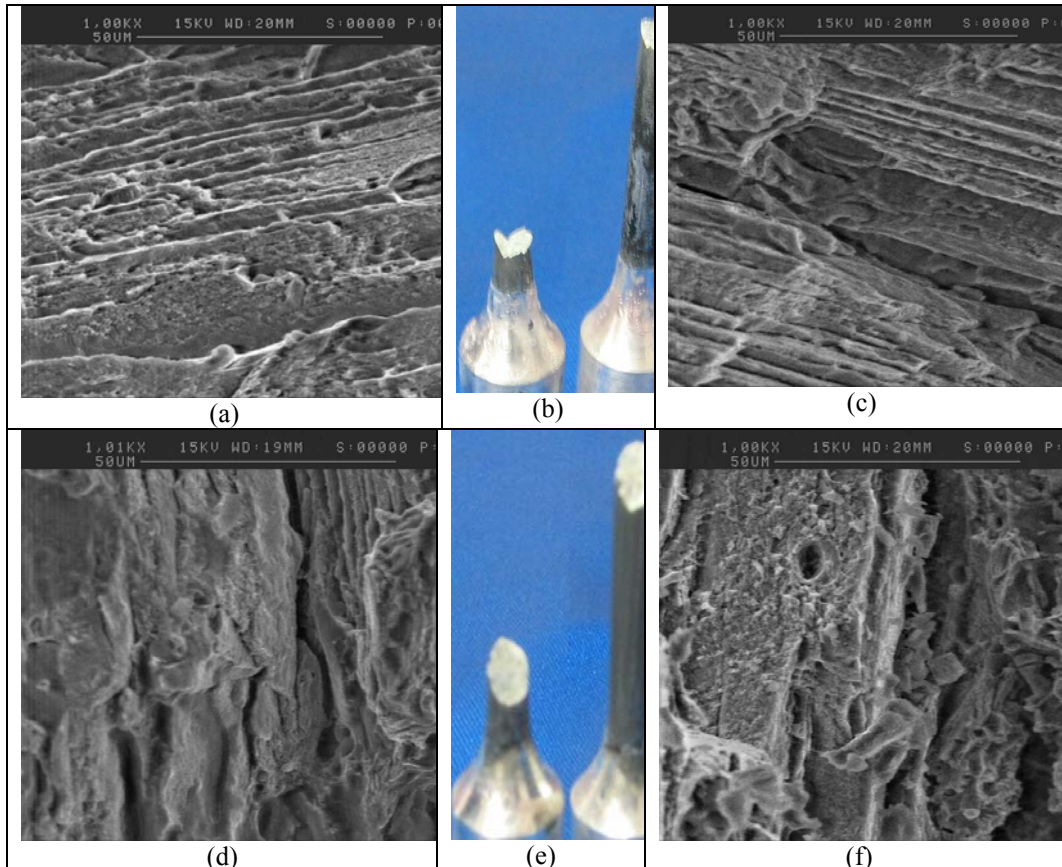


Figure 6. The surface fractured of the Al-Mg-Si alloy dumb-bell specimen viewed under SEM. (a) Test specimen DB1, (b) & (c) Test Specimen DB2, (d) & (e) Test specimen DB3 and (f) Test specimen DB4.

Specimens DB3 and DB4 which charged by hydrogen for 8 hours were fractured with striation spacing smaller and closer compared to the as-received test specimen. Hydrogen charging also remove all the voids and made the specimen more compact and fully with inconsistency directions of striations. As a result, the yield strength of the 8 hours hydrogen charging is much higher than that as-received specimen. These can be seen clearly in Figure 6(d) and (f), where the striations spacing are smaller with less amounts of microvoids. Solid corrosion product formed on the surface of the specimens (Figure 6b & e) were likely to act as hydrogen penetration barrier.

Influence of Arsenic to Hydrogen Embrittlement of Al-Mg-Si Alloy

Hydrogen embrittlement is a process of the atomic hydrogen penetrates into the metal alloys that which cause a reduction of ductility and tensile strength of that material. Hydrogen formed on the specimen surface due to the reduction reaction of hydrogen ion on aluminium alloy causes a decrease

its ductility which is called environmental embrittlement. Based on the observation of hydrogen charging to tensile test specimen of Al-Mg-Si alloy, generally most of the specimens were crack earlier compared to tensile test without hydrogen charging.

Cathodic charging in 3.56 wt% NaCl solution with 2 mL HCl and 0.1 gpL arsenic is known to result in hydrogen fugacity and while most of the hydrogen comes off as H₂ bubbles, in the presence of the recombination poison of arsenic which entered into the solution. The presence of arsenic in the NaCl solution enhanced the penetration of hydrogen into the Al-Mg-Si alloy surface.

Hydrogen embrittlement can happen during various manufacturing operations or operational use, anywhere where the metal comes in contact with atomic hydrogen. Materials susceptible to this process exhibit a marked decrease in their energy absorption ability before fracture in the presence of hydrogen. The best method to controlling the susceptibility hydrogen damage is to control contact between the metal and hydrogen. Generally, embrittlement prevention actions are use high resistance alloys and heat treatment to remove absorbed hydrogen. Smith (2004) mentioned that, to avoid hydrogen embrittlement caused by CU₂O, the oxygen can be reacted with phosphorus pentoxide (P₂O₅). Raizenne et al., (2001) reported that, the Retrogression and Re-ageing (RRA) heat treatment was first developed in 1974 by Cina and Gan to improve Hydrogen Induced Cracking (HIC) resistance of 7075 aluminium alloy while maintaining the high strength of the peak aged T6 temper for aircraft application.

CONCLUSION

Few conclusions can be made from this study:

- This alloy is sensitive to hydrogen embrittlement. Hydrogen charging significantly increased the yield strength from 270 up to 504 MPa and decreased the percent elongation approximately 50% after 8 hrs hydrogen charging.
- Generally, Al-Mg-Si alloy susceptible to hydrogen embrittlement. Small amount of arsenic was added to NaCl solution to enhance the penetration of hydrogen into the aluminium.
- Hydrogen embrittlement failures can be minimized by control contact between the metal with hydrogen and applied heat treatment to remove absorbed hydrogen in the component.

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MA(02)

EFFECT OF ACID TREATMENT ON FORMATION OF SiC (SILICON CARBIDE) FROM RICE STRAW

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ABSTRACT

Silica content in rice straw (RS) was very high so it has potential in production of SiC (Silicon carbide). In this study Rice straws had been treated by three types of acid which were sulphuric acid, citric acid and hydrochloric for 1 hour and concentration of 5N. The rice straws were soaked in water to eliminates the residual particle and then rinse, dried and treated with acid solution to produce treated rice straw with low water content, low carbon content, low inorganic impurities and with high porosity. Acid treatment had caused the cellulose which forms the main body of rice straw (RS) are leach out and reveals the trichome. Interior and exterior surface of stem tissues exhibit similar morphology figures of stomata including three types of trichomes hair-like, small and large rounded trichomes that can be seen appear in rows.

Keywords: *untreated rice straw (RS), treated rice straw (TRS).*

INTRODUCTION

Silicon carbide (SiC) is a ceramic compound of silicon and carbon that is manufactured on a large scale in semiconductor industries and other applications such as lightning arrester in electric power systems, circuit elements like blue LEDs, ultrafast, high – voltage Schottky diodes, and high temperature thyristor for high power switching. Silicon carbide is also used as an ultraviolet detector, disc brake and clutch mostly for sports car, diesel particulate filter, thin filament pyrometry, ceramic membrane, cutting tools and also as heating element. The pioneering work for Silicon Carbide (SiC) formation from rice husks is performed by Lee and Cutler in 1975. After that, several reports appeared in literature but nothing refers on the rice straws. Rice straws (RS) have been considered as a potential raw material for the formation of silicon carbide. The RS contains cellulose, and other organic material that produce high ash contain the ash composed largely of silica with small amount of alkalis and trace element. When RS are converted, these impurities interfere into the SiC process. In this investigation the Rice Straw (RS) were treated with 3 different types of acid which are citric acid, sulphuric acid and hydrochloric acid in order to reduce the level of impurities.

EXPERIMENTAL PROCEDURE

Dry RS, which had been sieved to eliminate the residual rice and clay particles and then shred and mill to the 300 µm size, were used in this work. The RS were feed into 5N citric acid, sulphuric acid and hydrochloric acid and stirring at 30 °C with 200 rpm for 1 hour. The treated rice straws (TRS) were thoroughly washed with distilled water and dried in an oven at 50 °C for overnight. The raw RS and TRS and treated RS and TRS were analyzed by- Scanning Electron Microscopy (SEM) model JEOL JSM – 646OLA and X-Ray Diffraction instrument (XRD).

RESULT AND DISCUSSION

From the all figures shows, we can see the outer and inner parts of RS leached out due to acid treatment. SEM micrographs of outer (adaxial) epidermis and interior (abaxial) epidermis of RS and TRS are shown in Figure 1 – 4. An XRF analysis revealed that the level of impurities in RS silica decreased considerably after acid treatment (Figure 5).

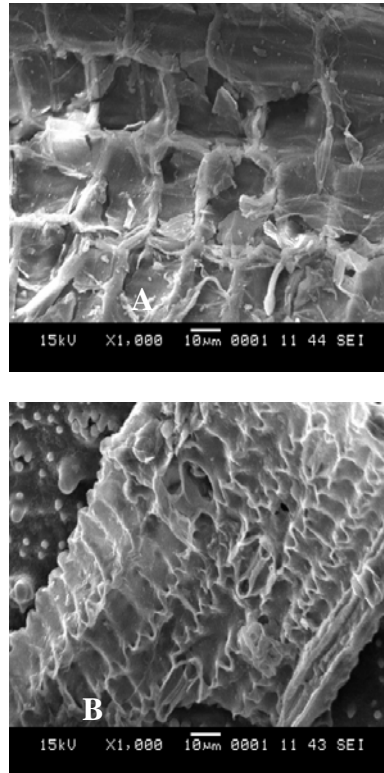
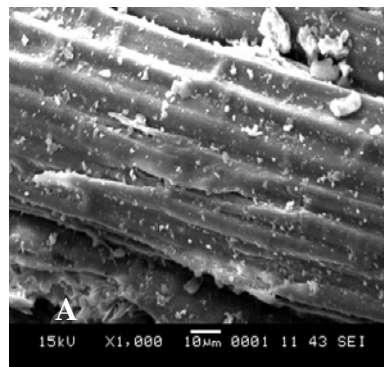


Figure 1: Sheath scanning electron micrographs of the abaxial (interior) epidermis. Anticlinal cell wall, with rigid ‘brickwork-like’ appearance to the abaxial surface can be seen clearly on the untreated RS from picture (A). The untreated sample has all its superficial waxes and other material with well build together. For Treated RS picture (B), some of the selective materials of cell wall formation have been remove indicating that components soluble in acid solution for treatment.



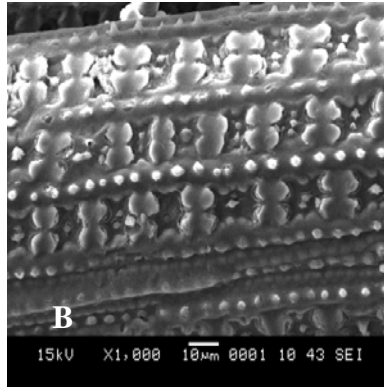


Figure 2: Showings are the scanning electron micrographs of the adaxial (exterior) epidermis. Picture (A) untreated sheath adaxial epidermis exhibiting: perfect hair-like with some other substances and appears relatively smooth. For treated RS picture (B), the acid extracted sheath adaxial epidermis showing the partial disruption tissues surface. The hair-like and smooth appearance is flattened and reveals the three types of trichomes: hair-like, small round and large round.

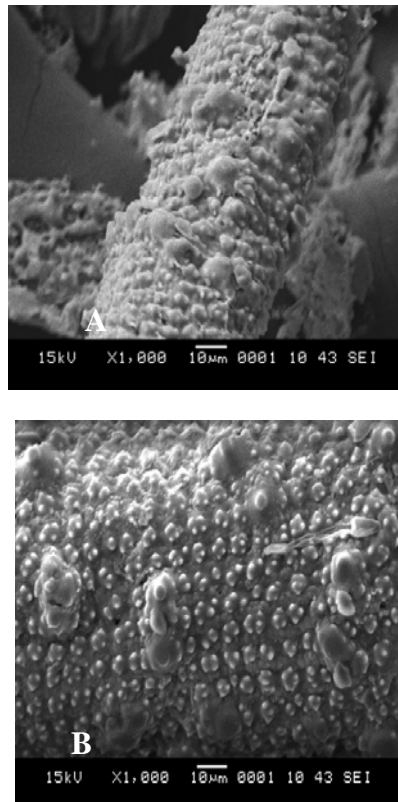


Figure 3: SEM micrograph of exterior surface epidermis of untreated rice straw (A) and treated rice straw (B) after sintering at 1000 °C.

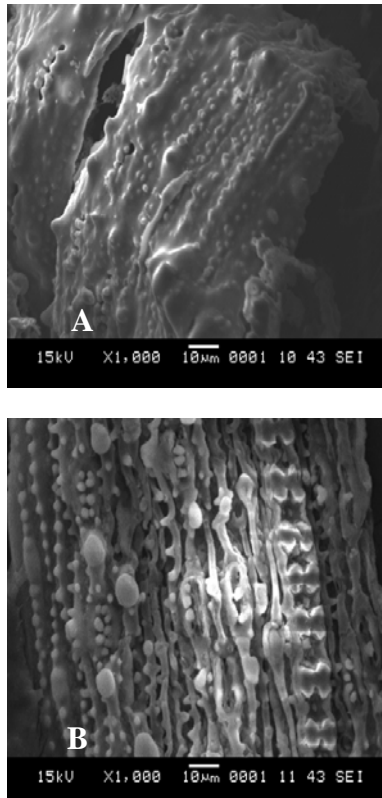


Figure 4: SEM micrograph of interior surface epidermis of untreated rice straw (A) and treated rice straw (B) after sintering at 1000 °C

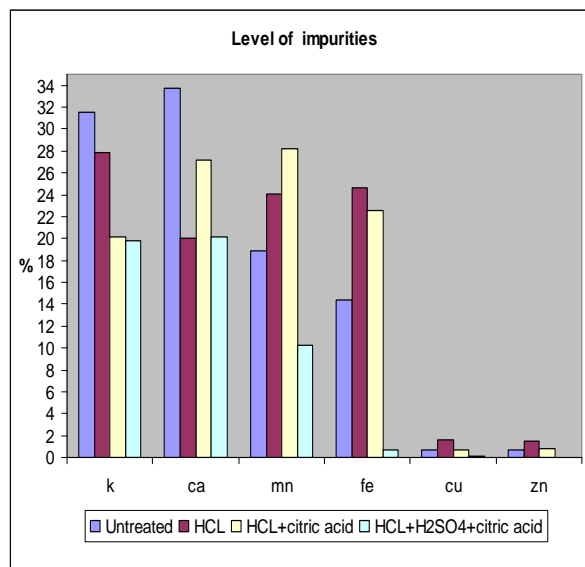


Figure 5: Impurities analysis (in wt %) of RS silica

When RS are treated with acid, the cellulose of RS is reduced and the carbohydrate is blackened due to removal of oxygen. The proteins in RS are decomposed into amino acids, and cellulose of large molecular weight is leached out as a smaller molecular weight compound. The impurities in the RS have substantially removed (see Fig. 5). This result is in higher purity of RS with porous structure. Due to the porous structure and low level of impurities the sintering process will have significant advantages in further process to produce a highly pure silicon carbide. It is well known that SiC forms

at relatively low temperature because of the intimate contact available for carbon and silica in RS and can be represented as follow:



CONCLUSION

The acid treatment step process was found to exhibits the interior and exterior surface epidermis at the same concentration of acid (5N). This study had proved that the presence of acid plays important role in removing selective impurities effectively. Among the possible beneficial effects of this combination are both an enhanced the process and enhanced removal organic and inorganic compounds.

ACKNOWLEDGMENT

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MA(03)

THE WILLINGNESS OF STUDENTS OF INSTITUTES OF HIGHER LEARNING IN KELANTAN TO CHOOSE AGRICULTURE AS A CAREER IN THE ERA OF ECER.

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ABSTRACT

ECER or East Coast Economic Region provides a lot of opportunities for people to participate in economic activity from 2008-2020. In this context, agriculture is one of the main cluster which focuses on the master plan of the Ninth Malaysia Plan and the government's aspiration to create Malaysia as food producer and exporter in the world. Young people especially students of higher learning institutions have a great potential to play an active role in developing agriculture in modern technology and effective marketing in the future. Therefore, this study is intended to identify how far is the willingness of the students to choose agricultural sector as a career in their life. The study was carried out among students from UiTM Kelantan (UiTMK) and University Malaysia Kelantan (UMK). The findings revealed that 55% of the respondents are willing to accept agriculture as a career in future. The number would probably increase if proper information, guidance, exposure and support are given to them. Majority of the respondents confessed that they lack in knowledge especially on how to get involved in agriculture and technology, besides being handicapped in skills and capital.

Keywords: *willingness; career in agricultur.*

INTRODUCTION

ECER or Economic Corridor Eastern Region which aims to accelerate the socio-economic growth of the region is to overcome poverty and to upgrade people's standard of living in Kelantan, Terengganu, Pahang and North Johor (ECER 2008). Since ECER is going to be implemented until 2020, students of institutes of higher learning have the prospect to participate in this socio-development program. In relation to this, agriculture is considered as one of the important sectors to be developed in using modern techniques for the benefits of the country. The Malaysian government declared that agriculture as the third engine to complement to the wealth with the given priority to produce food and to increase the level of income of farmers. The allocation of RM 11.4 billion is to implement the various projects in the Ninth Malaysian Plan. Over this 5 year period, the focus will be on the development of 'new agriculture' which involves expanding large scales of commercial farming, cultivating high quality and value-added agricultural activities, as well as unlocking the potential in biotechnology. The allocation of RM250millions is to help those who are interested in farming to become successful entrepreneurs (Ninth Malaysian Plan).

Statement Of Problem

The Malaysian aspiration is to become a producer and exporter of food in 2010 and this needs 300,000 expertise, 10,000 supervisors and 10,000 people for management. At the same time, the agriculture sector will be stimulated through the application of biotechnology and the most modern techniques; the manufacturing sector will be enhanced through encouraging investment in high

technology industries, while the services sector will be strengthened, particularly the areas of tourism, education, healthcare, Islamic finance and the production on the 'halal' foods. The government is allocating billions to implement various projects and programs. This allocation is higher than the RM6.2 billion spent on agricultural development under the Ninth Malaysian Plan. The Industrial Master Plan has outlined the development of agro-based industries comprising products processed from fish, meat, fruits and vegetables. Currently, there are agro-based industries which have not yet been fully developed to its full potential. There are many small-scale downstream processing activities that are undertaken by small farmers SMEs (Department Ministry of Agriculture and Agro-based Industry). The government has allocated RM250mil to those interested in farming to become successful entrepreneurs. Assistance will be given in the form of training, loans, proper marketing and packaging methods.

An issue here is how far people especially young people especially students of higher learning institutions (IPTA) are willing to get involved in this work. The reality of workers getting old which is 39% farmers is above 55 years and most of the farmers are not full-time workers, the land size is not economic (65% padi fields less than a hecter) . (Mahyudin 2004). In addition to this, currently there are symptoms of problems occurring in this field such as it estimates 300,000 hectares of rubber holdings untapped and 30,000 hectares of oil palm are not fully harvested (Abu 2004).

Therefore, how far the agricultural sector can get people's attention especially students to work for future manpower in this sector are important to be studied?

Objectives Of The Study

The main objectives of the study are:

1. To know the willingness among students of Institutes of Higher Learning in Kelantan in the agricultural sector as a career.
2. To classify favorable and unfavorable views of students of IPTA Kelantan towards agricultural sector as a career.

Significance Of The Study

This study is important due to agriculture as one of the major contributing factors to 35% (2 millions) of opportunities for Malaysian citizens who are involved in 70% of land in farming (Kegiatan Pertanian di Malaysia 2006), has more than half of the citizens of age between (15-64), and most of the people receive at least 11 years of education, the country has the advantage of young labours, educated and well-trained (Bliss, 2008). Since the number of young people involved in agriculture is quite low, so this study is significant. This study, however; focuses on young students of IPTA because they are considered as a group of intellectuals. The findings would be considered by the government to know the reasons why many of the young generations are not involved in agricultural sector and possibly to take certain action in encouraging them to join this sector.

This study hopes to contribute knowledge on the area of the study and probably could be used as one of the references for this kind of research.

Scope Of Project

The research scope focuses on “The Willingness of IPTA Students in Kelantan about The Potential of the Agricultural Sector as a Career”. UiTM and UMK were chosen to represent IPTA at Kelantan. The area which focuses on this research is limited on the willingness of IPTA students to select agriculture as a career and to identify favorable and unfavorable factors on this issue.

Hypothesis

Ho: There is no relationship between the perception of IPTA students and career in the agricultural sector.

H1: There is a relationship between the perception of IPTA students and career in the agricultural sector.

Ho: There is no relationship between gender of IPTA students and career in the agricultural sector.

H2: There is a relationship between gender of IPTA students and career in the agricultural sector.

H0: There is no relationship between perception in the field of work of IPTA students and career in the agricultural sector.

H3: There is a relationship between perception in the field of work of IPTA students and career in the agricultural sector.

Ho: There is no relationship between income and career in the agricultural sector.

H4: There is a relationship between income and career in the agricultural sector.

LITERATURE REVIEW

There are many factors that contribute to people’s decision to select a certain job as a career. Mathis and Jackson (2000) stated that there are four factors that led an individual to choose a career of job which are interest, self-image, personality and social back-ground. Bohlander, Snell and Sharman (2001) mentioned the selection of job based on psychological factor and financial satisfaction. Holland-Hexagon stressed on personality and environment. Donald Super focuses on personality, socio-economy, knowledge, skills and ability. For the purpose of this, the study explores on some elements of perception, rewards, motivation, knowledge and skills.

Perception on agriculture

A report on Iowa middle school students on agriculture; “often think of an old man, dressed in overall, smelling dirty, and chewing on a straw. This perception came through in a series of focus groups conducted during the winter of 1992-1993 in selected Iowa communities” (Mary Holz-Clause and Mark Jost, 1995,p.g1). Farming was perceived to be hard, physical labor and stressful because machinery brakes, weather uncertainty and price variance (Mary Holz-Clause and Mark Jost, 1995).

Howard (1989) studied the perception of public high school teacher and students in Mississippi regarding agriculture. The major finding was that teacher and students perceived agriculture as being important but students have no intention of studying or perusing in agriculture as a career.

Motivation in agriculture

Zoldoske (1996) found that autonomy in the workplace and retirement programs were the highest ranking factors in career selection, followed by decision participation for superior students than for above average students. The factor of salary and prestige were rated higher by Asian students rather than White students. Besides, significant differences were found in the factors of salary, advancement opportunities and merit pay for male students and societal influence and decision participation was rated significantly by female students in agricultural jobs today.

Idrees (2000) analyzed how to mobilize rural youth for the development of agriculture in NWFP Pakistan. The study was conducted in Chokra Council of District Karak, NFWP. The study suggested that there should be separate wings for male and female and the activity based on youth clubs having 10-15 should be at the village level.

Personality, Interest

Holland- Hexagon Model identified that personality of an individual influences the choice of job. In our culture, most persons can be categorized as 1 of 6 personality types: Realistic, Investigative, Artistic, Social, Enterprising or Conventional.

R: Realistic: preference for activities that entail the explicit, ordered, or systematic manipulation of objects, tools, machines and animals & to an aversion to educational or therapeutic activities. They are for example, Athletic Trainer, Electrician, Farmer, Military Officer, Plumber.

I: Investigative: preference for activities that entails the observational, symbolic, systematic, and creative investigation of physical, biological, and cultural phenomena and to an aversion to persuasive, social and repetitive activities, for example; Biologist, Dentist, Mathematician, Pharmacist, Physicist, Veterinarian.

A: Artistic: preference for ambiguous, free unsystematic activities that entail the manipulation of physical, verbal, or human materials to create art forms or products and to an aversion to explicit, systematic and ordered activities, for example; Architect, Art Teacher, Lawyer, Musician, Reporter, Sociologist, Translator.

S: Social: preference for activities that entail the manipulation of others to inform, train, develop, cure or enlighten and an aversion to explicit, ordered, systematic activities involving materials, tools or machines, for example; Child Care Provider, High School Counselor, Nurse, Physical Therapist, Social Worker.

E: Enterprising: preferences for activities that entail the manipulation of others to attain organizational goals or economic gain and an aversion to observational, symbolic, and systematic activities, for example; Buyer, Chef, Hair Stylist, Optician, Realtor, Travel Agent.

C: Conventional: preference for activities that entail the explicit, ordered, systematic manipulation of data and an aversion to ambiguous, free, exploratory or unsystematic activities, for example; Accountant, Bookkeeper, Mathematics Teacher, Paralegal, Secretary.

"Donald Super (1957) and other theorists of career development recognize the changes that people go through as they mature. Socioeconomic factors, mental and physical abilities, personal characteristics and the opportunities to which persons are exposed determine career patterns. People seek career satisfaction through work roles in which they can express themselves and implement and develop their self-concepts. Career maturity, a main concept in Super's theory, is manifested in the successful accomplishment of age and stage developmental tasks across the life span" (ICDM, 1991, p. 4-5).

FAMILY LIFE

Overall family functioning, a broader concept that encompasses parenting style, includes such factors as parental support and guidance, positive or negative environmental influences, and family members' interaction styles (Altman,1997). Family functioning has a greater influence on career development than either family structure (size, birth order, number of parents) or parents' educational and occupational status (Fisher and Griggs 1994; Trusty, Watts, and Erdman 1997). Ellias, T., M, (2006) stated that farmers in Indonesia learned knowledge and skills from their parents.

Parental support and guidance can include specific career or educational suggestions as well as experiences that indirectly support career development, such as family vacations, provision of resources such as books, and modeling of paid and non paid work roles (Altman, 1997). Interactions between parents and children and among siblings are a powerful influence. Interactions can include positive behaviors such as showing support and interest and communicating openly, or negative behaviors such as pushing and controlling (Way and Rossmann,1996a). By sharing workplace stories, expressing concern for children's future, and modeling work behaviors, parents serve as a context for interpreting the realities of work (ibid.).

Education, Knowledge, Skill & Ability

Two major assumptions of trait and factor theory are: (1) individuals and job traits can be matched, and (2) close matches are positively correlated with job success and satisfaction. These ideas are still part of our career counseling approach today. To reach career maturity, young people must develop adequate self-knowledge in relation to careers and acquire sufficient information on which to base career and education decisions (Super et al., 1996). In other words, engaging in career exploration is a necessary prelude to career maturity. Joseph (2004) studied teacher's perception of the need for agricultural education programs in schools in Jamaica and to determine the skills needed by youth to be employed in the agriculture industry. Amongst the findings were agricultural educations programs which would promote positive influence within communities in Jamaica and create opportunities for employment in agriculture, agribusiness owners in Jamaica identified many skills youth need to have to

enter the agricultural career. In addition to this, Saidin (1980) stated on the importance of professional competencies needed by supervisors or administrators in Malaysia.

Environment

Nesrin, O. H., (2008) focused on students' expectation to either family background or social status that affect their career decisions. The study found that parents and environments had a quite influence on students' occupational preferences.

Financial Rewards

Bai Limin (1998) studied on Chinese university students in China and he found that the good income as the most important criterion in job selection.

RESEARCH METHODOLOGY

This section focuses on the data Collection Method, Target Population and Sample Size and Data Analysis and Interpretation.

Data Collection Method

Primary Data and Secondary Data

The primary data were collected through questionnaires that were distributed to 200 respondents, who are IPTA students in Kelantan. Most of the secondary data were collected from the printed materials and other sources such as from the library and internet. This type of data was used extensively in analyzing the data and in literature review to provide the information for this study. They are journals, Bulletins, Magazines, Annual reports, Previous studies, Articles from the websites.

Target Population And Sample Size

Sample Population

The sample population respondents are those who are studying in UiTM Machang, and University Malaysia Kelantan (UMK)

200 respondents from IPTA students were selected randomly. The sample size of this research focussed on the respondents of UiTM Machang and UMK who are learning in different courses.

Sampling Techniques

The sampling that was used for this research is Non-probability Sampling. The sampling technique that we chose is Convenience Sampling. We chose this sampling because it is easily and conveniently to be obtained. By using this sampling we also can select a sample where suitability is the primary consideration. Besides that, this sampling also does not require a sampling frame.

Data Analysis And Interpretation

The data were analyzed by using several methods via computer software, i.e. Statistics Package for Social Science (SPSS) Version 11.0 for Windows. In analyzing the data, Frequency Distribution, Paired Sample T-test, Cross Tabulation and Pearson Chi-square were used.

RESEARCH FINDINGS

General Findings

Gender of Respondents and composition of respondents

38.0% of the respondents are male students who represent 76 respondents out of 200. On the other hand, 124 respondents are female students. They represent 62.0% of the respondents. The composition of the respondents from both universities are as follows (see Table 1).

Table 1: Students Studying in Universiti Teknologi MARA Machang Campus and University Malaysia Kelantan

Study in	Frequency	Percentage (%)
UiTM Machang	130	65.0
UMK	70	35.0
Total	200	100.0

Table 2: Students' Programs (UiTM Kelantan and UMK)

	Frequency	Percentage (%)
Dip .in Art and Design	18	9.0
Dip. in Information Studies	23	11.5
Dip. in Statistics	15	7.5
Dip. in Computer Science	16	8.0
Dip. in Business Management	12	6.0
Dip. in Banking	16	8.0
Dip .in Accounting	24	12.0
Deg. in Statistics	3	1.5
Deg. in Accounting	2	1.0
Deg. in Business Management	2	1.0
Deg. in Technology Creative and Heritage	37	18.5
Deg. in Entrepreneurship and Business	22	11.0
Deg. In Applied Sciences (Entrepreneurship in Agriculture Technologies)	10	5.0

Based on the data above, it can be concluded that 18.5% students are from Degree in Technology Creative and Heritage. They represent 37 respondents out of 200. This is followed by 12.0% of the students from Diploma in Accounting. The frequency for this course is 24 respondents. There are 15 students from the courses of Diploma in Statistics. They are represented by 7.5% of the respondents.

Besides, both Degree in Accounting and Degree in Business Management have only 2 respondents each. They represent 1.0% of the respondents.

Students’ Parents’ Occupation

About the students’ parents’ occupation, 33.5% of them work with government which is 67 of them. 35 parents of the respondents work in agricultural sector. They represent 17.5% of the respondents. 16.0% of the respondents show for both private and business sectors. This shows 64 respondents are involved in the private and business sectors to earn their living. The rest of the students’ parents do other jobs and pensioners. There are 34 people with the percentage of 17.0%. Even though many people still work with the government, agricultural sector is still an important sector in our country.

Analysis On Objective Of The Study

The Willingness of IPTA students to select agriculture as a career

It has been found that 56.5% of the respondents are interested to have agricultural sector as a career, and on the other hand, 43.5% are not interested to have agricultural sector as a career. In general, this finding shows a good sign that more than half of the respondents are positive about jobs in agriculture. This result is supported by respondents who are willing to see the aspiration of the government on the success especially stated in RM-9. We can see that 74% of respondents in IPTA are ready to take up challenges by our Prime Minister’s desire to develop the agricultural sector, while 26% of the respondents are not ready to take the challenge. In addition, there are 75.5% of the students in IPTA who are willing to be involved in the programs that are organized by the government in the agricultural sector. Meanwhile, 24.5% respondents are not ready to be involved in the programs that are organized by the government in the agricultural sector even if they are given a chance. This paper, however; looks at both favorable factors and unfavorable respondents’ perception about agriculture.

Favorable Factors

Agriculture is an Important Sector

According to Table 3 below, it shows that agriculture is an important sector to our country. 95.5% of the respondents agree and strongly agree that agriculture is an important sector in our country. It is because the respondents know that the government wants to make agricultural sector as a business. Meanwhile, 3.0% of the respondents disagree and strongly disagree with this question. However, 1.5% respondents is not sure whether agriculture is an important sector to our country or not.

Table 3: Agriculture is an Important Sector to Our Country

	Frequency	Percentage (%)
Strongly Disagree	2	1.0
Disagree	4	2.0
Not Sure	3	1.5
Agree	91	45.5
Strongly Agree	100	50.0
Total	200	100.0

Agriculture Suitable for All Education Level

According to Table 4, we can see the overall of percentages of agriculture is suitable for all education levels. 43.0% of the respondents agree and 33.0% strongly agree with this perception. Besides, 14.0% respondents are not sure that agriculture is suitable for all education level. However, 10.0% respondents disagree and strongly disagree with this case.

Table 4: Agriculture Suitable for All Education Level

	Frequency	Percentage (%)
Strongly Disagree	9	4.5
Disagree	11	5.5
Not Sure	28	14.0
Agree	86	43.0
Strongly Agree	66	33.0
Total	200	100.0

Government Aspiration about Agriculture

Table 5, below, shows that majority of the respondents agree that the young generation realize that the government’s aspiration of agricultural sector as a business with the percentage of 74%, 11% of the respondents disagree and strongly disagree and 15% are average with this case. This shows most of the students are alert with our prime minister’s aspirations to make our country as an agricultural country.

Support Agencies to the Agriculture

Based on the research, majority of the respondents agree that the well known agencies such as FAMA, MARDI, and FELDA are enough to support agricultural sector with percentage of 75% agree and strongly agree, and only 10% of the respondents, disagree; and 15% of the students are not sure with it. This means that our country has enough support agencies in this sector to help the farmers to improve their productivity.

Table 5: Support Agencies to the Agriculture

	Frequency	Percentage (%)
Strongly Disagree	7	3.5
Disagree	13	6.5
Not Sure	30	15.0
Agree	96	48.0
Strongly Agree	54	27.0
Total	200	100

Government’s Guidance and Help

Based on the Table 6 below, majority of the respondents agree that the government gives the guidance and help to market the farmers’ products with percentage of 82.5% and only 6% of the respondents disagree. Another 11.5% of the respondents are average in this case. This means that agricultural sector has a big potential to develop with the guidance and help given by the government.

Table 6: Government's Guidance and Help

	Frequency	Percentage (%)
Strongly Disagree	2	1.0
Disagree	10	5.0
Not Sure	23	11.5
Agree	103	51.5
Strongly Agree	62	31.0
Total	200	100

Facilities Provided by Government in the Agriculture

Based on Table 7, 68% of the respondents agree and strongly agree that the students do not know clearly whether the facilities provided by the government is enough to help the farmers. 12.5% of respondents disagree and strongly disagree with it. Another 19.5% of the respondents are average. This means that the government needs to give some exposure about their help to the farmers. It is easy for students to know either the facilities given by the government is enough to help the farmers to decrease their capital or help them how to increase their product in this sector. With some exposure about this, students can make their conclusion whether it is good or not to get involved in the agricultural sector.

Table 7: Percentages of Facilities Provided by Government in the Agriculture

	Frequency	Percentage (%)
Strongly Disagree	6	3.0
Disagree	19	9.5
Not Sure	39	19.5
Agree	101	50.5
Strongly Agree	35	17.5
Total	200	100

Table 8 Subsidies from Government to help the Farmers

	Frequency	Percentage (%)
Strongly Disagree	2	1.0
Disagree	7	3.5
Not Sure	38	19.0
Agree	96	48.0
Strongly Agree	57	28.5
Total	200	100

The table above shows that 76.5% of the respondents agree and strongly agree that the government gives subsidies to help farmers produce more agriculture products. Only 4.5% of the respondents disagree with it and 19% are not sure with this case. This means, the subsidies given can attract more people especially young generation to get involved in agricultural sector.

Table 9: Capital from Bank Pertanian Malaysia Help the Farmers

	Frequency	Percentage (%)
Strongly Disagree	2	1.0
Disagree	6	3.0
Not Sure	46	23.0
Agree	90	45.0
Strongly Agree	56	28.0
Total	200	100

73% of the respondents agree and strongly agree that Bank Pertanian Malaysia helps the farmers to get capital for buying tools for agriculture. Only 4% of the respondents, 8 students disagree and strongly disagree, and 23% respondents are not sure with it. This shows that, the farmers who have not enough capital can deal with this bank. So, it is not a big problem for students who want to get involved in this sector although they just have a small capital.

Unfavourable Factor

Student Ashamed to be a Farmer

Based on the graph above is the overall percentage of of respondents who are ashamed to be farmers. 63.0% respondents agree and 20.0% disagree with the idea that students are ashamed to be farmers. 63.0% of the respondents agree because they feel that the agricultural sector is suitable for old generation and the people who live in the rural areas. In addition, agriculture is not a famous sector and the working condition is uncomfortable.

Rewards : The Inconsistent Income in Agriculture

The graph shows the overall percentage of IPTA students' perception. 61.5% respondents in IPTA agree that the agricultural sector gives the inconsistent income; while, 16.5% respondents disagree that agricultural sector gives inconsistent income. The percentage of the students who are not sure about the inconsistent income in agriculture is 22% out of 44 students. They are afraid that when there is a decrease in the yield, they cannot enjoy their income.

Agriculture for People with Low-level Education

Due to the data collected, it was found that agriculture is a reflection for the people with low-level education. 78.5% respondents disagree and strongly disagree with agriculture as reflect for people with low-level education. It is because the respondents are aware that agriculture is not only for people with low-level education but also suitable for all education level. 11.0% respondents agree and strongly agree, while 10.5% are not sure about this case.

Table 10: Agriculture for People with Low-level Education

	Frequency	Percentage (%)
Strongly Disagree	81	40.5
Disagree	76	38.0
Not Sure	21	10.5
Agree	16	8.0
Strongly Agree	6	3.0
Total	200	100.0

The Young Generation Think That the Agricultural Sector is a Second Class Sector

The graph shows the overall percentage of IPTA students' perception. We can see that 55% out of 110 respondents in IPTA agree and strongly agree that the agricultural sector is second class in our economy, while 15.5% respondents disagree and strongly disagree that the young generation think that the agricultural sector is second class. Besides that, 29.5% of the respondents are not sure that agricultural sector is a second class to other sectors. They agree because they cannot see that agriculture can help to develop our country.

Table 11: The Young Generation Think That the Agriculture Sector is a Second Class Sector

	Frequency	Percentage (%)
Strongly Disagree	7	3.5
Disagree	24	12.0
Not Sure	59	29.5
Agree	90	45.0
Strongly Agree	20	10.0
Total	200	100.0

Working Condition In Agriculture

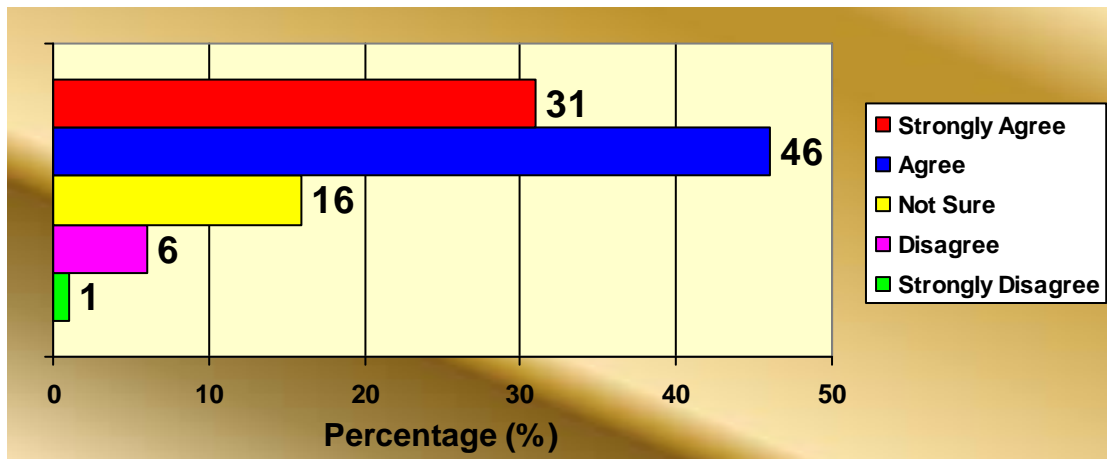
The Dirty Condition in Agriculture

65% of the respondents or 130 students agree that the dirty condition in agriculture make the young generation do not want to get involved in the agricultural sector. Only 16% of the respondents disagree with it. Another 19% of the respondents are not sure with this case. This means that the dirty condition makes the young generations not interested to get involved in this sector.

Table 12: The Dirty Condition in Agriculture

	Frequency	Percentage (%)
Strongly Disagree	6	3.0
Disagree	26	13.0
Not Sure	38	19.0
Agree	87	43.5
Strongly Agree	43	21.5
Total	200	100

Pests Like Birds, Rats, and Bats will decrease the Yield in Agriculture



Based on the graph and table above 78% of the respondents agree that pests like bird, rats, and bats will decrease the yield in agriculture. Only 7% of the respondents that disagree and 16% respondents are not sure with it. This means that the pests like birds, rats, and bats will decrease the yield in agriculture.

The Weather Factors That Affect the Agriculture Sector

Table 13: The Weather Factors That Affect the Agricultural Sector

	Frequency	Percentage (%)
Strongly Disagree	7	3.5
Disagree	12	6.0
Not Sure	35	17.5
Agree	95	47.5
Strongly Agree	51	25.5
Total	200	100.0

Based on the graph above 73% of the respondents agree that the weather factors like rain and hot weather give inconsistent effects to the agricultural sector. Only 9.5% of the respondents disagree with it. Another 17.5% are not sure in this case. This means that the weather factors like rain and hot weather give inconsistent effects to this sector.

Skills

Percentage of the Young Generation Who does not know how to use the Machines and Tools in Agriculture : 48% respondents in IPTA agree that the young generation does not know how to use the machines and tools in agriculture. Those who disagree that young generations do not know how to use the machines and other tools are 29% and 23% of them are not sure. There is a high percentage of the respondents who agree because they are not learning agriculture and have never used the machines and tools in agriculture before.

Table 14: The Young Generation Does not Know How to Use the Machines and Tools in Agriculture

	Frequency	Percentage (%)
Strongly Disagree	14	7.0
Disagree	44	22.0
Not Sure	46	23.0
Agree	68	34.0
Strongly Agree	28	14.0
Total	200	100.0

Capital

Land Influences Involved in Agriculture

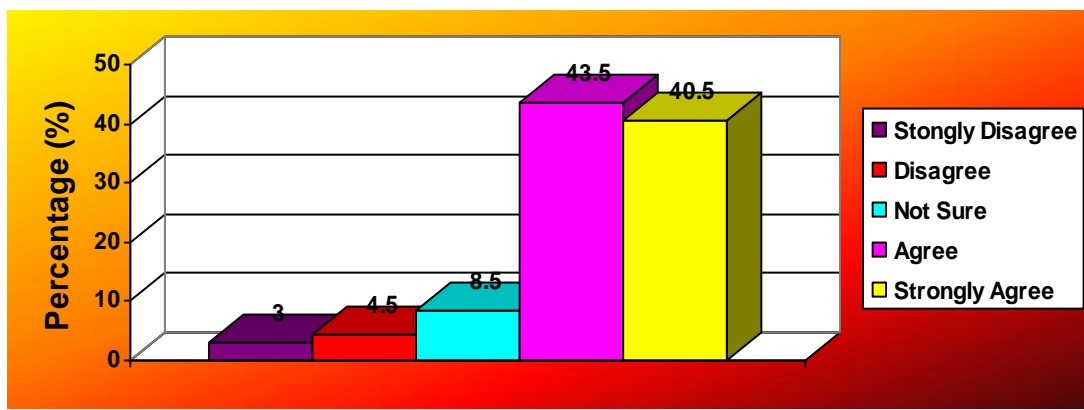


Figure 1

The graph above shows 84% out of 168 students in IPTA agree that land could influence students to get involved in agricultural sector as a career. The percentage of the students disagree that land influences the students to get involved in the agricultural sector are 7.5% with 15 students and 8.5% respondents are not sure.

Technology Influences Involved in Agriculture

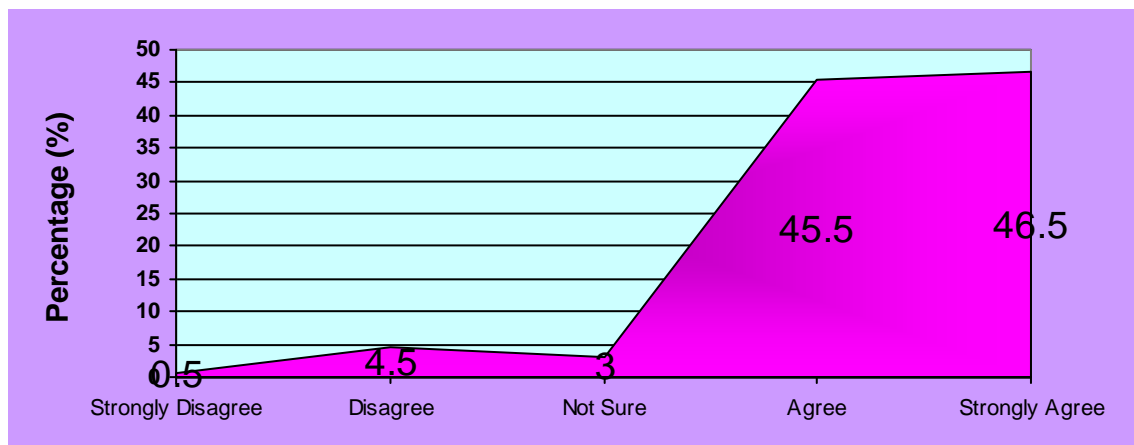


Figure 2: Percentages of Technology Influences Involved in Agriculture

92% respondents in IPTA agree that technology could influence students to get involved in agriculture sector as a career. 9.5% respondents disagree that the technology could influence students to

get involved in the agriculture. There are only percentage of 3.0% who are not sure that technology can influence students to get involved in agricultural sector as a career.

Skills that Influence Career in Agriculture

86% out of 172 students in IPTA agree that skills could influence students to get involved in agriculture sector as a career. 6.0% out of 12 students disagree that skills influence the students to get involved in the agriculture. 8% of the students are not sure that skills can influence students to get involved in the agricultural sector which equals 16 students out of 200 respondents.

HYPOTHESIS TESTS

Hypothesis One

Ho: There is no relationship between the perception of IPTA students and career in the agricultural sector.

H1: There is a relationship between the perception of IPTA students and career in the agricultural sector.

P value (11.259) > value in statistic table (9.488)

H0 rejected, H1 accepted

0.024 < 0.05, H1 accepted

Chi-Square test			
	P value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.259	4	0.024
N (Population)	200		

Hypothesis Two

Ho: There is no relationship between gender of IPTA students and career in the agricultural sector.

H1: There is a relationship between gender of IPTA students and career in the agricultural sector.

P value (0.809) < value in statistic table (3.841)

H0 accepted, H1 rejected

0.369 > 0.05, H0 accepted

Chi-Square test			
	P value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.809	1	0.369
N (Population)	200		

Hypothesis Three

H0: There is no relationship between perception in the field of work of IPTA students and career in the agricultural sector.

H1: There is a relationship between status of IPTA students and career in the agricultural sector.

P value (8.144) < value in statistic table (9.488)
 H0 accepted, H1 rejected
 0.086 > 0.05, H0 accepted

Chi-Square test			
	P value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.144	4	0.086
N (Population)	200		

Hypothesis Four

Ho: There is no relationship between income and career in the agriculture sector.
 H1: There is a relationship between income and career in the agriculture sector.

P value (18.313) > value in statistic table (9.488)
 H0 rejected, H1 accepted
 0.001 < 0.05, H1 accepted

Chi-Square test			
	P value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.313	4	0.001
N (Population)	200		

CONCLUSION

Overall findings are 55% of the IPTA students in Kelantan are willing to choose agricultural sector as a career. This shows that agriculture is still acceptable by the young generation. This is a good sign for the government’s aspiration especially in the era of ECER or East Coast Economic Region which provides a lot of opportunities for the people to participate in economic activities from 2008-2020. It is hoped that many educated people who will be involved in agricultural sector would help the Malaysian aspiration to become a producer and exporter as a reality. Also, the study was able to classify favorable factors only limited to some elements of perception and the government roles in promoting agriculture as a career to be involved by people of Malaysia. 95% respondents agree agriculture is an important sector and it is suitable for all people of all educational level and Malaysian government play its roles in supporting through relevance agency, guidance and provide facilities.

The unfavorable factors are such as capital, working conditions, weather, knowledge and skills. Nowadays, some of the students are ashamed to be farmers. They have seen that there is just a small scope to be a farmer in the agricultural sector. 63% out of 126 respondents are ashamed to be farmers. Meanwhile 26% out of respondents do not care to work as farmers. Actually, agriculture does not just only focus on farming but someone who is involved in this sector can also work in the laboratory,

office and also work as an executive. Modern agriculture extends well beyond the traditional production of food for humans and [animal feeds](#). Other agricultural production goods include [timber](#), [fertilizers](#), [animal hides](#), [leather](#), industrial chemicals ([starch](#), [sugar](#), [ethanol](#), [alcohols](#) and [plastics](#)), [fibers](#) ([cotton](#), [wool](#), [hemp](#), and [flax](#)), fuels ([methane](#) from [biomass](#), [biodiesel](#)), [cut flowers](#), ornamental and [nursery plants](#), tropical fish and birds for the pet trade, and both legal and illegal drugs ([biopharmaceuticals](#), [tobacco](#), [marijuana](#), [opium](#), [cocaine](#)). The Prime Minister is trying to make this sector into a business. In addition, 65% out of 130 students really care about working in the dirty condition but 16% out of 32 students do not want to work in the dirty condition. They do not really care because they do not have choices when they are looking for jobs because they do not want to be jobless. 61.5% out of 123 students do not want to get involved in the agriculture because this sector gives inconsistent income to them. 16.5% out of 33 students are interested in this sector although this sector gives inconsistent income to them. They will not enjoy their income when there is an increase in the yield. Also, majority of the respondents confessed that they lack in knowledge especially how to get involved in agriculture besides handicap of skills, capital and knowledge in technology.

RECOMMENDATION

Referring to the findings of the study, although around half (55%) of the respondents are willing to choose agricultural sector as a career, the study would like to recommend certain actions to be taken so that the number would probably increase if proper information, guidance, exposure and support are given to them. If not the number of those interested might decrease in future.

The government should organize more programs about agriculture

The government should organize more programs related to the agricultural sector which can help students to learn about agriculture and will make them interested to join in this sector when they are searching for jobs in the future. In these programs, students can have some practical and training on how to work in this sector. This suggestion is inline with the idea proposed by Mary Holz-Clause and mark Jost (1995) “Don’t assume youth are interested in agriculture. Instead, actively cultivate this interest, and demonstrate that agriculture is relevant to youth”. Majority of the respondents confessed that they lack in knowledge especially on how to get involved in agriculture and technology, besides being handicapped in skills and capital.

The education of agriculture as the peripheral subject

This will make sure that the students have some information about ‘new agriculture’ and agriculture as a business. They will understand clearly about the scope in this sector. Therefore, it is the first step for them if they want to get involved in the agricultural sector as their career in the future.

The societies in IPTA organize activities in agriculture

The societies can have a visit to the agricultural agencies like MARDI, FELDA, FELCRA, BERNAS and other agricultural agencies. They can have some new knowledge about agriculture through their visit. They can have real experiences if they try to practice on how to farm on their own in their farms. Hence, they will have confidence to get involved in this sector some day.

Recommendation for future research.

It is suggested for new researchers to study the relationship of courses in IPTA and the interest to work in agriculture, or the effectiveness of the government's roles in developing agriculture as an important sector in Malaysia.

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MA(04)

VERMICULTURE : A TOOL FOR POVERTY REMOVAL AND SOURCE OF BIOMASS FOR LIVESTOCK FEED, COSMETIC AND BIOTECH INDUSTRIES

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ABSTRACT

The practice of total Vermiculture in developing countries, such as India, Thailand and Argentina, has been found to be successful as a tool for removing poverty, and there is an abundance of case studies as proof of this claim. However, Malaysia has yet to pick up the example on a wide scale. The writers intend to advocate that the implementation of vermiculture can help to overcome the economic hurdle of the hardcore poor community, especially among the Skim Program Kesejahteraan Rakyat (used to be known as Program Pembangunan Rakyat Termiskin / PPRT) participants. Vermiculture has been found to be very vital for sustainable land management and development of human resources, as well as providing a unique opportunity to replace the subsidy dependent development with a revolving fund oriented development. For besides their primary role of generating organic fertilizer, the worms of vermiculture are also rich with enzymes that are highly sourced by the cosmetic and biopharmaceutical industry. Furthermore, these worms could also easily provide a ready source of protein in livestock feed preparation, thus, significantly reducing imported raw materials currently used. Hence, vermiculture can also be a pro-active tool towards maintaining a positive balance of trade. Vermiculture projects should be spearheaded by innovative members of the society, preferably the private sectors which could provide the technology transfer and market drive, thus creating a stream of continuous revenue creation for the target group and providing the right impetus towards total poverty elimination.

Keywords: *vermiculture, vermicompost, poverty removal, income generation, biotech.*

INTRODUCTION

Knowledge gained during the industrial revolution and the continuous technology break through by highly acclaimed Nobel Laureates had induced a rich variety of products for the benefits of mankind. However, the driving factor behind the production of such products is usually a monetary one. All research and development (R&D) funds are often centred upon how much profit can be generated once such products enter the market. In most cases, to enhance and to expedite development cycles of these products, various chemical formulations are relied upon ignoring their gravely negative side effects on mankind and his environment. This is especially true in the agricultural sector which is slowly and surely accumulating a variety of these negative side effects as both inorganic and organic wastes are uncaringly and ceaselessly dumped upon mother nature. A folly that has begun to take its toll upon all.

With the rising awareness of this folly among the scientific community, as well as the public community at large, the Green Movement was born. The world's major powers are overhauling their nation planning by promoting environment friendly code for both product production and also product deployment. Furthermore, the depleting natural resources that had given birth to the biotech industry had also induced new thinking on how to harvest new resources for human consumption. However,

commercial production usually only benefit the already rich, while the hard core poor remained in vivid poverty. In the meantime, new products that are born out of the biotech industry, are continuously generating and accumulating natural biomass. As the new product gained market acceptance, the continuously accumulating natural biomass that is left behind presents a real environmental nightmare that demands prompt attention.

Hence, to solve these various tangible issues mentioned above, we need to harness the advantages of Vermiculture practice to ensure mankind's comfortable survival.

OBJECTIVES

The purpose of this paper is purely to highlight the practical usage and the direct benefits of Vermiculture practice in solving various problems mentioned above. The benefits are listed below :

- a) Environment friendly solid organic waste management;
- b) Biomass source for Halal cosmetic industry;
- c) Biomass source for biotech industry;
- d) Protein source for livestock feed;
- e) Protein source for human consumption;
- f) Income creation and generation for hardcore poor;
- g) Employment opportunity among youths & graduates.

VISION

The writers hope to see a widespread adoption of vermiculture practice among the government departments and agencies, State government bodies, municipal bodies (Pihak Berkuasa Tempatan or PBT), political parties, non-governmental organisations, academic fraternity, youth associations, private sector and general community in formulating feasible programmes towards poverty eradication among the target group with the creation of multiple sources of income generation that cover short, mid and long term returns.

OBJECTIVE

The writers hope to expose the various implementations of Vermiculture and its advantages that could be utilised in order to execute a multiple-pronged strategy towards total poverty removal among the hardcore poor community, while at same time creating an abundance of biomass resources, that will meet and cover, the needs and requirements of agriculture (organic compost as fertilizer), cosmetic and biotech industries.

RATIONALE

There are rich choices of rationale that can be listed, when Vermiculture practice is put into active consideration. Below are some of these rationale, but not in any particular order of priority :

- a) High cost of solid organic waste management;
- b) Lacking choices of landfill to be used;
- c) Environmental issues from existing operating landfill;
- d) Untapped income source from farm waste (both livestock & plantation waste);
- e) Untapped domestic production of high quality fertilizer by the farmer themselves;

- f) High cost of fertilizer, both imported and locally produced
- g) Negative effects of chemical fertilizer on the agricultural land;
- h) Negative effects of chemical fertilizer on human health;
- i) Negative effects of poisonous insecticides on human health;
- j) High costs of vegetables & fruits ;
- k) High rate of hardcore poor among the Malay agriculture land bank;
- l) High rate of unemployment among graduates & youth, especially in rural areas;
- m) High subsidy and incentive payout by government to the hardcore poor;
- n) Dependence on un-halal raw material in cosmetic production;
- o) Dependence on synthetic or chemical compounds to extend food shelf life;
- p) Dependence on depleting imported & local raw material by the biotech industry;
- q) Non-integrated or non-closed loop solutions to handle various needs and requirements among agriculture land, hardcore poor, unemployed graduates, cosmetic & biotech industries.

DEFINITION OF BASIC TERMS

In order to ensure total comprehension of this paper, we provide definitions of the important terms for reference:

a) Vermiculture.

The practice of stabilization of organic waste in a controlled condition, through the cultivation of specific earthworms from a particular species, known as compost worms, and with the help of microorganisms to convert the organic waste into black, earthy-smelling, nutrient-rich humus. The goal is to continually increase the number of worms in order to obtain a profitable and sustainable harvest. The worms are either used to sustain or expand a vermicomposting operation or sold to customers who use them for the same or other purposes.

b) Vermicompost.

One of the end products of Vermiculture activity consisting of worm excretion, known as Vermicast, unprocessed decomposed organic media, worm eggs and active microorganisms that leave the soil with higher levels of minerals and microbial life. These microorganisms help plants to more easily absorb nutrients (minerals) from the soil resulting in better plant growth and stronger, healthier plants.

c) Vermitea.

Vermitea is another end product of the Vermiculture activity, resulting from the collected leaches during the daily spray of worm bin. This product can also be induced by a brewing process – similar to the method a home gardener might use to create compost or manure tea – into an organic, nutrient-rich liquid fertilizer that is also high in agriculturally valuable microbial life.

d) Vermiculture in Agriculture.

An integrated practice with the creation of a closed loop methodology, whereby the on-site cultivation of the compost worm produces organic fertilizer for internal consumption, while at the same time managing the farm waste in an efficient and profitable way and also creating an additional income stream. With this concept, farm waste is utilised to reduce operation cost and increase farm income, thus further motivating the farmers.

e) Vermiculture in Waste Management

The use of specific compost worms and microorganisms to ‘biodegrade’ or stabilize and reduce organic waste into vermicompost and vermitea, both of which have high market value, especially in producing organic foods for healthy consumption. Thus, avoiding usage of chemical based fertilizers, as well as omitting the need of environmentally costly incinerators or dump-sites in managing and processing organic waste and control of environment.

CHARACTERISTICS OF VERMICULTURE PRACTICE

There are FIVE significant characteristics of these various vermiculture practices, which are illustrated, in the table below, in direct comparison with other livestock cultivation, both aquaculture based or livestock husbandry based.

Table 1. Comparison between Vermiculture & Other Livestock Cultivation

Other Livestock Farming	Vermiculture/Worm Farming
Most livestock cultivation, except for bird nest project, is done outside the building or outdoors.	Worm bins for vermiculture can be set up, either outdoors or indoors without any restriction.
Every cycle requires repeated purchase of fry (aqua) or calf (ruminant).	Usually requires one purchase of worm stock only, since the worms breed and populate quickly.
There is a heavy reliance on purchase of livestock feed.	No heavy reliance on purchase of feed as there is always readily available organic waste.
Livestock need to be fed daily	Worms have very flexible feeding sessions.
Singular marketable end product	Three types of saleable end product

(Source : Sallehuddin Sa’ad, Jaringan Pertanian Kontrak Sdn. Bhd.)

Table 2. Key Advantages of Vermiculture practice

Other Livestock Farming	Vermiculture/Worm Farming
Delayed harvest will usually result in higher operating costs due to dependence on pricey feedstock.	Delayed harvest provides better composting and enable more worm propagation.
Over feeding or extended feeding period induce lower profit margin.	Since feedstock is cheap, over feeding has no impact to the bottom line.

(Source : Sallehuddin Sa’ad, Jaringan Pertanian Kontrak Sdn. Bhd.)

ADVANTAGES OF VERMICULTURE PRACTICE

There are numerous advantages of vermiculture practice that can be reaped to provide a multi-pronged strategy in meeting the needs and requirements of agriculture, cosmetic and biotech industries, while at same time upgrading the economic status of the hardcore poor community. Listed below are some from our own reflection :

- a) Does not need a large operating area - Can be implemented, either outdoors or indoors;
- b) Flexible worm bin structure – bins can either be constructed from plastic, wood, fibre or concrete
- c) Requires very low initial investment from set-up, feedstock cost and operating cost;
- d) Wide range of organic matters can be used as raw material;
- e) One time purchase of worm stock;
- f) Multiple end products from singular activity, with own market value;
- g) Direct usage of the generated end products without need of further processing;
- h) Both fertilizers produced are of high quality and competitive compared to chemical fertilizers;

- i) Very efficient in managing solid organic waste while effectively reducing cost of fertilizer use, hence a better balance of trade;
- j) Effective in harmful pathogens destruction;
- k) Can be executed by all strata of life, does not depend on gender or academic;
- l) Provide closed loop cycle within farm and livestock operation;
- m) High with protein content suitable for livestock feed usage;
- n) Possible protein source replacement for human consumption;
- o) Rich with enzymes for bio-pharmaceutical applications;
- p) Rich with natural anti-biotics for medicinal usage;
- q) High earthworms multiplication rate of 10-15 times in a year;
- r) Long productive life span.

In India, analysis of farm data within the first 5 years of Vermiculture practice, had shown significant information that underscores its stated benefits. The table below illustrates this further :

Table 3. Benefit Analysis of Vermiculture Practice in India
 (Source : M.R.Morarka-GDC Rural Research Foundation
http://www.morarkango.com/biotechnology/app_benefits.php)

First Level Benefit	Second Level Benefit	Third Level Benefit
Better taste of food	Significantly more tillering, flowering and grain setting	Better germination.
Bigger size of farm produce	Lesser insect and pest attacks on crops	Better overall appearance of crops.
Additional price gain from the sale of farm produce	Lesser weed infestation	Improved soil texture
Lesser irrigation water requirement	- NA -	Less termite attack
Cultivation has been possible in saline-alkaline conditions	- NA -	- NA -

The primary benefit of vermiculture practice is the recycling of agricultural waste products which leads to the reduction of the amount of total waste. This will benefit the farmers by reducing operation costs while at the same time generate new income. Vermiculture practice will also reduce the amount of chemical fertilizers used. This will in turn lead to rehabilitation of the soil such as the reduction of soil erosion and water contamination, which are two of the negative effects of indiscriminate use of chemical fertilizers (Rechcigl, J.E.et. al., 1995). In fact, according to W.C. Tan (2002, 2008),

“The use of chemical fertilizers causes cementing effects on the soil, killing off the soil food web micro-organisms, releasing heat into the atmosphere together with greenhouse gases and water. Industrial scale agriculture happened at the same time as the worsening of global warming, and depletion of carbon content in the soil. In short, agricultural intensification using chemical fertilizers is perhaps the biggest contributor to global warming and climate change.”

Thus, again vermiculture practice can be the answer to this grave environmental problem. To restore nature and prevent global warming, the writers advocate that farmers abandon the indiscriminate use of chemical fertilizers and adopt vermiculture and organic farming.

WORM SPECIES AND CATEGORIES

Sadly to say, in Malaysia it is only within these last two years that our local researchers had initiated the classification of our local earthworm species, in particular searching for our own compost

worm. Until more taxonomic survey data are made public, we have to rely on imported supply of compost worm which tend to be rather costly (SOURCE : Jabatan Pertanian, Unit Perlindungan Tanaman & Kuarantin Tumbuhan). There are more than 4,400 named species of earthworms on this planet, and researchers have broken them into three categories, largely descriptive of their habits in the soil. These three categories of earthworms are known as endogeic, anecic and epigeic:

a) Endogeic.

Endogeic worms build complex lateral burrow systems through all layers of the upper mineral soil. These worms rarely come to the surface, instead spending their lives in these burrow systems where they feed on decayed organic matter and bits of mineral soil. They are the only category of worm which actually eat SOIL and not strictly the organic component. Endogeic worms tend to be medium sized and pale colored. Their primary role is creating burrow for aeration and water distribution. They can be found down to within 6 feet from surface, and are quite easily noted when digging graves and ground wells.

b) Anecic.

Anecic worms (like Nightcrawler or *Pheretima elongata*) build permanent, vertical burrows that extend from the soil surface down through the mineral soil layer. It is not unusual for these burrows to reach a depth of six feet or more. Their natural habitat is within 6 inches to 6 feet from the surface. These worm species coat their burrows with mucous which stabilizes the burrow so it does not collapse, and build little mounds (called middens) of stone and castings outside the burrow opening. Anecic worms are able to recognize their own burrows, even in an environment where there are hundreds of other burrows present, and return to these burrows each day.

The anecic species feed in decaying surface litter, so they come up to the soil surface regularly, leaving them exposed to predators. They developed a spoon shaped tail that bristles with little retractable hairs, called setae, with which to grip the burrow wall and avoid being easily pulled out. If you ever come across worms with this "cobra" shaped tail, you are likely seeing an anecic worm species. They also tend to be very large worms and have bellies with less pigmentation than their backs. These worms have a rather long life span, but they do not do well in high density culture and require the stable burrow environment in order to thrive. In the absence of this burrow, anecic worms will neither breed nor grow.

c) Epigeic

These are the worms that are used for vermicomposting. Hence, they are also collectively known as compost worms. The most popular globally is *Eisenia fetida*, also known as Red Worm due to its bright reddish colour. In nature epigeic worms live in the top soil and duff layer on the soil surface. These small surface dwellers, deeply pigmented worms have a poor burrowing ability, preferring instead an environment of loose organic litter or loose topsoil rich in organic matter. Epigeic species feed on organic surface debris and have adapted beautifully to the rapidly shifting, dynamic environment of the soil surface. Epigeic worms are used as composting worms because of several

reasons. Firstly, their ideal environment can be easily duplicated in a bin or bed, secondly, they are voracious processors of organic debris, thirdly, they do well in high density cultures, and finally because they are so very tolerant of a wide range of environmental conditions and fluctuations.

The epigeic worm species, *Eisenia fetida*, is found on nearly every land mass of this planet, with Hawaii being a notable exception. Regardless, there are typically multiple epigeic worm species in most regions of the world, and where *Eisenia fetida* is prolific, at least two other worm species are common, they are *Lumbricus rubellus* (Tiger Worm) and *Perionyx excavatus* (Blue Worm). Vermicomposting using *Perionyx excavatus* is gaining recognition locally, although it is not popular in temperate countries because this species cannot tolerate cool temperatures for any length of time.

In every region of the world there are worms adapted to the local soils. Although researchers may not always know which worms may be present in a particular area, as not every place has had a taxonomic survey done, it is fairly certain that every piece of earth does harbour a worm species that is adapted to converting surface debris to topsoil.

When a composting or vermicomposting system is in soil contact naturalized earthworms will be drawn to the system when and if it meets their environmental requirements. Local epigeic species will all live happily side by side, processing vast amounts of organic debris, and the one best adapted to the particular bin environment and local climate will be the species that ultimately dominates the system.

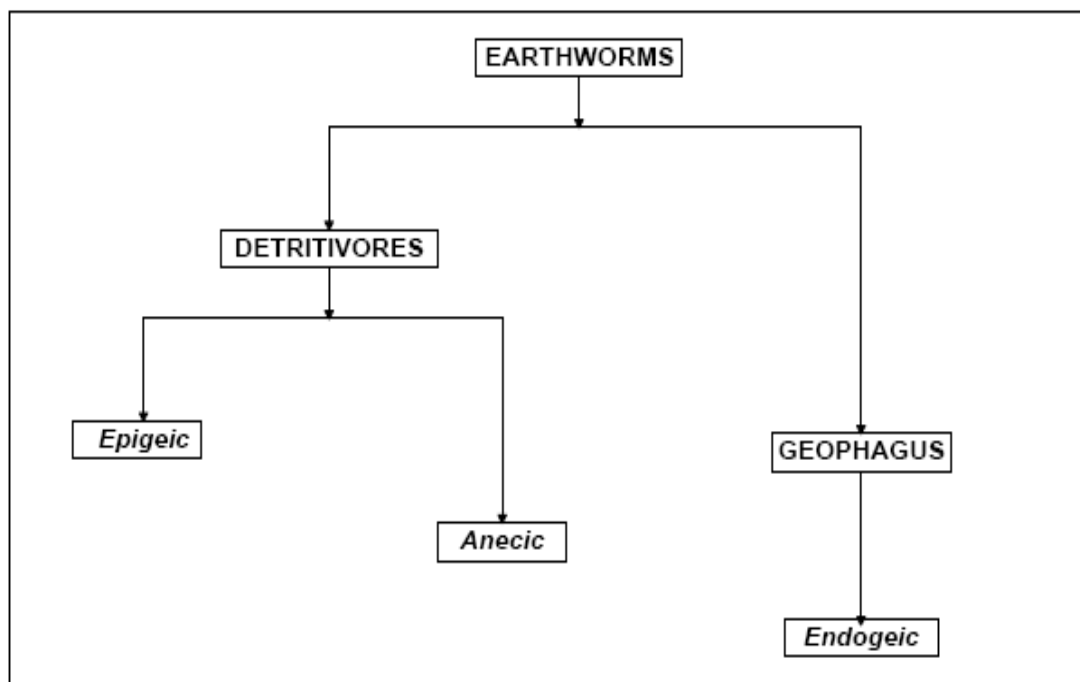


Figure 1: Categorization of Earthworms

(Source : Vermicomposting as an Eco-tool in Sustainable Solid Waste Management by Dr. C. Visvanathan, Dr. Ing. Josef Trankler, Dr. Kurian Joseph, Dr. R. Nagendran from The Asian Regional Research Programme on Environmental Technology (ARRPET) , Page 8. Adapted from Ismail, S.A : Vermicology “Biology of Earthworm”.

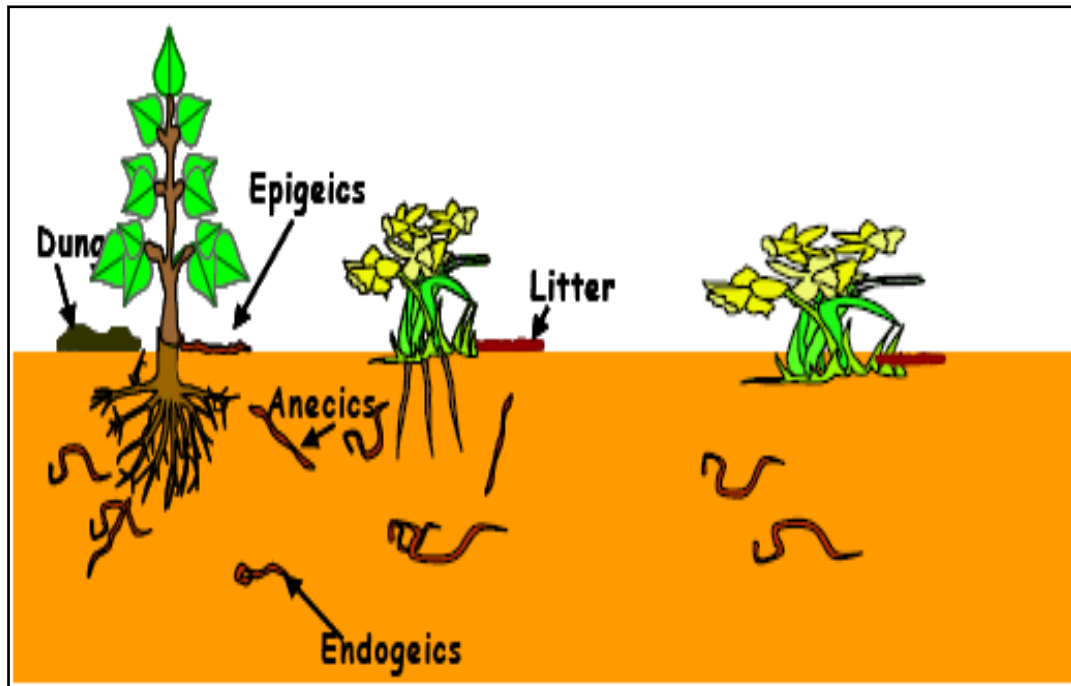


Figure 2. Illustration of Earthworm Habitat

(Source : Vermicomposting as an Eco-tool in Sustainable Solid Waste Management by Dr. C. Visvanathan, Dr. Ing. Josef Trankler, Dr. Kurian Joseph, Dr. R. Nagendran from The Asian Regional Research Programme on Environmental Technology (ARRPET) , Page 8.

VERMICAST SPECIFICATIONS

Analysis of the Vermicast yield several interesting facts that are hereby, listed below:

a) Physical.

Vermicast is a dark brown/black humus like coarse material, soft in feel and free from any foul smell, live weed seeds and other contaminations. Vermicast not only increases aeration and improves the drainage of heavy soils, it also provides excellent water retention properties as a mucus type substance coats each particle. Commercial vermicast should contain sufficient moisture (20-35%) at the time of packing.

b) Biological.

Total bacteria count of 2.5×10^6 comprising of Azotobacter, PGPR, PSB, Actinomycetes. Also contains plant hormones such as Gibberalline, Auxins and Cytokinine in sufficient quantities (Jackson, 2002).

c) **Chemical.**

Table 4. Chemical Specification of Vermicast

· pH	6.5-7.5
· Organic Carbon	20.43 – 30.31 %
· Nitrogen	1.80 – 2.05 %
· Phosphorus	1.32 – 1.93 %
· Potassium	1.28 – 1.50 %
· Carbon : Nitrogen	14-15 : 1 %
· Calcium	3.0 – 4.5 %
· Magnesium	0.4 – 0.7 %
· Sodium	0.02 – 0.30 %
· Sulphur	Traces up to 0.40 %
· Iron	0.3 – 0.7 %
· Zinc	0.028 – 0.036 %
· Manganese	Traces up to 0.40 %
· Copper	0.0027 – 0.0123 %
· Boron	0.0034 – 0.0075 %
· Aluminium	Traces up to 0.071 %
· Cobalt, Molybdenum	Present in available form

(Source : Best Practice Guideline to Managing On-site Vermiculture Technologies by Dr. Mark Jackson, Amanda Ferris and Angus Campbell from Recycled Organics Unit, The University of New South Wales, Australia, 2002).

EFFECT OF VERMICAST VERSUS CHEMICAL FERTILIZER IN SOIL

Listed below are two additional tables to show comparison between Vermicast and Chemical Fertilizer illustrating the effects of and also soil enrichment & soil quality improvement, that can be gained from the practice of Vermiculture in Agriculture :

Table 5. Effect of Vermicast Versus Chemical Fertilizer in Soil
(Source : Morarka Foundation India.)

Criteria for Comparison	Chemical Fertilizers	Vermicast & Vermicompost
Macro nutrient contents	Mostly contains only one (N in urea) or at the most 3 as in NPK compound fertilizer or 2 as N and P in DAP fertilizer	Contains all i.e. Nitrogen (N), Phosphorus (P) & Potassium (K) in sufficient quantities. Though, the proportion is relatively low compared to the chemical fertilizer
Secondary nutrient contents	Not available	Calcium (Ca), Magnesium (Mg) & Sulphur (S) is available in required quantities
Micro nutrient contents	Not available	Zinc (Zn), Boron (B), Manganese (Mn), Iron (Fe), Copper (Cu), Molybdenum (Mo) and Chlorine (Cl) also present
pH Balancing	Disturb soil pH creating saline and alkaline conditions	Helps in the control of soil pH and checks the salinity and alkalinity in soil
Electrical Conductivity (EC) Correction	Creates imbalance in soil EC affecting nutrients assimilation	Helps in balancing the EC to improve plant nutrient adsorption
Organic Carbon	Not available	Very high organic carbon and humus content improves soil characteristics
Moisture Retention	Reduces moisture retention capacity of the soil	Increases moisture retention capacity of the soil
Soil Texture	Damages soil texture thus reducing aeration	Improves soil texture for better aeration
Beneficial Bacteria & fungi	Reduces biological activities and thus fertility is impaired	Promotes rich biological life thus improves the soil fertility and productivity on a sustainable basis
Plant Growth Hormones	Not available	Sufficient quantity helps in better growth and production

Table 6. Nutrient Enrichment from the usage of Vermicast & Vermicompost in Soil
(Source : Morarka Foundation India.)

Nutrient Parameters	Improvement Achieved
Organic Carbon	Improved up to 35%
Nitrogen	Improved up to 2.5%
Phosphorus	Improved up to 3.5%
Potassium	Improved up to 2.25%
Carbon : Nitrogen	Maintained same i.e. 14-15 : 1
Calcium	Maintained same i.e. 3.0 – 4.5%
Magnesium	Maintained same i.e. 0.4 – 0.7%
Sodium	Maintained same i.e. 0.02 – 0.30%
Sulphur	Improved upto 0.5%%
Iron:p>	Maintained same i.e. 0.3 – 0.7%
Zinc:p>	Improved upto 0.05%
Manganese	Maintained same i.e. up to 0.40%
Copper	Maintained same i.e. up to 0.0123%
Boron	Maintained same i.e. up to 0.0075%
Aluminium	Maintained same i.e. up to 0.071%
Cobalt, Molybdenum	Maintained same i.e. available form

PRODUCTS OF VERMICULTURE ACTIVITY

Besides providing a closed loop cycle in organic waste management, there are several other end products of the worm farm. These end products, listed below, have different market value and direct usage, thus could be used to motivate the target group, especially the hardcore poor, towards sustainable and profitable agriculture ventures.

a) Compost Worm.

The species of compost worms used in Malaysia are *Eisenia fetida* (Red Worm), *Lumbricus rubellus* (Tiger Worm), *Lumbricus terrestris* (Night Crawler), *Perionyx excavatus* (Blue Worm) and *Pheretima elongata*. The retail market price of these compost worms ranges from RM450 to RM1,500 per kilogramme depending on location, initial set-up cost, scale of operation and technique of cultivation. The quantity of worms per kilogramme ranges from 3,000 to 8,000, consisting a mixture of young and adult worms, and sometimes even baby worms which are normally omitted.

Nowadays, with the help of print and electronic media exposure, the level of public awareness regarding vermiculture practice and its benefits has increased significantly. This can be seen from the number of advertisements on worm farming courses offered, sales of plastic containers for worm bin set-up, the number of buildings converted into worm farm and the number of Authorised Permit (AP) holders, official import clearance issued by Agriculture Department, for importing the compost worms. Despite this increase in awareness, there is still a lot of room for the expansion of vermiculture practice in Malaysia.

b) Vermicompost.

Compost worms produce a high-quality compost, known as vermicompost. It is the nature of the compost worms to excrete the by-products of their digestive processes on the surface of the soil. This excretion, when collected is known as Vermicast. These castings can be collected separately and sold to the market or left in the worm bin to be mixed with unprocessed decomposed media collectively

known as vermicompost. Vermicompost is a combination of this worm excretion, known as vermicast, unprocessed decomposed organic media, worm eggs and active microorganisms. It is both a good organic fertilizer and soil conditioner, that induces better plant growth and stronger, healthier plants. The microorganisms contained in vermicompost can help plants to more easily absorb nutrients (minerals) from the soil. Vermicompost contains humus with high levels of nutrients such as nitrogen, potassium, calcium, and magnesium. This is in stark contrast to other commercial compost, that is produced by the decomposition of organic matter or agricultural wastes.

c) Vermitea.

In agriculture, besides powdered chemical fertilizer, such as Urea, liquid fertilizer, known as foliar feed is a favourite among the farmers. This is especially true among farmers practising fertigation techniques, using special piping technology to distribute both water and fertilizer to the plants, directly and discretely, on a regular and scheduled basis. For this purpose, there is available a liquid organic fertilizer based mostly from imported components or raw material, which is comparatively more pricey compared to self generated Vermitea, with some of them reaching up to RM360 for a 4 Liter container (based on Chitin/prawn shells).

Preliminary studies throughout the United States and abroad have shown that compost teas may be an effective form of supplying nutrients and preventing or suppressing disease in crop plants (Riggle, 1996; Ingham, 1999). Since foliar sprays of compost teas contain plant nutrients and beneficial microbes, they combine some of the best features of foliar feeding (Alexander 1986) and microbial bio-control (Cook and Baker 1983). When applied to foliage, beneficial microbes in the compost extract can compete with pathogens on the leaf surface for available space and nutrients. Some of the applied microbes are antagonists such as *Pseudomonas* sp. or *Trichoderma* sp. that directly attack leaf pathogens (Cook and Baker 1983; Ingham 2001)

Therefore, Vermiculture activity yields vast opportunity for the farmers to harness the worm power to produce high quality fertilizer on-site. Through daily sprays, the resulting liquid from the collected leaches could be utilised as liquid foliar fertilizer. Besides this technique, Vermitea could also be produced by a brewing process – similar to the methods a home gardener might use to create compost or manure tea – into an organic, nutrient-rich liquid fertilizer that is also high in microbial life.

Sadly to say, the acceptance among the local agriculture fraternity is lukewarm. Local farmers duly brush aside this liquid foliar fertilizer for fertigation use with the misconception it would induce contamination, due to the livestock manure used in the worm feedstock. Actually, there are many research papers worldwide that highlight the power of compost worms in suppressing pathogens and harmful bacteria, such as *E. coli* and *Salmonella* originating from the worm feedstock for example “The Effectiveness of Vermiculture in Human Pathogen Reduction for USEPA Biosolids Stabilization” as outlined by Bruce R. Eastman, Philip N. Kane, Clive A. Edwards, Linda Trytek, Bintoro Gunadi, Andrea L. Stermer and Jacquelyn R. Mobley in *Compost Science & Utilization*, (2001), Vol. 9, No. 1, 38-49 and “The Potential of Nutrient Reuse from a Source-Separated Domestic Wastewater System in

Indonesia – Case study: Ecological Sanitation Pilot Plant in Surabaya” illustrated by A.F. Malisie, R. Otterpohl & M. Prihandrijanti from the Institute of Wastewater Management and Water Protection, Hamburg University of Technology. In fact, vermicompost, and vermitea too, also contain several microorganisms, such as *Trichoderma* sp. that can protect the plants from certain diseases (Edwards et. Al., 2002). Furthermore, when combined with certain plants extracts, such as Neem and Chilli, Vermitea can be utilised effectively as part of the integrated liquid foliar fertilizer in Integrated Pest Management Control (IPM). This concept has been widely used by the small scale farmers in India since 1990 (Yasmeen, 2001; Chaoui, H. et. al., 2002; Spiagi, 2002).

VERMICAST INNOVATIVE USES

In addition to vermicast application in agriculture (as an alternative to chemical fertilizer) many other innovative uses have also been reported worldwide. Some of the significant applications noted are as follows:

a) Maintenance of Landscapes, Gardens and Nurseries.

- It reduces water consumption;
- It improves the quality and appearance of plants;
- It reduces the bulk of the plant;
- It eliminates the need for weeding operations;
- It increases the shelf life of flowers;
- It reduces potential termite problem;
- It improves germination of seeds in nurseries.

b) Soil and Water Conservation.

- It helps in stabilization of earth structures through better vegetative growth;
- It promotes grass production in degraded open grass lands;
- It enables reclamation of waste lands for plantation & cultivation.

c) Forest Development.

- Helps in early stabilization of transplants;
- Enables early regeneration of partly degraded forest areas;
- Increases overall vegetation in hilly regions.

d) Waste Management

- Helps recycle segregated solid wastes from diverse sources.

e) Ecological Renewal.

- Helps in plantation of trees in extremely adverse conditions.

(Source : Morarka Foundation India.)

With such vast and diverse usage of Vermicast, Vermicompost and Vermitea applications and potential income generation, it is not surprising that creative individuals or organisations, can find new innovative ways to harness the worm power.

For example, based on most municipality analysis, the bulk of solid organic waste are food leftovers from restaurants, food court, canteens and hotels. This type of waste begins the process of protein break-down even before reaching the dumpsite. During such process, it would attract harmful bacteria and flies. Even while still in the dustbin, the stench can be overpowering. Upon reaching the dumpsite, it would become worse and eventually disperse stench and harmful leaches to the environment. On top of that, organic waste on rubbish dumps releases carbon dioxide and methane, both greenhouse gases that trap heat in the atmosphere, adding to global warming.

On August 22, 2006 The Star reported how a special type of earthworms “guzzle tonnes of scrap food left over from the tables of the rich and famous at South Africa’s plush Mount Nelson Hotel. The worms were kept out of sight of patrons enjoying the opulent surroundings and gourmet treats, but they bask in pampered luxury in a backroom a short slither from the presidential suite. Up to 15cm long, the worms, commonly known as red wrigglers or tiger worms, are housed in specially designed crates and fed vegetable leftovers from the kitchen and pricey restaurant table leftover. Their fluid excrement or ‘worm tea’, is carefully harvested and used as a prized fertilizer for the hotel’s rolling gardens, where peacocks parade on manicured lawns.” This effort by the Mount Nelson Hotel is a clear example of how, by undertaking vermiculture, each of us could quietly share the responsibility of saving the planet.

STATISTICS AND SCENARIO OF MALAYSIAN HARDCORE POOR

After our nation gained its independence in 1957, the initial statistic stated that at least 60 % of the total population were hardcore poor. Since then, the figure had progressively declined to 5.7 % by the year 2007 (Kementerian Penerangan Malaysia). Thankfully, the ratio of both hardcore poor and relatively poor among the small estate holders also showed a downward trend due to the increase of both rubber and oil palm prices since 2002, from 23.9 % (2002) to only 0.84 % (2006). While the ratio of relative poor were 37.4 % (2002) to 9.14 % (2006).

This decline was largely due to the government’s efforts of adjusting the minimum take home income every year, that is known as the Poverty Line Income or Paras Garis Kemiskinan (PGK), that provides the separation line between the hardcore poor and the relative poor community. Currently, the figure used for hardcore poor reference is below RM440 household income per month. Of course, this constant adjustment of the PGK by the government does not reflect the actual poverty scenario of the people.

Based on statistic in 1970 at least 49.3 % from all households in peninsula Malaysia had income below the hardcore line. From the total of all poor families, 86% were in rural areas and only 14% in urban areas. The breakdown of hardcore poor statistic by race yielded Malay (64.8 %), Chinese (26.0 %), Indian (39.2 %) and other races (44.8 %). In the year 1976, our nation’s hardcore poor rate nationwide stood at 42%, in which 51 % were in the rural areas, while 19 % were in the urban areas.

By 1990, the ratio of hardcore poor had declined to 17 %. The number of poor households were 619,400 households and by the end of the Sixth Malaysia Plan or Rancangan Malaysia Ke-6 (RMK6)

in 1995, the hardcore poor had declined to 8.9 %, with the total poor stood at 370,000 households nationwide. Hence, it can be concluded that the quality of life among the population and the nation's productivity, had steadfastly increased parallel with the development and prosperity of our nation.

In Malaysia, the lead agency that is spearheading the poverty removal programme is the Ministry of Rural and Regional Development or Kementerian Kemajuan Luar Bandar dan Wilayah (KKLWB), with the target of total elimination of hardcore poor by the year 2010. Currently, nationwide 48,134 hardcore poor persons had been listed. Between June and December 2006, at least 3,830 persons had successfully been eliminated from the hardcore poor cluster. By December 2006 to 31 March 2007 recently, the total hardcore poor had been reduced to 44,304 persons and the trend is on the downturn, albeit slowly.

KKLWB had targeted zero hardcore position by creating and offering various programmes to help increase the income of household poor. Through the Program Latihan, Kemahiran dan Kerjaya (PLKK), at least 4,000 participants had participated in these programmes and they had performed positively. Through the RMK-9, the government had allocated RM603 million to help upgrade the income level of the hardcore poor. In Kelantan alone, this year RM8.9 Million had been disbursed through such programmes.

Among the key programmes are academic education and technical skill training. Education had significantly improved the poor in various areas where the target group gained access to government schools; as the target for hardcore poor removal is not only centred upon the head of the family, but also all members of the household. By educating and motivating the household members, such as their school going children, we open new dimensions in their thinking, hence induced them to be independent economically without relying on the government's monetary help.

Based on the new poverty line income or PGK, basic poverty was rated at 5.7 %, while the hardcore poor at 1.2 % in 2004. The government had set the target of reducing the overall poverty to 2.8 % and completely eliminate hardcore poverty by the year 2010. The focus of such programmes were self development, access to education, skill set training, entrepreneurship, positive values, developing self confidence and personal motivation.

Through education and skill training, we can lead our population out of the poverty trap, which is a vicious cycle among other Third World countries. As the proof of the effectiveness of education, there are numerous cases whereby children of poor families of farmers, rubber tappers, small estate holders and even traditional fishermen, grew up as doctors, lawyers, engineers, entrepreneurs and millionaires. They are able to upgrade their own social and economic status, and indirectly improved their parents' status quo in a short time.

In Malaysia, the statistics had shown that till now Malays represent the bulk of the population at 60 %. However, they only hold 20 % of the economy. Though these statistics noted an overall

improvement compared to the 1970 scenario, where the Malays hold a mere 5 % of the economy. Yet, compared to the Chinese, who holds about 60% of the economy, the Malays are still far behind.

Comparatively the state level poverty statistics in 1997 declared that poverty among the population was still high with Kelantan (19.2 %), Terengganu (17.3 %), Sabah (16.5 %), Kedah (11.5 %) and Perlis (10.7 %).

Since, the Vermiculture practice can generate various marketable end products, with low production costs, the hardcore poor can be harnessed as the production unit that can produce such finished goods. Therefore, instead of giving them monthly and yearly grants or subsidies, we could harness them as the production unit with paid monthly allowances.

Hopefully by 2010, if with concerted efforts and options from various relevant quarters, the word poverty and hardcore poor would merely be a part of the dictionary entry. Or it could be delegated as history reference to be stored discretely in the museum for the next generation to stumble upon. In order to achieve this, we need a secret formula urgently, hence, Vermiculture is glaringly spotlighted each passing day.

VERMICULTURE : A TOOL FOR POVERTY REMOVAL

With such abundant references and observation listed in the last few pages, we had come to the conclusion that Vermiculture practice could and should be used, as a pivotal tool towards total poverty removal strategy. Continuously increasing oil prices, had duly dented our nation's coffers limiting the government's ability to provide unlimited subsidy and incentive to the hardcore poor. In the background a new awareness had also come to the limelight, that is the problem of food shortage, which will surely affect the population at large. All of sudden, food supply becomes part of the nation's security agenda.

To increase food supply means to increase agricultural activities. Without the widespread acceptance of Vermiculture practice, this will mean more farm waste, more chemical fertilizers disturbing the soil structure and 'sustaining' global warming and climate disturbances, while at same time tipping the balance of trade negatively further with the more expensive, due to rising oil prices and transportation costs, imported chemical fertilizer. Furthermore, the farm waste from plantation and livestock farms would create more environmental problem through possible open burning, with the lame excuse of converting the waste into fertilizer. In addition, livestock farmers will also have to deal with continuously accumulating livestock waste that will pollute the surrounding environment, which consequently would trigger the anger from the public and possible legal action from both the PBT and Department of Environment or Jabatan Alam Sekitar.

The time had come for us to evaluate and reflect the impact of our own action. Thus, why not we begin our action by embracing the Vermiculture practice as Allah had ordained us by stating in Al-Quran through various verses, for us to make good when dwelling on Earth and benefit from what nature offers, through plants and animals. For the plants to grow well they need fertilizers, so why not

produce the much needed fertilizer safely and organically using the compost worm. Better still why not, provide the initial capital and skill set training for the hardcore poor, so that they can become the production unit to produce the organic fertilizer through contract farming so that they do not have to worry about technology requirement and market.

Hence, they could gain work opportunity that induce income generation, without waiting for government to disburse the monthly payout through the Welfare Department or Jabatan Kebajikan Masyarakat or other agencies. Give them their independence and self confidence. Only in this manner, can the Federal government reduce the annual allocation for the hardcore poor. The income gained through this manner would motivate the members of the families and surrounding people to join hands in grabbing the opportunity. By providing business opportunity to the hardcore poor to manage the worm farms to produce organic fertilizers, we are not only helping them to be independent income earners, but we are also indirectly helping livestock farmers to manage their farm waste and at the same time reduce the nation's balance of trade by not relying on imported fertilizers; and not to forget the impact of this effort upon the problem of global warming and climate disturbances.

VERMICULTURE : PRODUCER OF PROTEIN SOURCE

In both the aquaculture and livestock farming, protein source from pellet feedstock is crucial for both fish and ruminant livestock weight gain and growth. Serving high protein pellets, beginning with starter, growth and ending with finisher pellets, would ensure higher weight count, which would eventually ensure higher income earning. Yet, the impact from rising oil prices and the raw materials used in producing the pellets, namely corn grain, fish meal and soy bean, had pushed the price of pellets higher each passing month. This of course pushes the farm operating costs higher, consequently making the farm produce more expensive.

Recently, MARDI through its Pusat Strategik Makanan Ternakan, had conducted an evaluation on the prospect of worm biomass to replace the imported fish meal. The imported high quality fish meal, mostly from Argentina, only has 25% protein count per weight. While, live worm biomass yields up to 75% per weight. Nevertheless, at RM2,600 per metric tonne, the fish meal is hard to challenge since the stock for the worm biomass has a market value of up to RM500 per kg. Here then, lies the opportunity to be reaped specifically by the hardcore poor community. Exemplifying an actual case study of how the socialist government of Cuba successfully harnessed the power of vermiculture practice to ensure sustainability of their sugar cane plantation, while avoiding negative impacts of the economic blockade initiated by the USA (Chollet et. al., 2006), we introduced the concept of using contract farming as the leverage towards total poverty removal in their respective areas, to KESEDAR, KKLBW, LTN and several YB DUNs and YB Parliaments.

The hardcore poor community can be deployed as the producers of the needed worm biomass through contract farming, a farming concept that does not need the participants to bear the high costs of production themselves. In fact, they can be paid a monthly work allowance throughout the duration of the contract, before they can be independent and the whole operation can be handed over to them

completely. Of course, besides producing organic fertilizers, the worm biomass can be harvested and sold at a much lower price to compete with the imported fish meal.

Since the socio-economic achievement in each respective DUN and Parliament can play a crucial factor on the survival of each politician, and vermiculture can be used as leverage to bring jobs and income generation to the community on either small or medium scale investments, such a project suggested above may be able to provide good political mileage to the concerned politician who has the 'calibre' to initiate it. For the path to success, especially the success of a novel idea or a new enterprise, is full of obstacles demanding great strength and calibre.

CONCLUSION

Earthworms are an incredibly varied and adaptable group of animals that are so common in our world that they often go unnoticed and unappreciated. We are far more dependent on them than we realize, and are fortunate that they are so eager and able to rise to the challenges we pose them. May this resolve us to comprehend the beauty of Allah's creation of the compost worms, by becoming the missing link in macro agriculture, thus avoiding farm waste problem while producing cheap organic fertilizer.

Despite of our country's 50 year independence, our mindset is still yet to be independent if we keep on with the perception that what the developed countries have to offer in the forms of chemical fertilizers, poisonous pesticides and costly incinerators are the best among the best to solve our own local problems, in ensuring our productivity so that we can to be labelled as developed. To be truly independent, in mind and spirit we have to open our minds to how nature offers abundant ways to manage our self induced waste without relying on solutions, that are not only costly but also tends to hurt our one and only habitat, the planet earth.

The time has come for us to understand and embrace Vermiculture practice which provides the missing links for us to address our pressing problems through its multiple applications concept. Since, as illustrated, besides producing several types of organic fertilizers that our country needs as part of the national food security agenda and regional development as seen through ECER, NCER, WPI and others, Vermiculture can also be utilised to provide the much needed protein source for our livestock industry. It can also provide the much needed biomass to sustain the Halal cosmetic industry and also the biotech industry. All these would generate a lot of entrepreneurship and job creation and opportunities that could be taken up by the unemployed graduates, and more importantly the hardcore poor. By becoming a production unit, which is sure to bring better income to the household, the hardcore poor can slowly and surely escape the shackles of poverty. Only then, our balance of trade would progressively shift to the positive, without annual funding for monthly allowance for the poor nor for further poverty removal programmes .

Alhamdulillah. Wassalam.

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SELECTION FACTORS OF ISLAMIC BANKING BETWEEN BANK ISLAM MALAYSIA BERHAD AND CONVENTIONAL BANKS IN KOTA BHARU: WHAT DO THEIR CUSTOMERS SAY?

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ABSTRACT

Islamic banks have been operating for about four decades alongside conventional banks in Malaysia. Similar to conventional banks, Islamic banks mobilize deposits and produce loans, however, their form of operations, which is based on Islamic Law (Shari'ah), is different from those of conventional banks. Islamic banking differs from conventional banking in several ways, namely, the prohibition of transactions based on interest rates and the requirement that the bank's operations be carried out according to certain procedures and through the use of certain financial instruments. Conventional banking, on the other hand, offers interest based banking. This study attempted to investigate the selection factors of Islamic banking customers and depositors based on data collected from various groups of public servants who are customers and depositors of a full-fledged Islamic bank in Kota Bharu, namely, Bank Islam Malaysia Berhad (BIMB) and conventional banks offering Islamic windows. Using a sample of 208 respondents, this paper explored the main selection factors of the depositors and customers of BIMB and conventional banks. Based on the main interpretation of the varimax rotated matrix first factors, the results from the customers and depositors of BIMB delineated a cluster of relationship for 'product price' (X16), 'Service Hour' (X10), 'Reputation' (X8), 'Profit Sharing' (X6), 'Service Counter' (X5), 'Confidently' (X4), 'Other Branches' (X7), 'Advertisements and marketing' (X18), 'Diversity' (X18), and 'Services Charge' (X9). Whereas, for the conventional banks offering Islamic windows the factors are 'Internal Interior' (X17), 'Recommended by Friend and Relatives' (X19), 'Parking' (X11), 'Counseling' (X12), 'Advertisement and Promotion' (X18), 'Confidently' (X4), 'Services Charge' (X9), 'Location' (X13), 'Customers Services and Receptionists' (X15).

Keywords: *Islamic banking, selection factors, public servants, BIMB, conventional banks*

INTRODUCTION

The Islamic banking system in Malaysia continues to face increasingly stiff challenges from the conventional banking system. This is because the conventional banking system has developed more competitive and innovative products for short-term and long-term financing facilities. On the other hand, the Islamic banking system is still within the secondary stage of its development. In this research therefore the author will examine the Islamic banking system in Malaysia and will also attempt to assess the developments which are confronting the Islamic financial system.

Islamic banking has been emerging as a new market on the international financial scene since the 1970s. The emergence of Islamic banking was driven by the revival of Islam and the increasing number of Muslims who wanted to lead their lives in accordance with the Shari'ah, including in the areas of banking and finance. The successful setting-up of the first Islamic bank, the Dubai Islamic Bank, and the establishment of the Islamic Development Bank in 1975 paved the way for the establishment of Islamic financial institutions throughout the world.

Three countries, namely Iran, Sudan and Pakistan, have fully transformed their banking systems into Islamic banking systems (BNM, 1999; p. 243). In addition, Islamic finance has become a major global industry, with over 300 institutions involved in both Muslim countries and international financial markets. Assets managed in accordance with Islamic law are worth over US\$350 billion, including financial facilities made available by banks and investments by mutual funds that have been screened for Shari'ah compliance. Just three decades ago even the strongest advocates of Islamic finance could not have envisaged that such progress would have been possible in the context of an international financial system that was dominated by western interest-based methods of financing (Rodney Wilson, 2002; p. 29).

In Malaysia, a separate banking legislation, the Islamic Banking Act 1983 (IBA), was enacted to allow Islamic banking to exist side by side with conventional banking. In addition, the Government Investment Act 1983 was enacted at the same time in order to allow the government to issue Government Investment Issues (GII) based on Islamic principles. The introduction of GII enables the Islamic banks to meet their liquidity requirements, as well as acting as an instrument to absorb idle funds in the short run.

Bank Islam Malaysia Berhad (BIMB) was established in July 1983 as Malaysia's first Islamic bank licensed under the IBA. As with other licensed banks, Bank Negara was vested with powers under the IBA to regulate and supervise the Islamic bank. BIMB commenced operations on 1 July 1983 with a paid-up capital of RM80 million and a branch in Kuala Lumpur. As provided in the IBA, BIMB carries out banking business similar to that of other commercial banks, but along the principles of Shari'ah.

The bank provides deposit-taking products such as demand deposits (current deposits) and savings deposits (time deposits) under the concept of Al-Wadiah (guaranteed custody) and investment deposits under the concept of Al-Mudharabah (profit-sharing). The bank grants financing facilities such as working capital financing under Al-Murabahah (cost-plus), house financing under Bai' Bithaman Ajil (deferred payment sale), leasing under Al-Ijarah (leasing) and project financing under Al-Musharakah (profit and loss sharing). The government decided to give BIMB a lead period of 10 years before the establishment of another Islamic bank. This was to enable the bank to focus fully on the development of Islamic banking. It also allowed BIMB to create as many products as possible to provide Malaysians, particularly Muslims, with adequate Islamic banking products and services (BNM, 1999; p. 244).

On the prudential side, BIMB has to observe regulatory rules similar to those applied to conventional banks. For instance, the bank has to observe a minimum risk-weighted capital ratio of 8 per cent. The bank is also required to maintain a statutory reserve account with Bank Negara, and the prescribed statutory reserve ratio as at end-June 1999 was 4 per cent of its total eligible liabilities. The only difference is in the liquidity requirement, whereby the Islamic bank observes a two-tier liquid asset ratio. The first liquid asset ratio is 10 per cent of its eligible liabilities excluding investment

account liabilities, and the second liquid asset ratio is set at 5 per cent of its investment account liabilities. As at end-June 1999, the bank complied with all the three basic regulatory requirements.

The bank was listed on the Main Board of the Kuala Lumpur Stock Exchange on 17 January 1992. In 1997, BIMB implemented a restructuring arrangement to increase its paid-up capital to RM500 million and shareholders' funds to RM970 million. By 1999, the assets of BIMB stood at RM7.1 billion while deposits and financing outstanding amounted to RM5.7 billion and RM3.8 billion respectively. It has 80 branches throughout the country and 1,670 staff manning the bank. After 15 years in existence, BIMB has proved that Islamic banking is viable and has demonstrated its ability and capability to operate in parallel with conventional banks within the banking system.

CREATING AN ISLAMIC BANKING SYSTEM

It has been a long-term objective of Bank Negara to develop a comprehensive and vibrant Islamic banking system operating side by side with the conventional banking system. To achieve this objective, Bank Negara has, over the last five years, introduced various measures to translate this objective into workable policies. Although Malaysia had already established an Islamic bank in 1983, this bank was not able to serve the needs of the entire population, especially since the operations of the Islamic bank were constrained by the limited numbers of branches and resources. Furthermore, a single Islamic bank does not constitute a banking system.

An Islamic banking system requires a large number of dynamic and pro-active players, a wide range of products and innovative instruments, and a vibrant Islamic money market. In addition to the above requirements, an Islamic banking system must also reflect the socio-economic values of Islam. In other words, it must be Islamic both in form and in substance. Malaysia has therefore developed its own model, which is described below:

The Malaysian model of Islamic banking system

Malaysia has developed a unique approach to Islamic banking compared with other Islamic countries in the world. So far it is the only country to implement a dual banking system, that is, a fully-fledged Islamic banking system operating on a parallel basis with a fully-fledged conventional banking system. In addition, not only do the two systems work on a parallel basis, they also utilize essentially the same banking infrastructure and administration. This has significant implications in terms of cost and speed in implementing the Islamic banking system in Malaysia. The following paragraphs provide a comparison between the Malaysian dual banking system and other systems.

The Malaysian "dual banking system" model vs. the conventional system

Muslims in countries that have only a conventional system do not have the opportunity to benefit from an interest-free banking system without being involved in the interest-based system. The only choice they have is therefore between using the facilities of the interest-based banking system or avoiding using the domestic banking facilities altogether.

The Malaysian “dual banking system” model vs. the single Islamic banking system

Compared with the single system of Islamic banking, the dual banking system has at least two basic advantages, which are as follows:

(i) The range of Islamic banking products in a dual banking system tends to be wider than in a single Islamic system. In a dual banking system the Islamic banks have to provide a similar range of services to those provided by the conventional banks. In addition, the Islamic banks cannot afford to be complacent, since they operate in a competitive and dynamic economic environment in Malaysia. By contrast, in the single Islamic system model, the financial institutions would not have a similar incentive to expand the range of Islamic banking products, as the possibility of customers shifting away from the conventional system does not arise.

(ii) The Islamic banking products in the dual banking system can also be expected to be more advanced and sophisticated than those in the single Islamic banking system. In a dual banking system, innovations will quickly find their way into the banking system through innovation in the design of new products. This is a result of competition and financial engineering in the market.

Interest-free banking scheme/Islamic banking scheme

In order to realize the objective of setting up an Islamic banking system alongside the conventional system, Bank Negara gradually implemented measures to provide the necessary infrastructure by optimizing available resources. The first step was to disseminate Islamic banking on a nationwide basis with as many players as possible and within the shortest time period possible. This was achieved through the introduction of the Skim Perbankan Tanpa Faedah (SPTF) (Interest-free Banking Scheme) in March 1993. The scheme allowed conventional banking institutions to offer Islamic products and services using their existing infrastructure, including staff and branches.

The scheme was launched on 4 March 1993 on a pilot basis involving three banks. Following the successful implementation of the pilot run, Bank Negara opened the scheme to commercial banks, finance companies and merchant banks in July 1993, subject to specific guidelines issued by Bank Negara. Although the participation of the banking institution is voluntary, it has to observe the requirements of the scheme, such as;

- i. To establish an Islamic Banking Unit (IBU) to be headed by a senior Muslim banker,
- ii. To create an Islamic Banking Fund (IBF) with a minimum allocation of RM1 million,
- iii. To open separate current/clearing accounts for Islamic banking operations with Bank Negara,
- iv. To register as Indirect Members under the wholesale payments system, and
- v. To observe a separate cheque clearing system for Islamic banking.

The bank is also required to maintain a separate general ledger for its Islamic banking operations. These requirements will ensure that the bank does not commingle the funds freely without proper internal controls. The bank is also encouraged to appoint at least one Shari'ah consultant to advise on the day-to-day operations of its Islamic banking division. The numbers of financial institutions, numbers of branches/Islamic Banking Scheme (IBS) counters and financing deposit ratio (%) as at the end of 1998 and 2003, are shown in Table 1.

In 1998, as part of the overall review of Islamic banking, the usage of the term SPTF was reviewed and it was found that the term did not give the right impression with regard to the Islamic banking operations undertaken by the banks. Thus, Bank Negara replaced the SPTF with the Islamic Banking Scheme (IBS), beginning 1 December 1998. Bank Negara also observed that the Islamic banking operations of the SPI were regarded as low hierarchy business, being manned by middle-level management, while the IBU was allowed limited functions to perform its duties and responsibilities effectively.

Table 1 Numbers of financial institutions, numbers of branches and financing deposit ratio (%) as at end of 1998-2003

Numbers of financial institutions	1998	1999	2000	2001	2002	2003
Islamic banks	1	2	2	2	2	2
Commercial banks	25	23	35	29	26	25
Finance companies	18	16	22	12	12	11
Merchant banks	5	5	5	10	10	10

Numbers of branches/IBS counters	1998	1999	2000	2001	2002	2003
Islamic banks	80	120	123	127	129	133
Commercial banks	1560	1373	1538	1462	1436	1340
Finance companies	826	738	915	872	835	721
Merchant banks	7	7	15	12	12	13

Financing deposit ratio (%)	1998	1999	2000	2001	2002	2003
Islamic banks	90.3	51.3	57.5	61.8	65.4	67.2
Commercial banks	52.3	45.9	49.3	52.1	54.8	56.2
Finance companies	78.7	98.8	89.5	76.7	79.3	81.4
Merchant banks	69.4	193.9	154.3	128.6	135.9	125.1

Sources: Compiled by the author using data from

www.bnm.gov.my/fin_sys/islamic/key_data.htm/, 2000, 2004

Compiled by the author from

www.bnm.gov.my/index.php?ch=109&pg=294&pth=6&yr=2004, Monthly Statistical Bulletin, Bank Negara Malaysia.

As part of the ongoing efforts to promote Islamic banking further, the existing organization structure, scope and responsibilities of the IBU were reviewed and enhanced by introducing a new framework as follows:

(a) Effective from 2 January 1999, the IBU was upgraded to an Islamic Banking Division (IBD). The IBD would be the one-stop centre responsible for all aspects of Islamic banking operations, such as retail banking, commercial banking, corporate banking, trade/international banking, treasury operations, corporate planning and branch operations. This included product development, marketing, processing, and approving limits, branches supervision and credit control.

b) The IBD was also required to prepare a strategic plan to chart the future direction of Islamic banking in the banking institution on a medium-term basis.

c) The IBD was expected to have a working relationship with other departments/divisions and should be provided with the necessary support from the departments/divisions in ensuring the smooth

implementation of Islamic banking operations, particularly in areas where the same infrastructure was being shared.

d) The IBD should be proficient in applying accounting standards (including Islamic banking accounting standards), legal and regulatory requirements, directives and guidelines issued by Bank Negara and other authorities, including roles and regulations issued by the relevant banking associations.

e) As a division, which operates like a “bank within a bank”, the level of resources should be justified and commensurate with the expected cost and profitability of the IBD, with a minimum staff requirement.

f) The IBD should be headed by a Muslim senior management officer of the bank, of at least the level of Assistant General Manager (AGM). The position of the AGM should be equivalent to the status of other key functional heads to enable him to deal effectively with his peers and supervisors when discharging his duties and responsibilities. Importantly, the AGM should be functionally responsible to the Chief Executive Officer (CEO). Initially, the AGM was allowed to carry out banking duties and responsibilities other than Islamic banking during an interim period of two years (1999-2000). Beginning 1 January 2001, the AGM should perform his duties and responsibilities with regard to Islamic banking on a full-time basis.

In tandem with the enhancement of the IBU, the Islamic Banking Financing (IBF) of the Islamic Banking Scheme (IBS) commercial banks and finance companies was increased from RM1 million to RM5 million, and to RM3 million for the merchant banks, effective from 2 January 1999. By 1 January 2001, the Islamic Banking Financing (IBF) for the commercial banks and the finance companies would be further increased to RM20 million and RM10 million respectively, and to RM6 million for the merchant banks.

The Islamic Financial System

The Islamic financial system in Malaysia can be classified into three main categories, namely the Islamic banking system, the non-bank Islamic financial intermediaries and the Islamic money market. In addition, the Islamic financial system is characterized by two different types of institution, namely:

- (a) Fully-fledged Islamic financial institutions, and
- (b) Conventional financial institutions with Islamic windows.

The Islamic banking system

The Islamic banking system comprises Bank Negara, the Islamic banks and the other financial institutions (i.e., commercial banks, finance companies, merchant banks and discount houses) participating in the Islamic Banking Scheme (IBS).

Fully-fledged Islamic banking institutions

At present there are three Islamic banks operating in Malaysia, namely Bank Islam Malaysia Berhad (BIMB), Bank Muamalat Malaysia Berhad and RHB Islamic Bank. Bank Islam Malaysia Berhad is the first Islamic bank in Malaysia, which was established in July 1983 under the Islamic Banking Act 1983 (IBA). By May 2002, Bank Islam Malaysia Berhad operated a total of 87 branches with a staff of about 1,700 people (BIMB, 2003).

Bank Muamalat Malaysia Berhad (BMMB) is the second Islamic bank, which was established on October 1, 1999. The establishment of Bank Muamalat Malaysia Berhad was the result of the merger of Bank Bumiputra Malaysia Berhad (BBMB) and the Bank of Commerce (M) Berhad (BOC). Bank Muamalat Malaysia Berhad commenced operations with 1,009 staff, absorbed mainly from the former Bank Bumiputra Malaysia Berhad, and operating 40 branches throughout the country. The paid-up capital of Bank Muamalat Malaysia Berhad was RM300 million (BNM, 2003).

With the establishment of Bank Muamalat Malaysia Berhad, Bank Islam Malaysia Berhad lost its monopoly status as the only fully-fledged Islamic financial institution. In addition, the creation of Bank Muamalat Malaysia Berhad and RHB Islamic Bank will ensure competition for Bank Islam Malaysia Berhad, which has come under criticism from the public over recent years for its over-cautious and bureaucratic approach.

Conventional financial institutions with Islamic windows

The commercial banks are the largest group of financial institutions participating in the Islamic Banking Scheme (IBS) in the Islamic banking system. The total assets of the commercial banks under the Islamic banking system were RM60.1 billion.

The second largest group of financial institutions in the Islamic banking system is the finance companies. There were 9 finance companies participating in the Islamic Banking Scheme (IBS) at the end of 2007, with total assets of RM8.7 billion. Merchant banks are the third group in the Islamic banking system and there are 5 Islamic Banking Scheme (IBS) merchant banks. At the end of 2007, the total assets of Islamic Banking Scheme merchant banks amounted to RM1.5 billion.

The emergence of strong Islamic movements in last three decades has generated a renewed interest in Islamic economics, especially in Islamic interest-free banking. Iran and the Sudan have instituted Islamic banking systems, and while many other countries have established a mixed/dual banking system where Islamic banks operate side by side with the conventional banks. Following the latter course the first Islamic bank in Malaysia started operating in July 1983, Bank Islam Malaysia Berhad (BIMB). The blue print of the modern Islamic banking system came in 1983 with the introduction and enforcement of two new acts known as Islamic Banking Act and the Government Investment Act. However, in Malaysia the demand for Islamic banking dates from the establishment of Lembaga Tabung Haji Malaysia in 1969, now known as Tabung Haji. Tabung Haji usually collects and invests the savings of those who want to perform pilgrimage to Makkah in accordance to Islamic law (Shari'ah), and disburses the funds to pay for airfares and accommodation.

Following a decade of successful functioning and performance of Bank Islam Malaysia Berhad (BIMB), on March 4th 1993, the Malaysian government introduced an interest-free banking scheme (Skim Perbankan Tanpa Faedah). Under this scheme, all conventional banks were asked to participate and offer Islamic finance by opening Islamic counters that would exist side by side with conventional counters.

Islamic banks and conventional banks with Islamic counters or branches in Malaysia offer deposit facilities that rely on profit sharing instead of interest. The bank offers demand and savings deposits under the concept of guaranteed custody (Al-Wadiah), and investment deposits under the concepts of profit sharing (Al-Mudharabah). Islamic banks are prohibited from issuing securities such as long and short-term bonds that involve interest, debentures and preference shares. At present, the Islamic banking financial instruments are based on the four main sources of funds, namely demand, savings, investment deposits (accounts) and shareholder's funds:

- a) Demand deposits – this kind of deposit has similar functions to its counterpart with a conventional bank. This demand deposit usually comes under the concept of guaranteed custody (Al-Wadiah). Under this type of account the depositors have full right to withdraw their funds at any time without any prior notice. Here the reward depends upon the banks' own discretion based on the profit that they declare.
- b) Savings deposits – these are usually for those who want to earn some income and at the same time, avoid the risk of capital losses. For this type of deposit the Islamic banks do not provide any fixed return to their depositors, but instead share the profits with their customers, since these savings deposits are usually understood as guaranteed custody (Al-Wadiah).
- c) Investment deposits – this account, is equivalent to a fixed deposits or investment account with a conventional bank. This account usually comes under the concept of profit sharing (Al-Mudharabah). However, the differences between the investment deposits in Islamic banks and fixed deposits in conventional banks is that these types of accounts are not considered as liabilities or debt, but as participatory accounts. Here the banks invest their client's money, with their general or specific consent, depending on the account contract, in different projects. After that, on the basis of their agreement, the profit shares are distributed between the bank and its customers using a pre-agreed ratio.

Shareholders funds: – is the main source for Islamic banks to raise equity by offering common shares to general public. Islamic banks and financial institutions are not allowed to issue preference shares, as these involve a fixed dividend corresponding to interest, which is prohibited by Islamic law (Shari'ah).

Islamic banks also grant working capital financing that mainly involve five financial instruments. These are:

- i) Al-Bai' Bithaman Ajil (deferred payment sale) - this is usually a contract that refers to the sale of goods on a deferred payments basis. Equipment or goods requested by the client are bought by the bank, which subsequently sells the goods to the client at an agreed price (the sale price) that includes the bank mark-up (profit). However, the client may be allowed to settle payments by installments within a pre-agreed period or through a lump sum payment.
- ii) Al-Murabahah (cost-plus finance) – this is a contract between the bank and its client for the sale of goods at a price that includes a profit margin agreed by both parties. As a financing technique, it's involves the purchase of goods by the bank as requested by its client. The goods are sold to the client at cost-plus profit margin agreed between them at the time of contract. Repayment terms, usually in installments, are specified in the contract.
- iii) Al-Ijarah (Leasing) - A customer who wishes to engage the services or the rights to the services of an asset may seek financing under the Ijarah leasing facility. Under the Ijarah arrangement, the bank will purchase the asset and subsequently leases the asset for a fixed period. In return, the customer (the lessee) is obliged to pay for the lease rentals and any other terms and conditions as agreed by both parties.
- iv) Al-Musharakah (profit and loss sharing) – this is usually for project financing, which involves a partnership on a joint venture bases between the parties to the contract. The parties share profits on a pre-agreed ratio, but losses are shared on the basis of equity participation. The management of the project may be carried out by all the parties or by just one party. This is a very flexible partnership arrangement where the sharing of the profits and management can be negotiated and pre-agreed by all parties.
- v) Al-Mudharabah (trust financing) - this is basically an agreement between two parties, one which provides 100 per cent of the capital for the project and another party known as entrepreneur (mudharib) who manages the project using his or her entrepreneurial skills. Profits arising from the project are distributed according to a predetermined ratio. Any losses accruing are borne by the provider of capital provided these are beyond the control of the entrepreneur.

LITERATURE SURVEY

Many scholars have demonstrated that people identify themselves with organizations when they perceive an overlap between organizational attributes and their personal attributes (Maignan and Ferrell, 2004). As stakeholders perceive that key organizational features are in harmony with their self-identity, they are likely to patronize the organization (Scott and Lane, 2000). Many of the banking patronage studies have identified a number of factors, such as cost and benefits, service quality (fast and efficient), reputation and image of the bank, convenience (location and ample parking), and friendliness of bank personnel, as other equally or more important criteria for the customers or depositors in selecting a particular banks.

For this research, an exploratory factor analysis was conducted. Factor analysis with separate varimax rotation was run on nine-thin variables representing various attributes of banking selection criteria. These banking selection criteria or patronage factors have been extensively investigated in the literature. A sample of this type of study includes Erol and El Bdour, 1989, 1990; Haron, Ahmad et al., 1994; Gerard and Cunningham, 1997; Metawa and Almassawi., 1998; Naser, Jamal et al., 1999; Othman and Owen., 2001, 2002; Ahmad and Haron, 2002; Abbas, Hamid et al., 2003; Azura et al (2006) and Azura et al (2007). After a detailed review of these selection criteria and given a nature of this study, nineteen basic attributes were selected and tested in the current study.

These widely investigated attributes are customer services quality (fast and efficient service), financial product price, convenience (e.g. available parking space and interior comfort), location being

near home or workplace, reputation and image, and economic and financial reputation. Table 2 provides a summary of the customers' selection criteria based on the patronage studies on banking (conventional and Islamic banking).

Table 2: Patronage Studies on Banking Selection Criteria (Conventional and Islamic Banking)

Criteria in Banking Selection										
Literature	A	B	C	D	E	F	G	H	I	J
Erol & El Bdour (1989)	-	+	+	+	+	+	+	+	-	n/a
Haron, Ahmad et al (1994)	-	+	+	+	+	+	+	+	+	n/a
Gerrard & Cunningham (1997)	+	+	+	+	+	+	+	+	+	n/a
Metawa & Almosawi (1998)	+	+	n/a	n/a	n/a	+	n/a	+	n/a	n/a
Othman (2001)	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	n/a
Othman & Owen (2002)	+	+	+	+	n/a	+	+	n/a	+	n/a
Ahmad & Haron (2002)	-	+	+	+	+	+	n/a	n/a	n/a	n/a
Abbas, Hamid et al (2003)	+	+	n/a	+	+	+	+	+	n/a	n/a
Naser, Jamal et al (2003)	+	+	+	+	+	+	+	+	n/a	n/a
Anderson et al. (1976)	n/a	+	+	+	+	+	n/a	+	n/a	+
Tan dan Chua (1986)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	+	n/a	n/a
Javalgi et al. (1989)	n/a	+	+	+	n/a	n/a	n/a	n/a	n/a	+
Laroche et al. (1986)	n/a	+	n/a	n/a	+	+	n/a	+	n/a	+
Kaynak (1986)	n/a	n/a	+	+	n/a	n/a	n/a	n/a	n/a	n/a
Ringgal (1980)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	+
Aven (1979)	n/a	n/a	n/a	n/a	n/a	+	n/a	n/a	n/a	+
Azura et al (2006)	+	+	+	+	+	n/a	n/a	n/a	n/a	+
Azura et al (2007)	+	+	+	+	+	+	+	+	n/a	+

Notes: + indicate positive and important results; +/- indicate an equivocal results, - indicates negative and no significant results, and n/a indicates variables was not investigated /examined in the study.

- A: Religious factor
- B: Cost/Benefit
- C: Service Quality
- D: Size and Reputation
- E: Staff Factors
- F: Convenience
- G: Confidentiality
- H: Friends' and Relatives' Influence
- I : Mass Media Advertising
- J: Location

As depicted in Table 2, the patronage studies on Islamic and conventional banking so far have largely focused on various criteria including religious, reputations, commercial, services satisfaction, convenience factor, staff and confidentiality. Notwithstanding the progress made to date in the study of customers' perception towards various banking selection criteria, the more focused research on the comparisons between BIMB and conventional banks offering Islamic banking is not existent yet, especially in Kota Bharu.

Therefore, it is imperative to study the perception of customers and depositors towards the selection criteria on BIMB and conventional banks offering Islamic banking. This will further contribute to the literature of the study and knowledge about the selection factors for Islamic banking in comparison between full-fledged Islamic bank (BIMB) and conventional banks.

RESEARCH METHODOLOGY

The main purpose of the study is to poll of the opinion of different Stakeholders (depositors and customers) of BIMB and conventional banks in Kota Bharu. In particular this study sets out to provide answer whether selection factors criteria constitutes parts of the patronage factors influencing selection division by the stakeholders (depositors and customers) of the Islamic banking systems in Malaysia.

For this reason, a survey was conducted to elicit the opinion of the two stakeholder groups of one fully-fledged Islamic bank in Kota Bharu (namely Bank Islam Malaysia Berhad) and conventional banks offering Islamic banking: customers and depositors. The choice of the two groups was based on the grounds that they represent the primary groups of stakeholders of Bank Islam Malaysia Berhad and conventional banks offering Islamic banking systems. The choice of the groups also consistent with the popular definition of the stakeholders which is defined as “any group or individual who can affect or is affected by the achievement of the firm’s objectives.” (Freeman 1984).

In this study, the perceptions of stakeholders (customers and depositors) on nine-thin attributes or banking selection criteria are examined using factor analysis: (1) to determine the main factor contributes of the important indicators in their banking selection criteria and (2) to ascertain which of these factors strongest motivation amongst selection criteria of stakeholders (customers and depositors).

Research Hypothesis

Islamic monetary instruments work side by side with conventional monetary instruments in Malaysia. In addition, BIMB and conventional banks offering their services side by side also to their stakeholders’ (depositors and customers) in Malaysia including Kota Bharu. For this reason, it is important to test whether the Islamic banking offering by BIMB have more significant relationship comparing to conventional banks and also we would like to know either the religion, location and knowledge factor is the most of the main criteria for the stakeholders to choose their Islamic banking services in Kota Bharu. Therefore, this study attempts to test the following hypotheses:

- (1) Ha: There is significant relationship stakeholders’ selection factor of Islamic banking offering by BIMB than conventional banks.
- (2) Ha: There is a strong relationship stakeholders’ selection criterion of Islamic banking with religion.
- (3) Ha: There is a strong relationship stake stakeholders’ selection criterion of Islamic banking with location.
- (4) Ha: There is a strong relationship stake stakeholders’ selection criterion of Islamic banking with knowledge.

Survey Instrument

To minimize the element of bias that could emerge from the study, a structured questionnaire consisting of mainly close-ended types were constructed types for the study. The questionnaire content

was adapted from any similar patronage study of Islamic banks and conventional banks offering Islamic banking. The questionnaire prepared in Malay before the final version of the questionnaire was sent out, it was pilot tested to determine the appropriateness and relevance of the questions in the instrument. Based on the feedback from these respondent, several modification were made to the wording of the some questions, and some less important question were deleted to reduced the length of the questionnaire. The final version of the questionnaire was then distributed to customers in Kota Bharu.

Data Collection

The process of data collection continued for two months, from Jun through July 2008. The data were collected through self administered questionnaires distributed by hand to individuals at BIMB and the various conventional banks offering Islamic banking (Islamic windows) in Kota Bharu. Respondent were randomly selected from among customers and depositors who visited the sampling locations during the chosen time intervals, in order to eliminate the sampling frame errors and to ensure the representation of the population under study in the sample unit. Following the data collection procedures outlined by Kader (1993; 1995), Gerrard and Cunningham (1997), Metawa and Almosawi (1998), Azura et al (2006) and Azura et al (2007), the questionnaires were distributed during various working hours of the same day, as well as various days of the week during the four month period, to avoid any potential bias owing to high concentration of the bank customers and depositors during certain hours of the day, or certain days of the week or month.

FINDINGS AND ANALYSIS

Respondents' Backgrounds

Table 3 summarises some basic statistics on gender, age, marital status and monthly income of the respondents. The respondents selected by randomly were predominantly female which comprise 39.9 per cent of the respondents. There is quite a good mix of age group ranging from below 20 years of age to over 50, although a bulk of the respondents belongs to middle ages (20-50). Consequently, the opinions expressed in the survey could very well reflect the attitudes and selection of the middle-aged and younger respondents (that is if we consider those above 50 to be the older respondents). There are 104 respondent are BIMB customers and 104 customers Islamic Banking customers at conventional bank. This again indicates that the sample is somewhat reflects the composition of the young and promising generation for the future of Islamic of Islamic banking in Kota Bahru, Kelantan and Malaysia.

The results reported in Table 3 also indicate that majority (73.6%) of the respondents were in the RM686-RM3000 monthly income group. Meanwhile 12.9 per cent of the survey respondents earned between RM3001-RM5000 per month.

Combined together, the respondents in those income groups represent 86.5 per cent of the total sample. This result indicates that most of the respondents can be classified as above poverty line income and middle-income earners since majority of them have monthly incomes range of RM686 to

RM5000. This finding captures closely the pattern of income distribution of Malaysia (including Sabah) households which mainly consist of those with earnings between RM686 to RM2500 of lower-income households and middle-income households.⁷⁴

Table 3: Distribution of Respondents

		Frequency	Per cent %
Gender	Male	125	60.1
	Female	83	39.9
Age Group	Below 20	20	9.6
	21 – 25	46	22.1
	26 – 30	36	17.3
	31 – 35	13	6.3
	36 – 40	20	9.6
	41 – 45	28	13.5
	46 – 50	27	13.0
	Above 50	18	8.7
Marital Status	Single	77	37
	Married	128	61.5
	Divorced	3	1.5
Monthly Income	Below RM685	28	13.5
	RM686 – RM1370	61	29.3
	RM1371 – RM1800	44	21.2
	RM1801 – RM2500	28	13.5
	RM2501 - RM3000	20	9.6
	RM3001 - RM3500	6	2.9
	RM3501 - RM4000	4	1.9
	RM4001 - RM4500	4	1.9
Above RM5000	4	1.9	

Factor Analysis: Support for the Banking Selection Criteria

In testing whether factor analysis was appropriate for the banking selection criteria, KMO and Bartlett’s Test of Sphericity were conducted. The KMO test revealed a value 0.844 and 0.874 for the BIMB and conventional bank offering Islamic banking respectively. In addition, the Barlett’s Test of Sphericity also reached statistical significance (0.000) BIMB banks which offering Islamic banking. Based on this favourable results, factor analysis was conducted using Principal Component Analysis (PCA) and varimax notation with Kaiser Normalisation. The results of varimax rotated factors are given in Table 4 (BIMB), and Table 5 (conventional bank) along with communality values of each variables, eigenvalues and percentage of explained variance.

⁷⁴ According to the definition given in the Eight Malaysian Plan (2001-2005), lower-income households were defined as those earning less than RM1500 per month. The middle-income households defined as those earnings between RM1500 and RM3500. [Eighth Malaysia Plan (2001-2005), Percetakan Nasional Malaysia Berhad, Kuala Lumpur: Malaysia. pp. 60-62].

Factor Analysis: Public Servants Selection on BIMB

Table 4: Rotated Component Matrix on BIMB Selection Criteria

Factor	1	2	3	4	5	Communality of Each Variable
Variable	Reputation/ Image	Location/ Branches	Services Quality	Convenience	Confidently	
X2	0.780					0.759
X19	0.737			0.547		0.629
X13	0.638					0.621
X8	0.622					0.683
X4	0.617					0.875
X5	0.614			0.555		0.746
X6	0.608			0.552		0.579
X18		0.587		0.570		0.710
X12		0.586				0.753
X17		0.560				0.605
X15			0.564			0.682
X7			0.558			0.613
X16		0.544	0.526			0.662
X10	0.508					0.602
X11					0.522	0.746
X1					0.510	0.755
X3					0.508	0.715
X9						0.863
X14		0.522				0.594
Eigenvalue	7.760	2.010	1.975	1.925	1.923	
% of Variance	40.843	10.580	6.713	5.919	5.387	
Cumulative %	40.843	51.423	58.136	64.054	70.441	

Extraction Method: Principal Component Analysis. Rotate Method: Varimax with Kaiser Normalization.

Variables:

- X1 Other Service (i.e., internet banking, fast cash deposit and fast cheque deposit)
- X2 Fast, Efficient and Technology
- X3 Friendly Services
- X4 Confidently
- X5 Service Counter
- X6 Profit Sharing
- X7 Other Branches
- X8 Reputations
- X9 Service Charges
- X10 Service Hour
- X11 Parking
- X12 Counseling
- X13 Locations
- X14 Diversity
- X15 Customers Services and Receptionists
- X16 Product Price
- X17 Internal Interior
- X18 Advertisements and Promotion
- X19 Recommended by friend and relatives

The results in Table 4 reveal the presence of five factors with all nineteen (19) items of the banking selection criteria exhibit large factor loadings. The eigenvalues for the five factors are above 1 (1.760, 2.010, 1.975, 1.925, and 1.923 respectively). These five factors explain a total of 70.441 per

cent of the variance. Specially, Factor 1 has eight significant loadings while Factor 2 has five significant loadings, Factor 3 has three significant loadings, Factor 4 has four significant loadings and Factor 5 has three significant loading respectively.

Turning to an interpretation of independent dimensions based on the varimax rotated matrix as given in Table 4, one can see that the first factor (Reputation and Image) delineates a cluster of relationship amongst the following attributes are 'Fast, Efficient and Technology' (X2), 'Recommended by friend and relatives' (19), 'Locations' (X13), 'Reputations' (X8), 'Confidently' (X4), 'Service Counter' (X5), 'Profit Sharing' (X6) The nature of the highly loaded variable on this factor suggests that it can be named "reputation and image". This "reputation and image" factor contributes around 40 per cent of the reason for selecting BIMB. Since Factor 1 has the highest eigenvalues and variance, (eigenvalue = 7.760, variance = 40.843) it necessary the most important factor that has influenced stakeholders to patronize BIMB.

The second factor (Location and Branches) delineates a cluster of relationship attributes are 'Diversity' (X14), 'Parking' (X11), 'Recommended by friend and relatives' (X19), 'Customers Services and Receptionists' (X15), ' Internal Interior' (X17), and 'Advertisements and Promotion' (X18) 'The nature of the second higher loaded variable on this factor suggests that it can be named "Location and Brancest" factor contributes around 10 per cent of the reason for selecting BIMB. Since Factor 2 has the second higher eigenvalue and variance, (eigenvalues = 2.010, variances = 10.580%).

The third factor (Service Quality) delineates a cluster of relationship attributes are 'Customers Services and Receptionists' (X15), 'Other branches' (X7), and 'Product Price' (X16). The nature of the three higher loaded variable on this factor suggests that it can be named "Services Quality" factor contributes around 7 per cent of the reason for selecting BIMB. Since Factor 3 has the fifth higher eigenvalue and variance, (eigenvalues = 1.975, variances = 6.713%).

The fourth factor (Convenience) delineates a cluster of relationship attributes are 'Recommended by friend and relatives' (X19), 'Service Counter' (X5), and 'Profit Sharing' (X6), 'Advertisements and Promotion (X18). The nature of the fourth higher loaded variable on this factor suggests that it can be named "Convenience" factor contributes around 6 per cent of the reason for selecting BIMB. Since Factor 4 has the fourth higher eigenvalue and variance, (eigenvalues = 1.925, variances = 5.919%).

The fifth factor (Confidently) delineates a cluster of relationship attribute is 'Parking' (X11), 'Other services' (X1) and 'Friendly Services' (X3). The nature of the fifth higher loaded variable on this factor suggests that it can be named "Confidently" factor contributes around 5 per cent of the reason for selecting BIMB. Since Factor 5 has the fifth higher eigenvalue and variance, (eigenvalues = 1.923, variances = 5.387%).

Factor Analysis: Public Servants Selection on Conventional Banks

Factor Analysis: Customers Selection on Conventional Banks

The results in Table 5 reveal the presence of five factors with all nineteen (19) items of the banking selection criteria exhibit large factor loadings. The eigenvalues for the five factors are above 1 (8.681, 1.811, 1.259, 1.153 and 1.152 respectively). These five factors explain a total of 72.414 per cent of the variance. Specially, Factor 1 has seven significant loadings while Factor 2 have six significant loadings, Factor 3 have four significant loadings, Factor 4 have five significant loadings and Factor 5 has two significant loadings respectively.

Turning to an interpretation of independent dimensions based on the varimax rotated matrix as given in Table 5, one can see that the first factor (Reputation and Image) delineates a cluster of relationship amongst the following attributes are ‘Location’ (X13), ‘Other Branches’ (X7), ‘Service Hour’ (X10), ‘Counseling’ (X12), ‘Service Counter’ (X5), ‘Diversity’ (X14), and ‘Parking’ (X11), ‘. The nature of the highly loaded variable on this factor suggests that it can be named “reputation and image”. This “reputation and image” factor contributes around 46 per cent of the reason for selecting Maybank. Since Factor 1 has the highest eigenvalues and variance, (eigenvalue = 8.681, variance = 45.688) it necessary the most important factor that has influenced stakeholders to patronize conventional banks.

Table 5: Rotated Component Matrix on Conventional Banks Selection Criteria

Factor						
Variable	1 Reputation/ Image	2 Location/ Branches	3 Services Quality	4 Convenience	5 Confidently	Communality of Each Variable
X13	0.604					0.589
X7	0.600					0.687
X10	0.599					0.650
X12	0.572					0.759
X5	0.654			0.586		0.689
X14	0.595	0.540		0.627		0.616
X11	0.521	0.586		0.521	0.539	0.638
X19		0.642		0.621		0.723
X15		0.623				0.619
X17		0.616				0.684
X18		0.545	0.534	0.535		0.746
X16						0.551
X9					0.719	0.827
X6			0.543			0.594
X4						0.691
X1						0.773
X2			0.646			0.861
X8						0.721
X3			0.503			0.486
Eigenvalue	8.681	1.811	1.259	1.153	1.152	
% of Variance	45.688	9.532	6.628	6.071	4.496	
Cumulative %	45.688	55.220	61.848	67.919	72.414	

Extraction Method: Principal Component Analysis. Rotate Method: Varimax with Kaiser Normalization.

Variables:

- X1 Other Service (i.e., internet banking, fast cash deposit and fast cheque deposit)
- X2 Fast, Efficient and Technology
- X3 Friendly Services
- X4 Confidently
- X5 Service Counter
- X6 Profit-Sharing
- X7 Other Branches
- X8 Reputations
- X9 Service Charges
- X10 Service Hour
- X11 Parking
- X12 Counseling
- X13 Locations
- X14 Diversity
- X15 Customers Services and Receptionists
- X16 Product Price
- X17 Internal Interior
- X18 Advertisements and Promotion
- X19 Recommended by friend and relatives

The second factor (Location and Braches) delineates a cluster of relationship attributes are 'Diversity (X14), 'Parking' (X11), 'Recommended by friend and relatives' (X19), ' Customers Services and Receptionists' (X15), 'Internal Interior' (X17), and 'Advertisements and Promotion' (X18). The nature of the second higher loaded variable on this factor suggests that it can be named "Location and Branches" factor contributes around 10 per cent of the reason for selecting Maybank. Since Factor 2 has the second higher eigenvalue and variance, (eigenvalues =1.811, variances = 9.532 %).

The third factor (Services Quality) delineates a cluster of relationship attributes are 'Advertisements and Promotion' (X18), 'Profit Sharing' (X6), 'Fast, Efficient and Technology' (X2) and 'Friendly Services (X3)' The nature of the third higher loaded variable on this factor suggests that it can be named "Services Quality" factor contributes around 7 per cent of the reason for selecting conventional banks. Since Factor 3 has the third higher eigenvalue and variance, (eigenvalues = 1.259, variances = 6.628%).

The fourth factor (Convenience) delineates a cluster of relationship attributes are 'Service Counter' (X5), 'Diversity' (X14), 'Parking (X11)' 'Recommended by friend and relatives' (X19), and 'Advertisements and Promotion' (X18) . The nature of the fourth higher loaded variable on this factor suggests that it can be named "Convenience" factor contributes around 6 per cent of the reason for selecting conventional banks. Since Factor 4 has the fourth higher eigenvalue and variance, (eigenvalues = 1.153, variances = 6.071%).

The fifth factor (Confidently) delineates a cluster of relationship attribute are 'Parking' (X11), and 'Services Charges' (X9). The nature of the fifth higher loaded variable on this factor suggests that it can be named "Confidently" factor contributes around 4 per cent of the reason for selecting

conventional banks. Since Factor 5 has the fifth higher eigenvalue and variance, (eigenvalues = 1.152, variances = 4.496%).

HYPOTHESES TESTS

The first hypothesis of this study shows that there is no significant relationship in stakeholders' selection factor of Islamic banking offering by BIMB compared with conventional banks. That means we reject the hypothesis alternative (Ha) there is a strong relationship between stakeholders' selection criteria with the Islamic banking offering by conventional banks. Because from the frequency results, majority of the stakeholders' (depositors and customers) have more opted for Islamic banking offered by conventional banks than BIMB. This result may be due to the poor awareness of stakeholders on Islamic banking offering by BIMB. In addition, this is also because for them the conventional banks offering Islamic banking in Kota Bharu having more branches than BIMB. The most significant fact revealed by this study is that there is no significant difference in the selection criteria. In other words, the stakeholders' who patronized Islamic banking either offering by BIMB and conventional banks have a common perception in selecting their banks. This can be seen that where 140 per cent of the stakeholders choose Islamic banking offered by conventional banks than BIMB, which only 68 per cent. These results similar with the findings by Haron et. al. (1994), Gerrard and Cunningham (1997), and Naser, et al. (1999), Azura et. al. (2006) and Azura et. al. (2007). The result of the relationship between stakeholders and Islamic banking offering by BIMB and conventional banks can be shown in Table 6. Besides that in Table 7 was show result from T-Test which Conventional Banks Standard Deviation is 179.596 than BIMB 128.058. It means in average, the respondent more to choose conventional banks which provide Islamic window to the customers.

Table 6: The Relationship of Stakeholders' Selection Factors of Islamic Banking between BIMB and Conventional Banks

Item	Frequency (Total respondent)	Per cent (%)
BIMB	68	32.6
Conventional Banks	140	67.4
Total	208	100.0

Table 7: The Relationship of Stakeholders Selection Factor of Islamic Banking between BIMB and Conventional Bank by Using T-Test

Bank	Number	Mean	Std. Deviation	Std. Error Mean
BIMB	130	261.30	128.058	11.272
Conventional Banks	170	241.30	179.596	9.656

The second hypothesis shows that there is a significant relationship between stakeholders' selection factor of Islamic banking with religion. In other words, the stakeholders' who patronized commercial banks have a common perception on the issues of Islam in selecting their Islamic banking services. With this information, the Islamic bank should not over emphasize, and rely on, the religion factor as a strategy in its effort to attract more customers. The Islamic bank should also be aware that approximately 64 per cent of Muslims believe that religion is the main factor in why people maintain an account with Islamic bank. This result accepts the hypothesis alternative (Ha) there is a significant relationship between stakeholders' selection factor with religion. This research results support the

findings made by Gerrard and Cunningham (1997) and Naser, et al. (1999) but differ with Haron, et al. (1994). The results of the second hypothesis tests can be shown in Table 8.

Table 8: K-W Test Result Comparing the Mean Ranks of Relationship between Stakeholders Selection Factors of Islamic Banking with Respect to Religion

Degree of influence	Value	Total (%)	N	Mean Rank	X2	Asymp. Sig. (p)
Very Important	5	30.8	64	206.95	X2 = 22.329	.000
Important	4	55.3	115	257.51		
Not Important	2	9.6	20	246.49		
Not Important at all	1	2.4	5	293.83		
Neutral	3	1.9	4	295.12		
Total		100.0	208			
Significant F value	0.000 12.432					

The second hypothesis was used Kruskal-Wallis Test. Table 8 indicates that while there is significant relationship between stakeholders (customers and depositors) selection factors of Islamic banking with respect to religion. The chi-square, χ^2 values for the variables is 22.329 higher than the tabulated chi-square value, $\chi^2 = 22.329$ at 0.05 confidence interval; 6 degrees of freedom. However, the observed significance level ($p = 0.000$) for 'relationship between stakeholders selection factors of Islamic banking with respect to religion' is lower than the 0.05 level, indicating the existence of variations between the two groups (customers and depositors) in the population.

Hence, the alternative hypothesis should be accepted. The findings clearly indicate that two stakeholders groups (customers and depositors) attach a similar degree of importance especially in 'relationship between stakeholders selection factors of Islamic banking with respect to religion' when making a judgment about Islamic banks based on the list of banking selection criteria.

The third hypothesis shows that there is significant relationship between stakeholders' selection factor of Islamic banking with location. Based from Table 9, the value of chi-square X2 is 25.770. at 0.05 confidence interval; 4 degrees of freedom. However, the observed significance level ($p = .000$) for 'relationship between stakeholders selection factors of Islamic banking with location. It is over than the 0.05 level. It means the hypothesis is accepts because there is significant relationship between stakeholders' selection factor of Islamic banking with location.

Table 9: K-W Test Result Comparing the Mean Ranks of Relationship between Stakeholders Selection Factors of Islamic Banking with Location

Demand	N	Mean Rank	X2	Asymp. Sig.
Bank Islam Malaysia Berhad	68	123.68	X2 = 25.770	.000
Conventional Banks	140	171.01		
Total	208			

The fourth hypothesis shows that there is no significant relationship between customers selection factor of Islamic banking with knowledge on Islamic banking. Based from Table 10, the value of chi-square X^2 is 4.558. at 0.05 confidence interval; 4 degrees of freedom. However, the observed significance level ($p = .550$) for 'relationship between customers selection factors of Islamic banking with knowledge on Islamic banking'. It is over than the 0.05 level. It means the hypothesis is rejected because there is no significant relationship between stakeholders' selection factor of Islamic banking with knowledge on Islamic banking. Result from Table 10 shows that, respondent have less a knowledge of Islamic concept. These results cannot accept the hypothesis alternative (H_a) which there is no significant relationship between stakeholders' selection factor with knowledge on Islamic banking.

Table 10: K-W Test Result Comparing the Mean Ranks of Relationship between Customers Selection Factors of Islamic Banking with Islamic banking knowledge

Degree of influence	Value	Total	Mean Rank	X^2	Asymp. Sig.
Very Important	5	81	236.92	$X^2 = 4.558$.550
Important	4	292	247.83		
Not Important	2	59	252.87		
Not Important at all	1	13	291.27		
Neutral	3	55	272.50		
Total		500			

CONCLUSIONS

In this study, an attempt was made to investigate the selection factors of customers and depositors when choosing Bank Islam Malaysia Berhad (BIMB) and conventional banks offering Islamic banking. The paper is based on data collected from depositors and customers, which were divided into three categories namely managers, executive and technical workers amongst public servants in Kota Bharu. Overall, the findings revealed that customers and depositors of Islamic banks in Kota Bharu have generally positive views of selection factors. One of the most important reflections of their positive attitude is that reputation and image factor are shown as important criteria in their banking selection decision. The findings implied that Islamic banks operating in a competitive dual-system such as in Malaysia, in particular in Kota Bharu can create their own niche in the market especially to meet the needs of customers, who are committed and concerned with socially responsible and ethical banking.

The findings also proved that the relevance of selection factors as a globally accepted practice in choosing Islamic banking systems, in this case for BIMB and conventional banks offering Islamic banking. The Islamic banking system has an in-built dimension that promotes social responsibility, as it resides within a financial trajectory underpinned by the forces of Shari'ah injunctions. These Shari'ah injunctions interweave Islamic financial transactions with genuine concern for ethically and socially responsible activities, while at the same time prohibit involvement in illegal activities which are detrimental to social and environmental well-being.

According to the hypothesis results, it is shown that there is no significant relationship between stakeholders' selection factor with Islamic banking offered by BIMB compared to that of conventional banks. However, this study consequently revealed that there is a significant relationship between stakeholders' selection with religion in selecting Islamic banking services offered by BIMB or conventional banks in Kota Bharu.

Like other previous studies, this study also has its own limitations, which fall into two categories. Firstly, the discussion over selection factors Islamic banking between BIMB and conventional banks amongst public servants in Kota Bharu is still limited in nature. It needs to incorporate more components about the review of the Islamic banking of BIMB and conventional banks, for instance friendly personnel factor, knowledgeable and competent personnel factor, Islamic working environment factor, respect for human rights factor and involvement in the community. Secondly, the study was based on a survey using only BIMB and conventional banks in Kota Bharu. Selection of these examples for the study may have an effect on the generalization of the results. Thus, in the future should be more meaningful if a comparison is also made between the full-fledged Islamic banks (such as BIMB and Bank Muamalat Berhad) and full-fledged conventional banks (such as Maybank Berhad and Bumiputra Commerce Bank Berhad) that are located in Kota Bharu, which will perhaps produce interesting findings. Inclusion of foreign owned banks (such as HSBC Bank and Standard Chartered Bank) may also produce interesting findings. Finally, this study was developed in and covered only Kota Bharu, a major city in east-coast region. The results may differ if the same study is conducted in other cities or towns in the state or the country. Selection of these examples in a particular location for the study may have an effect on the generalization of the results.

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SUPPLY CHAIN MODEL FOR RICE IN MALAYSIA – BASICS AND CHALLENGES

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ABSTRACT

Rice is the staple food and also a food culture for Malaysian. Availability of reasonable priced-quality rice at the right time is of ultimate importance to the livelihood of the people. Supply Chain Management (SCM) was coined in the early 1980s and since then SCM has increased its attractiveness both in industrial goods as well as in agriculture. In rice supply chain, products change in their appearance and quality from primary production to the final consumer. Supply chain formation within agri-food system is driven by the desire to improve competitiveness. The growing importance of food security requires dramatic changes in agri-food systems. Agri-food systems link from producers through consumers with an increasingly dominant role being played by retailers. The key to be successful in agri-food distribution will be driven by the capacity to establish seamless partnership that serves consumers. The basic background and recent development in the SCM of agri-food products in Malaysia will constitute the first part of the study. The study then describes the mismatch between supply and demand, and the sourcing and responsiveness problems faced by the Malaysian rice supply chain. The researcher considers size of domestic production and imports in the presence of various types of constraints. The study describes the need for improvement of an efficient and robust supply chain for the Malaysian rice sector. In the study, the researcher addresses a number of options to mitigate these problems. The study proposes a framework of public policy choices and strategies for the development of an innovative rice supply chain involving farmers, collectors, rice mills, importers, wholesalers and retailers. The study concluded that an integral approach is essential to develop robust solutions for competitive SCM for rice.

Keywords: *rice, food security, agri-food, public policy, distribution and supply chain management.*

INTRODUCTION

The objectives of this study are (a) to describe the need for improvement in the ‘Supply Chain Management (SCM)’ for the Malaysian rice sector, (b) to eradicate poverty through income generation and to achieve self-sufficiency, and (c) to describe the need for improvement in the ‘Supply Chain Management (SCM) for the Malaysian agriculture particularly in rice sector.

They are 3 billion people worldwide, mainly in Asia and West Africa, who rely on rice (*Oryza sativa* L.) as a staple food. Food prices have been increased tremendously in the first half of 2008.

The World Bank has warned that the crisis could further impoverish 100 million people. Food shortage, malnutrition, starvation, high inflation, poverty could happen in poor countries. The resulted social unrest is a threat in 33 countries. The food price hike will further widen the gap between developing and advanced countries.

Problem faced by ordinary people is spending of food in a budget depends on income, savings, debt levels, spending needs and priorities. It will be a crisis if the budget for food increases from 60% to 70%. In the US, the share of food in the consumption basket of the average household is 19%, and it is 21% in Singapore, 24% in France and 28% in South Korea.

In East Asia it ranges between 31% and 50%. In China, it accounts for 34%; Thailand, 36%; Indonesia, 40%; Vietnam, 43%; and the Philippines, 50%.

The World Bank estimated that every 10% increase in rice prices reduces the real value of the expenditure of the poorest tenth of the population by 2%. In Malaysia, food budget is expected to increase from 31% to 40%.

In November 1996, leaders of 186 countries at the World Food Summit in Rome committed to step up the goal of food for all. The Rome Declaration on World Food Security states: "Food that is available at all times, to which all persons have means of access, that is nutritionally adequate in terms of quantity, quality and variety, and is acceptable within the given culture."

There are two kinds of food insecurity: "transitory", which results from instability in food prices, food production and household incomes, and "chronic", which means continuously living on an inadequate diet due to poverty (World Bank, 2001)

Paddy Production from Thailand, India, Vietnam and Pakistan accounted for 70% of the 30 million MT global rice trade. Thailand alone contributes to 26% of world export, most of which from higher quality grain.

In Indonesia, the government introduced a special market operation program (OPK: Operasi Pasar Khusus) in July 1998. BULOG (Badan Urusan Logistik / National Logistic Agency) sells rice to 7.5 million low-income families at a subsidised price of Rp 1,000 per kg. Each family was entitled to receive 10 kg of rice per month. During the harvest season, BULOG purchased the rice produced by the farmers to protect them from the declining price of rice, and the BULOG built the rice stock during the harvest season. On the other hand, during the dry season where the rice production usually becomes lower, BULOG sold the rice stock to the market to protect consumers from the high rice prices.

The Philippines has set an import quota of 2.1 million MT for 2008. Despite government efforts to involve the private sector in rice imports, the response has been poor due to high prevailing prices of rice in the global market. The subsidy has allowed the National Food Authority (NFA), the state's grain-importing arm, to sell rice at P18.25 a kilo (about half its actual cost).

There is negligible intervention of the NFA as it accounts for only less than one percent of the domestic rice market. Furthermore, around 98% of the rice that the NFA uses to intervene in the market is imported. (Philippine Daily Inquirer, 29th April 2008)

THE MALAYSIA RICE INDUSTRY SECTOR

Rice sold in Malaysia can be classified to the following types: Thai Fragrant rice, Vietnam aromatic rice, Thai rice, Local super rice, Unpolished, Calrose rice, Basmathi rice and Pulut.

Malaysia is a relatively small rice producer. Paddy supplies only one percent of GDP and five percent of agricultural value-added.

In 1980-1990, agriculture's share of GDP fell from 23% in 1980 to 7.5% in 2005. Manufacturing in contrast, increased in years and by 1995 it was contributing 33.1% to GDP. Commodity contributes to 30% in nominal GDP growth, 35% to fiscal revenue and 40% to employment growth. Manufacturing has overtaken agriculture to be the locomotive of Malaysian economy since the late 1980s.

Total workforce in agriculture is expected to decline for 40% from 1,524,000 workers in 1995 to 930,000 workers in 2010. Decline in Malaysian rice production partly due to switch to higher value fruit and vegetables (Khor, et al., 1998).

Even though rice is a staple food in Malaysia, the consumption has been declining probably due to change of life style in tandem with economic development. The per capita consumption of rice has been decreasing from 123 kg/person in 1972 to 88 kg/person in 2001, 82 kg/person in 2006 and 77 kg/person in 2007. In advance country like Japan, the annual consumption is about 61 kg/person. (The Sun, 8th May 2008).

The main agriculture import items of Malaysia are rice, wheat and feed (mainly made of corn). Thailand, located in the northern border enjoys logistical advantages.

Consequently, Thailand is the main supplier to the rice market. Nevertheless, imported rice faces obstacles of tariff and implicit subsidy for local rice mills. Malaysia spent RM558 mil in rice import in 2006, 25% was fragrant rice. Price of rice was US\$512 a metric ton in Jan. Rice prices jumped 50% from January to March 2008 in two months. The Benchmark Medium-grade 10% broken grain Grade B Thai white rice prices reached US\$760 a metric ton in April then hit a record US\$1,000 a metric ton in May — three times the price from US\$360 a metric ton in October last year.

The world food prices recorded biggest gain since 1970s oil crisis. Rice prices were \$629 per metric ton in 1974, \$411 in 1978 and \$1,000 in 2008.

World stockpile for wheat has fallen 26% since end 2004; soy bean has fallen 86% since end 2005; global rice stocks for 2007-08 at 72 million tons, the lowest since 1983-84 and about half of the peak in 2000-01. Consequently, prices of these crops climbed up in the said period. In one-year period from 23 April 2007, corn has increased 54%, followed by wheat 71% and soybean 77%. The World Bank reports that global food price has increased 83% in three years. The trend is estimated to continue until 2009, when the trend to be countered by economy slow down.

To a certain degree Malaysia is benefited in this era of high commodity prices with export of crude oil and crude palm oil (CPO). Though the economy slow down cause lower demand in manufactured goods, Malaysia keeps enjoying trade surpluses by exporting highly priced commodities.

On the other hand, high commodity prices are also benefiting the rural society that supports rural consumption (Businessweek, 28th April 2008).

BERNAS

Lembaga Padi Negara (LPN) established in 1971 was corporatised to become Padiberas Nasional Berhad (BERNAS) in 1996, and was given sole importer rights for 15 years until 2011 as an incentive. BERNAS is the importer and distributor of rice in Malaysia.

BERNAS is not only involved in procuring, processing, importing, trading and distributing rice, but it also handles public funds for subsidies of rice production (BERNAS Annual Reports). The country strategic stockpile is targeted for 3 months, for which 2 weeks stock (92,000 MT) kept at BERNAS and two and half months' (464,933 MT) at the trading / supply pipeline.

BERNAS implemented joint venture (JV) under supplier agreement with rice producing countries to ensure smooth international supply and trading network. BERNAS imports about 20% of the rice supply, mainly from Thailand and Vietnam. The setback of sourcing overseas is that the response is slow partly due to the distance. As a mill, BERNAS purchase paddy from the farmers at a Government set benchmark price. However, the benchmark price entitled to the farmers does not reflect actual market situation when the international rice price kept increasing. The farmers were disappointed about profit margin of BERNAS, and also their disability as farmers to purchase rice sold at higher price in the retail market.

The current supply of the controlled price grade, Super Special Tempatan 15 per cent (SST15%), amounts to anywhere near 30% of total national consumption. From June 2008, the Government has also included 10% broken grain B grade rice (SST10%) and 5% broken grain A grade rice (SST5%) to be controlled at RM2.80 and RM2.70 per kg respectively, on top of RM1.65 per kg for SST15% normal grade rice.

The purpose of widening coverage of price control is to discourage local mills from production of higher margin and previously price uncontrolled SST10% and SST5% grade rice. If the prices of non-price-controlled grades are sufficiently high that causes a shift in demand to SST15% from any significant number of consumers resulting in additional stress on supply. BERNAS has 21% of the local rice supply, with the remaining 79% outside their control. Overall, BERNAS supplies 55% of rice consumption, balanced being supplied by private mills. Private mills are also instructed to put aside 10% of production for ST15%. BERNAS is to increase production of ST15% from 11,000 MT / month to 15,000 MT then further to 20,000 MT per month to meet demand of low and medium-income consumer group.

PADDY CULTIVATION IN MALAYSIA

Ministry of Agriculture's Department of Irrigation and Drainage (DID) is responsible for the planning, implementing and operation of irrigation, drainage and flood control projects throughout the country. The Department of Agriculture (DOA) is responsible for providing advice and extension services to the farmers.

In the water supply sector, Ministry of Public Works' Public Works Department (PWD) is responsible for the planning, implementation and operation of urban water supply projects.

As a socio-economy well-being plan, the World Bank has supported irrigation development for paddy cultivation in MUDA irrigation scheme since the mid-1960s. Irrigation schemes comprising granary schemes, mini-granary schemes and non-granary schemes have total irrigation areas of 413,700 ha. The results were the beginning of two times cropping.

There is 700,000 hectares of land dedicated for paddy cultivation, mainly in Kedah, Penang, Perak, Kelantan and Terengganu. There were 155,900 rice farmers by 2006, with average age of 55-60 years old (World Bank, 2001).

The gross production in 1979 was 2.1 MT, and fell to 1,470,052 MT in 2004, supported by import of 527,540 MT. Rice demand is driven by GDP growth measured at 2.9%. The demand for rice was expected to increase to 2.3 million MT in 2010 from 2 million MT in 2000 (IRRI Country Reports).

The production cost of rice in Malaysia is US\$171, compared US\$144 in Thailand, US\$118 in Vietnam and US\$ 92 in India. The average yield for irrigated rice was 4 t/ha in 1995. In 2003, average yield being 3.36/ha. The yields of neighbouring countries are 2.9 MT/ha in Thailand and 4.9 MT/ha in Vietnam. Hence, Malaysia is a relative low yield producer (MPC, Productivity Report 2007)

The target in the First Malaysia Plan was to achieve 100% self-sufficiency. Nevertheless, gradually the importance for self-sufficiency has been replaced by the need to develop industry sector.

Malaysia has observed reduced in self-sufficiency ratio from 102% in 1985 to 78% in 2004.

The national target is to achieve 86% and 100% self-sufficiency in 2010 and 2015 respectively (MOA, The Third National Agricultural Policy). To ensure food security, in 2008 special allocation of RM4 billion was made to increase self-sufficiency ratio, and making Sarawak another major source of paddy cultivation in a National Food Security Policy. However, having planned that, do we have the necessary development capabilities? How about the essential of involvement of private sector which was not much emphasized thus far?

To eliminate the fear of the people on shortage of rice, the Government has urgently ordered 500,000 MT of rice from Thailand in May 2008.

This exercise costs RM725 million of subsidies, as this is the first time that imported rice being subsidised. Malaysia's spending on 'social safety net' placed its main focus in general subsidies for rice. In other countries that provide rice subsidy like India, Indonesia or the Philippines, the distribution of rice is channelled through public distribution system. In Malaysia, the system relies heavily on BERNAS which is a public listed company and there could be conflict of interest between public interest and private profit driven company policy. The questions that the public concerns are: Does BERNAS need restructuring? Should rice import be liberalised to encourage competition?

If subsidies are to continue, it encourages smuggling activities especially in Thai – Malaysia border. If subsidies are lifted, high prices of food will cause high inflation, there will be political and social welfare costs.

If the Government is to increase salary of civil servants to fight inflation, this may ignite another round of inflation. Currently the Government contains inflation by allowing optimum appreciation of ringgit. If inflation is to be curbed by increase in interest rate, economy growth and the stock market will be affected, subsequently job opportunity and consumption (including car and property) will be jeopardised. Currently, countervailing duties of 40% was remained imposed on rice import.

Rice in the Highly Sensitive List (HSL) has been included in 2005. The Government's commitment is to implement the Agreement on the Common Effective Preferential Tariff (CEPT). Tariff in 2010 would be kept at 20% and it will be reduced to 0 to 5% by 2013. Under the globalised environment, markets are designed to facilitate freer exchange of goods and services amongst willing participants. How well are domestic farmers ready to face this challenge of AFTA for rice trade in 2010 in a globalization era?

AGRI-FOOD SUPPLY CHAIN MANAGEMENT (SCM)

Supply chain may be typically defined as 'A supply chain is that network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate customer or consumer.'

The supply chain network consists of connected and interdependent organisations. Upstream relates to the relationships between an organisation and its suppliers. Downstream relates to the relationship between an organization and its customers. Linkages are the coordination of supply chain processes. A process is a specific work activity with a beginning and an end and clearly identified inputs and outputs, a structure of action. The supply chain successes are due to priorities give to quality, price, timely delivery and relationships with suppliers. The key is to understand what the customer wants — where, when, how much and at what price, and respond to it accurately, speedily and with minimum flow of materials.

The Government's current strategy is to boost local production. The researcher argues that the in-kind subsidies are the most successful, and doubt that the existing rice subsidy schemes are worthwhile. Nevertheless, in extreme cases, the subsidized fertilizers are sold in exchange of instant cash instead of

put into paddy field. In other cases, subsidized fertilizers were of low quality. Supply bottleneck may be overcome with development of an integrated supply chain.

There involves toll, petrol and distribution costs. So there are a lot of people involved in bringing the product to the market. The companies to provide real-time information for supply chain players to ensure they are working together effectively. A successful implementation of a supply chain depends on the ability of the companies to establish compatible logistics systems, reduce Internet barriers and develop trust and collaboration among business partners. Linking up and managing the rice supply chain from seed-to-shelf which essentially involved getting people along the supply chain to cooperate, collaborate and to work together towards a longer over arching goal was one of the most difficult, albeit most satisfying achievements

THE ISSUES

The shortage in the rice supply in the first half of 2008 was due to several interrelated reasons.

Production / Supply shortfall (Left shift of supply curve)

One of the main reasons for shortfall of supply is harvest that is curtailed by disease, pests and climate change. Natural disaster like flood destroys the crops. Cash crops like fruits or vegetables that farmers are convinced bring faster and better returns. Limited land, meaning that farming has to compete with other usage of land like industry (Kato, 1994). Rice exports restriction in India (the 2nd largest rice exporter), Vietnam (the 3rd largest rice exporter) and Cambodia to stabilize domestic food prices and to curb inflation. These restrictions have also contributed to untimely disturbance to rice supply in global market.

Demand Surge (Right shift of demand curve)

Locally, the producers used higher grade of rice to manufacture rice vermicelli (bee-hoon). However they shifted to use price-controlled ST15% and resulted double in demand for ST15%. As manifested by the Bullwhip effect, increase of forecast and stockpile right from consumer up the supply chain to retailer, wholesaler and producer.

When crude oil prices are ballooning, the crude oil importing countries shift to use bio-fuel which is made from edible oil like crude palm oil (CPO), soybean, sugar and wheat, causing increased demand for these crops. Regulations in some countries such as USA and EU require certain percentage of fuel made from non-depleting resources.

Cost of Production

As the world trade is mostly denominated in US Dollars, weakness in the currency causes price increase for any item quoted with this currency. For instance, it was RM3.38 to a US dollar on 22nd November 2007 and RM3.13 on 23rd April 2008. Cost of planting in food production chain has increased e.g. fuel cost (crude oil soared to US\$130 a barrel), fertilizer, feed (mainly made of corn and soybean). Fertilizer accounts for about 30% of farm production costs.

Speculation

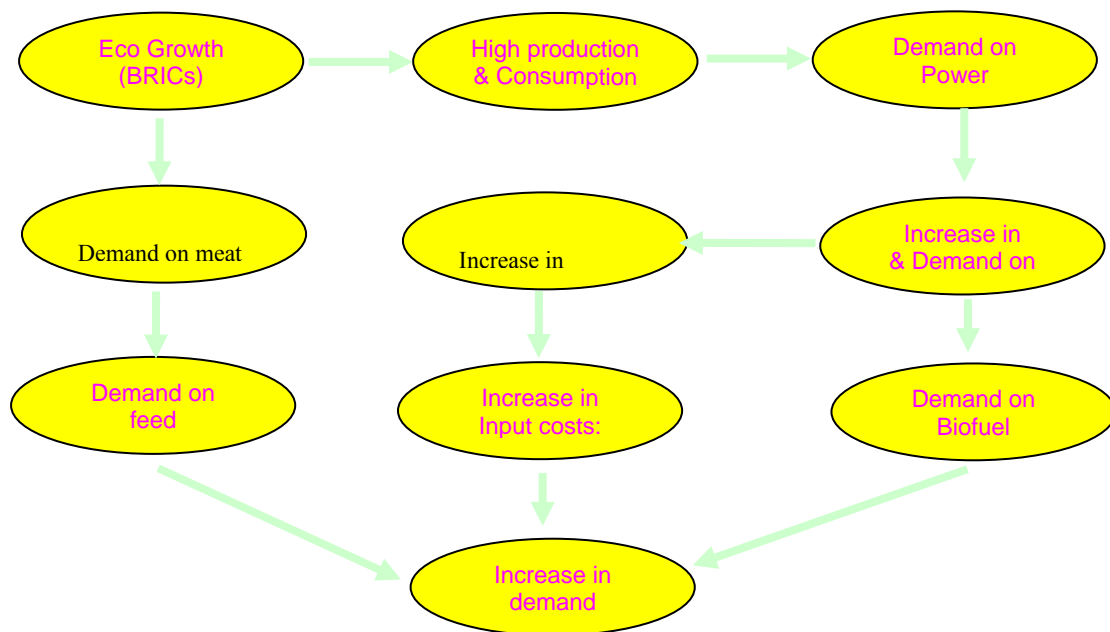
Speculation of hedge fund on commodity future prices as alternative investment in the wake of subprime crisis first submerged in July 2007.

Panic buying and hoarding

When prices are expected to increase, participants along the supply chain pipeline like retailers or even consumers will stockpile in order to avoid artificial shortage. Some may hold inventory in expecting rising prices as a source of windfall profits.

Inefficient farming practices

Some paddy cultivation areas like Sekinchan and Pasir Panjang in Selangor, and Chui Chak in Perak are able to record yield up to 13 MT per hectare (INSAP, 6th August 2008).



The interrelation of the causes can be represented in the above flow chart.

IMF estimated that 50% of recent price rise was due to export restriction and panic buying. Is the inflated price problem a structural problem than a cyclical problem? Can we still remember cooking oil shortage that happened in 2007 even though Malaysia is one of the top palm oil producers? By October 2008, commodity prices led by crude oil had dropped more than 40% from the peak reached in July. This may have proved cyclical nature of the commodity prices.

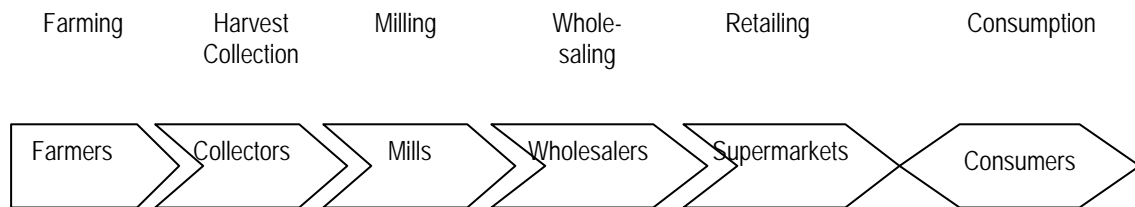
PUBLIC POLICY CHOICE OF SCM

Past focus has been concentrated mostly on upstream activities like variety and yield improvements. What more can be done focusing further downstream? A fundamental question is whether or not public sectors should get involved with the development of supply chains? The public

sector has a basic choice to make with respect to supply chain as a strategic priority. The choices are: (a) Do Nothing, (b) Regulate the market, or (c) Take Strategic Action. The public policy may be useful to deal by: (a) Play an important role in the development of supply chains to create an enabling environment for private sector supply chain development, (b) Set and ensure enforcement of transparent and consistent rules and regulations, (c) Deal with competition issues associated with the rising supply chain, and (d) Development issues associated with the rising supply chains.

PROPOSED STRATEGIES

The objectives to implement the agri-food supply chain strategies were to become synchronized thus more responsive to the changing marketplace and to eliminate non value-adding activities i.e. to reduce cost such as inventory holding cost leading to customer satisfaction. An efficient supply chain is a driving force for the development of the industry. The agri-food supply chain plan defined the flow from suppliers through production to distribution for local market. Farming include producing under contract or supplies from other countries, like with the farmer association.



The following table shows material flow activities by each agri-food supply chain players.

Materials flow	Activities
Farmers	Harvesting
Collectors	Paddy collection
Mills	Grading, packing, labeling
Wholesalers	Break-bulking
Supermarkets	Distribution

Improved supply reliability to meet market demands

The key success factors for forming supply chains are (a) Focus on specific partnerships, products, and markets, (b) Build upon successful partnerships, and (c) Build flexible organizations that meet the specific needs of each partnership.

Foreign partnership via contracting should not be viewed as too risky. The key to be successful will be driven by the capacity to establish seamless partnerships with agreed expectations, i.e. alliances that serve customers. Willingness and ability to forge reliable and mutually supportive relationships up and down throughout the supply chain is the key. In setting up efficient and robust supply chain, an integral SCM approach is essential to develop robust solutions including an efficient information flow. Assurance of supply is one of the basic requirements of the consumers.

On the other hand, breaking up of BERNAS import monopoly and opening up to international sourcing by multiple importers are not without challenges. According to Birou and Fawcett (1993) research, the main problems to source internationally in orders are:

- a. JIT sourcing requirements
- b. Finding qualified foreign sources
- c. Logistics support for longer supply links
- d. Culture and language differences
- e. Duty and customs regulations
- f. Fluctuations in currency exchange rates
- g. Knowledge of foreign business practices
- h. Nationalistic attitudes and behaviour
- i. Understanding the political environment

Besides, existing of ceiling price-controlled mechanism indirectly causes little incentive for the mills to produce these categories of rice due to low margins. As the current system applied in the market to all consumers regardless of income, in order to avoid misuse of the retail price control system like smuggling to neighbouring country, the Government may consider other poverty support mechanism to replace commodity-subsidy with direct cash subsidy like use of subsidy coupons or stamps that is distributed to the needy family directly.

Monitoring of Quality of produce/product

One of the key market drivers of supply chain is food safety and quality assurance, i.e. the development of detailed quality assurance systems from primary production to retail. This type of chain may be small scale or involve an entire sector strategy involving major producer organizations and large-scale food processors and retailers. In Japan, rice that was contaminated with high level pesticide which was supposed to be used for manufacturing purposes was leaked to the food market in the forms of rice balls and so on. The responsible parties that ignored food safety must be punished and quality assurance system has to be enforced along the supply chain. Good Manufacturing Practices (GMP) or international standards like Hazard Analysis and Critical Control Points (HACCP) can be obtained to prove good handling and quality in meeting food safety requirements.

Improved logistics management

Why is there a lack of supply chain integration in Malaysia?

In upstream, the Ministry of Agriculture has imposed a regulation to prohibit transportation of harvested paddy for over 5km radius area in August 2008. This gives impacts to farmers like those in Kedah where there is insufficient mills to collect the paddy within 2 days, maximum paddy stock keeping period. The collection hours are from 8 am to 6 pm, compared with 24 hours of the Selangor state. Due to limited capital, the farmers have to share the usage of harvesters, causing longer time is needed for harvesting. There is growing risk of quality deterioration if the longer harvested paddy is not processed in the shortest period. Paddy has time sensitive processing characteristics and failure to adhere will produce inferior quality rice with substantial loss in market value. Therefore, cut the lead-times from farm to mill will reduce post-harvest losses. Restriction of interstate movement has been claimed to affecting the income of the paddy farmers. (INSAP, 6th August 2008). In the market, they

are a total of 204 mills and 1239 rice wholesalers. They are also “rice collectors” in between the mills and paddy farmers. There exists dominance of BERNAS mills in branded rice with distribution advantages. Other private mills are viewed as a threat. BERNAS’ lack of transparency in distributing rice to favour certain wholesalers by selling rice to ‘subsidiary’ companies at cheaper rate compared to other wholesalers. Other wholesalers would have to sell the S.S.T. 5% rice at ceiling price, which effectively means they were forced in making a loss. In turns, these have resulted in rice shortage in the market (The Borneo Post, 7th June 2008). Therefore, the Government is urged to review policy that may hinder smooth logistics of the paddy. More liberal policy that promotes competition of the rice mills without restriction of state borders is required. Improvement in warehousing and transport as part of a supply chain is essential to ensure timely and agility to match supply of the market. A stronger link with mills is desired. A responsive supply chain requires optimum inventory level without unnecessary occurrence of holding cost. In downstream, there is increased participation of chain store especially leading foreign hypermarkets like Carrefour and Tesco in urban area. There should be better coordination along the agri-food supply chain organizations to form the infrastructure of agri-food superhighway. Streamlined supply chain is effective in fulfilling market demand. Best practise inventory management can only be achieved with the cooperation of efficient and effective suppliers in a liberalized environment.

Promote efficient farming practices

The irrigation system (water control) must be enhanced. New system has to be developed and the existing system has to be maintained. The farmers must ensure proper land preparation, including soil quality upgrade using fertilizer or soil nutrient. On the other hand, the farmers must also be aware that over application of fertilizers can cause diseases. In the next stage, effective transplant method has to be applied. Then, the farmers have to follow the planting schedule without fail. In the paddy-growing period, weed management, and pests and disease control measures have to be in place. At the end of the cycle, harvesting mechanism must be encouraged. Utilization of combine harvester proved to be able to overcome the shortage of labour during peak harvesting season given reasonable total grain yield (Roy S K. et al., 2003). The government has allocated RM286 million in 2009 and has been allocated for 50% grant to purchase heavy and light machinery.

Enhanced R&D and Training

The farmers are encouraged to use quality seeds that are disease resistant, high yield, and of twice/year varieties e.g. MARDI’s 34 paddy strain Mas Wangi. Cultivation of higher grade paddy seeds will enable the farmers to earn more when harvest. However, do we have the necessary R & D capabilities that are sustaining? In terms of education and training, the Malaysian mindset of farming does not need high level of education is outdated and counterproductive. In advanced countries, the farmers are equally highly educated in agriculture specialization. Latest knowledge transfer to the front liners is important. Under the Ninth Malaysia Plan, a total of 657,715 entrepreneurs will be trained and developed, provided by numerous government training agencies, the bulk of whom from the Department of Agriculture (DOA) that undertake agricultural based training programs to enhance farmers, agricultural officers, extension agents and students with the latest knowledge and technology

on agriculture and agribusiness marketing in institutions like Kolej Pertanian Malaysia. At university level, most of the agriculture-based programmes are offered by University Putra Malaysia (UPM).

Promote information flow

Knowledge infrastructure has to be encouraged. Increased food production without improving food distribution systems will not alleviate food insecurity. The latest technological advancements on traceability and tagging systems in agricultural processes are required for data transparency. However, the need to share relevant information in real time across the chain like internet and Electronics Data Interchange (EDI) does not always happen due to limitations of attitudes, cultures and systems that people are used to.

CONCLUSIONS

The culture of long grain rice Indica in Malaysia is very typical. The government of Malaysia is very protective of the rice industry. The Government tries to enhance food security by giving a lot of input in upstream paddy cultivation. It bears a major proportion of the cost of production, by spending a substantial amount of money on subsidies. However, this results in the issue of fighting for fiscal allocation, either to allocate on development or subsidies. The next question is how the subsidies are funded? In long term, we have to consider how long this can last? If the subsidies are related to productive sectors, it can be eliminated once efficiency is stabilized in the sector. If they are allocated on non-productive sector, then it is very unlikely that they can be eliminated one day. In the same time, there is deepening of the problem of abandoned paddy field especially in the populated west coast of Peninsular Malaysia. Furthermore, some consumers may prefer imported species like fragrant rice. Therefore, the modus operandi of paddy cultivation must be changed with the change of time and emerging importance of other economy sectors.

Lack of deeper supply chain integration is a result of tension between foreign and Malaysian mills. Therefore, it is importance to realise a rice supply chain network in Malaysia and foreign countries including rice import. Maintaining BERNAS's rice import monopoly and dominance in rice distribution affects the effort in poverty eradication and food supply in reasonable price. The recognition that as urbanization occurs at unprecedented rates, economic growth generated by agriculture (and the value adding along the supply chain) is the main vehicle for reducing poverty and preserving the environment in the rural areas. Growth in the rice sector plays a major role in overall growth and poverty reduction through linkages to manufacturing and services in a supply chain and international trading network framework as well as in connecting the poor along the agri-supply chain to growth. Recognizing the fact that Malaysia has got in place a much successful and competitive poultry sector, it may be beneficial to adopt its appropriate practices to the rice sector. The government is urged to assess the infrastructure improvements and review the rice distribution organization.

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REGIONAL ECONOMIC DEVELOPMENT: RETHINKING THE REGION

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ABSTRACT

The main objective of this article is to determine the factors that contribute to the construction and destruction of regional economic development. Various theories were formulated for the conclusion of this article. Among the theory reviewed was Schumpeterian model (1950) of social inequalities, Borts and Stein (1964) theory of employment change, human capital and social capital theory. A comprehensive conceptual framework of Regional Economic Development was proposed by determining the factors that contribute to regional economic development performance. In attaining regional development, the leadership of the state is proposed to inculcate the Islamic values in administrating and making decision for the development of the region.

Keywords: *economic region, social capital, social inequalities*

INTRODUCTION

The East Coast Economic Region (ECER) of Malaysia, covering the states of Kelantan, Terengganu, Pahang and the district of Mersing in Johor, is set to become Malaysia's latest and most exciting region offering diverse business opportunities to potential investor. ECER development is expected to become a major trade and industrial gateway, offering investors' access to the vast, burgeoning markets of the Asia Pacific region and beyond, encompassing a vibrant market of about two billion people. ECER has the capability to create the needed mass and demand to propel property development in the region as it can boost the property sector and property prices in the long term. As a long term game, the higher impact would be on industrial development in buildings and land for industrial. However, in addition to creating positive spillover effects to property prices and property development activity in the region, ECER will also create inequalities among the locals and it will deteriorate the land ownership of the Malays in the region as the 'Malay reserve' land will be acquired for the development purposes. Moreover, the stiff competition for business opportunities in the ECER will be a challenge for local entrepreneurs to participate in the ECER development programmes with the arrival of foreign investors to set up business in the east coast states. The diminishing of the Malay's religiosity and values will also be part of the challenge of ECER development program as the spillover of the foreigners' access to the region. This paper thus will discuss the possible implications and needs for ECER development based on the factors suggested by previous researcher to the success of regional economic development. The model proposed in this paper will provide insight for the growth and regional economic development. The model looks at the construction of regions around the theme of development, looking at culture and Islamic values, institutions, social relations and

leadership in the East Coast of Malaysia namely Kelantan, Terengganu, Pahang and the East of Johor, Malaysia.

BACKGROUND OF THE STUDY

In the past, there was a great deal of interest in regional economic development studies among scholars and practitioners alike. Various perspectives were scrutinized. As we see it, there are numbers of theories on regional economic development. It started with Schumpeter's model (1939), focusing on Capitalism and Business cycle followed by the entrepreneurial ability and innovation as a key factor in the process of creative destruction (and construction) of a region. Schumpeterian theory suggests that regional economic development is operable and efficient only when regional social climates are equalized. Following Schumpeter, theory of Borts and Stein (1964) on the other hand focused on the assumption of the labor supply conditions as factors that is invariant between regions. The theory demonstrates that regional development is mainly labor supply driven once we adopt a broader view of elasticity (Mathur, Song, 2000). In contrast, Harry Holzer (1991) and Mathur and Song (2000) claim that employment growth in regional development is labor demand driven due to interregional migration of population and entry of firm. Furthermore, theory of Paasi (1986) concerned with the regional identity and planning emphasizing on social capital formation process and component related to cultural geographers' and sociologist ideas that is crucial for the regional economic development success (Raagma, 2002). Raagma (2002) previously highlighted the issue that, to support social capital formation process, public leaders in regional economic development are the key position in economic peripheries where a general lack of human resources and thin organization exist. The related theory used was named as Chaos theory. According to this theory, leaders have decisive roles during unstable periods or chaos in a society when a very small fluctuation may qualitatively change the direction of development (Raagma 2002).

Recently, new regionalist theories of development emphasis on the significant impact of regional development in relation to changing relationship of territory and function on social construction of regional systems of production, Much emphasis has been put in recent work on the concept of social capital, social mobility and social structure although this is often invoked more than analyzed and often reduced to an inherent cultural trait. This strand of the literature also focuses on the role of networks and trust in economic growth.

However, there is a certain lack of studies addressing the connection and the effects of social capital on other facets of development that can contribute in making growth more sustainable in the long run, like, for example, well being and social cohesion. It is true that economic growth, by increasing total wealth, also enhances its potential for improving well-being and solving other social problems. However, as stated by Schumpeter and the World Bank (2000), 'History offers a number of examples where economic growth was not followed by similar progress in human development. Instead growth was achieved at the cost of greater inequity, higher unemployment, weakened democracy, loss of cultural identity, or over consumption of resources needed by future generation. To be sustainable,

economic growth must be constantly nourished by the fruits of human development. Conversely, slow human development can put an end to fast economic growth' (World Bank, 2000).

Hence, in this article, we attempt to address the theories related to the development of economic region and further will scrutinize the factors contributed to regional economic development. Specifically, we intend to propose the best model to be developed for East Coast Economic Region (ECER) regional development. This issue can be broken down into more specific questions. What is the effect of external economic forces (exogenous factor) on regional and urban development in the East Coast of Malaysia? How does this affect regional culture and values? What are the functions of public leaders relative to these factors and values? What is the moderating role of Islamic values among public leaders on the regional development?

ECONOMIC REGIONAL DEVELOPMENT THEORIES

Schumpeterian Model

Schumpeter stated that "capitalism means a scheme of values, and attitude towards life, a civilization – the civilization of inequality". This means that, he believed that the fluctuations essential for the expansion of an economic system inevitably cause inequalities which is the small price to be paid for the economic progress (Leahy and McKee 1972). During the process of economic development, according to Schumpeter, creative destruction occurs which is the essential fact of capitalism. This is the process of Industrial Mutation That incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one (Schumpeter, 1950).

According to Schumpeter, development takes place when the circular flow in the stationary economy is upset. It occurs particularly in terms of the production function. The latter takes on a new form as innovation appears in the stationary economy. Innovation is a function of the economy in equilibrium with normal profits because the expected gain is large and the cost is minimal. The initial innovation followed by secondary innovations causes the economic system to regenerate itself. But parts of the organic system are destroyed while others are created. Thus some firms grow while others decline, some industries develop while others lag, and perhaps some regions grow while others decline (Leahy and McKee, 1970). These interregional variations are implicit in the Schumpeterian system. Schumpeter states that entrepreneurial ability and innovations do not occur in all industries. Therefore, the equality does not distribute equally all over the industrial field. Therefore, development does not happen harmoniously over time. This is an implicit conclusion in Schumpeter that development is not spread evenly among all in the region.

Schumpeter on the other hand highlighted that, in order to secure a change of quality and economic development, the entrepreneur needs a conducive social climate for such change and action. The entrepreneur (new business) engages in deviant behavior in that he changes the existing political, social, and economic conditions. However, this deviant behavior can be either allowed or prevented by the social climate. Thus the entrepreneur needs at least three elements in the social climate. First, the

social climate must be one in which there are no inhibiting political, social or economic situation. Thus, the crucial point is economic development cannot take place if the social climate is not appropriate to the process of creative destruction (and construction). Schumpeter warned against any change in the social innovation in his economic system.

Labor Market Base Theory

The Borts and Stein (BS) (1964) theory of regional economic growth and development has been widely accepted and discussed in regional development literature. This theory discussed on the issues pertaining to regional economic development as measured by employment change. It started with the theory by Roman (1965) which has theoretical roots of Solows (1956) neo-classical model of economic growth proposed that the income growth in the region was from the implication of employment change, stimulated by investment (capital formation) into the region.

The most pertinent issue highlighted within this model is whether regional growth and development is primarily driven by changes in the labor demand or by changes in labor supply (Mathur & Song, 2000). Bort and Stein's (1964) theory assumption leads them to conclude that regional growth is labor supply driven. This follows from their conjecture that the regional labor demand is highly wage elastic and moreover the economic regional development will lead to higher employment needs, therefore the spillover of exogenous employment will occur. However, Mathur and Song (2000) argued that there are two major weaknesses in the BS model. First, their assumption on immigration into the region is exogenous, ignores the direct and indirect interaction effects between immigration and wage changes on labor demand. Second, BS ignores the agglomeration effects of immigration and hence population growth on labor demands. Hence, Mathur and Song (2000) conclude that regional economic development were driven more by changes in labor demand instead of labor supply. They proposed a model of a regional labor market which provides theoretical support to the observed regularity which is that employment growth is primarily labor demand driven.

Social Capital Theory

Social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity (Dekker and Uslaner 2001; Uslaner 2001). Sander (2002,) stated that 'the folk wisdom that more people get their jobs from whom they know, rather than what they know, turns out to be true'. Adler and Kwon (2002) identified that the core intuition guiding social capital research is that the goodwill that others have toward us is a valuable resource. As such they define social capital as 'the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor' (Adler and Kwon, 2002). Dekker and Uslaner (2001) posited that social capital is fundamentally about how people interact with each other. Nevertheless, the idea that a region whose inhabitants have a lot of social capital will on the whole perform better. Social capital implies many social links, some of which may transmit valuable information. Relevant information is often costly, and the ones who have easier access to it may have a decisive advantage.

Because knowledge is increasingly specialized and fragmented, having information about new technologies, potential demand, or matching partners can be essential for regional development.

Social capital relations to regional economic development have become a critical term in the social sciences since Loury's (1977) and Coleman's (1988) seminal studies. Coleman (1990) and Putnan, Leonardi, and Nanetti (1993) focus on the positive spillover effect of social capital. The original work from Loury defines social capital as "naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace . . . an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society" (Loury, 1992)" Penner (1997) on the other hand added that social capital will effect the economic growth as he said social capital is 'the web of social relationships that influences individual behavior and thereby affects economic growth' (Penner 1997). Lin (2001) looking at both operational and strategic development defines Social Capital as 'resources embedded in a social structure, which are accessed/mobilized in purposive actions'. According to this definition, social capital does not consist in social networks per se, but in the resources that these networks may give access to, such as norms, values and trust of social structure. Lin's argument was supported by Fukuyama (1997). He argues that only certain shared norms and values can be regarded as social capital. In addition, Putnan(2000), Ostrom (2000), and Bowles and Gintis (2002) highlighted that trust is central to social capital. Arrow (1972) and Fukuyama (1995) have argued that the level of trust in a society strongly influences its economic performance.

Regional Public Leader

Social capital theory is also embedded in the regional cultural change theory (Dicken, 1998) which is incorporated in social capital norms, trust and values. Changes in culture appear through the process by which institutions are created and modified. New values and identities are thus obtained. As the economy has grown in size, cultural capital has increased too and created more and more different social forms in society. 'Horizontal' cultural and regional-local fragmentation takes place simultaneously with 'vertical' economic globalization and standardization within the so-called global village (Dicken, 1998). Many institutions that are locked into routine practices (Malmberg & Maskell, 1996) and lack innovation may damage positive developments and establish a negative milieu and image with its own people and investors abroad. Economic and social problems due to high unemployment and cultural decline may develop. The problem occurs when the marginal groups seldom win in the normal democratic process and get authority to carry out respective changes. Hence, the quality of the leader matters. Kotter (1996) argues that in the turbulent, fast-changing environment, not just plain old management (planning) was required. Current business literature stresses quite extensively the importance of strategic leadership (see further Kotter, 1988, 1996; Bennis 1994). Public leaders and key persons have been mentioned more often in regional and micro-level economic studies literature (Rokkan & Urwin, 1983; Paasi, 1986a, 1986b, 1996) that potentially contributes to the success of regional economic development.

Applying the leader approach in regional development, we have substantial support from Paasi (1986b) who regards leadership as a precondition for the formation of human groupings. Public leaders in regional economic development are a key position in economic peripheries where a general lack of human resources and thin organization exist. The related theory used was name as Chaos theory. According to this theory, leaders have decisive roles during unstable periods or chaos in a society when a very small fluctuation may qualitatively change the direction of development (Raagma, 2002). Therefore, they are ethical activists of maintaining or alleviating change.

Islamic values

This model will also incorporate Islamic values as the moderator to the public leadership variable. Public leadership should inculcate Islamic values in their administration and decision making related to public welfare. Leaders, who are guided by the Islamic values, have passion to follow the divine path in their daily works. By embedding the Islamic values in public leadership, public leaders promote the norm that is not averse to worldly gain but at the same time ensuring distribution of wealth remain fair to every member of the society, and most importantly, 'the amanah' (trustworthiness) view of wealth is not violated. This amanah seeks to convert the material ambitions of man into attaining spiritual height as his destination in life. More importantly, Islam views conversion of wealth as benevolence through 'infaq' (donation) and 'zakah' (paying alm) or spending in the way of Allah (Hasan, 1995). Through 'infaq' and 'zakah', public leaders would be able to distribute wealth of the state or region fairly among its citizen, whether moslem or non-moslem. Since fairness and justice are experienced by public, stability of the state or region will be attained and development will occur.

The public leaders will gain full trust from the stakeholders and the leaders will become the stakeholders' trustee. In whatever action or decision undertaken, priority in making decision by leader must consider the implication that public or stakeholders will face later (Beekun & Badawi, 1999). In conclusion, Islamic values which are derived from the main sources of Quran and Sunnah, combined with the Islamic culture that blends well with the local malay culture can lead to better leadership strategy and higher regional development.

Theory of Human Capital

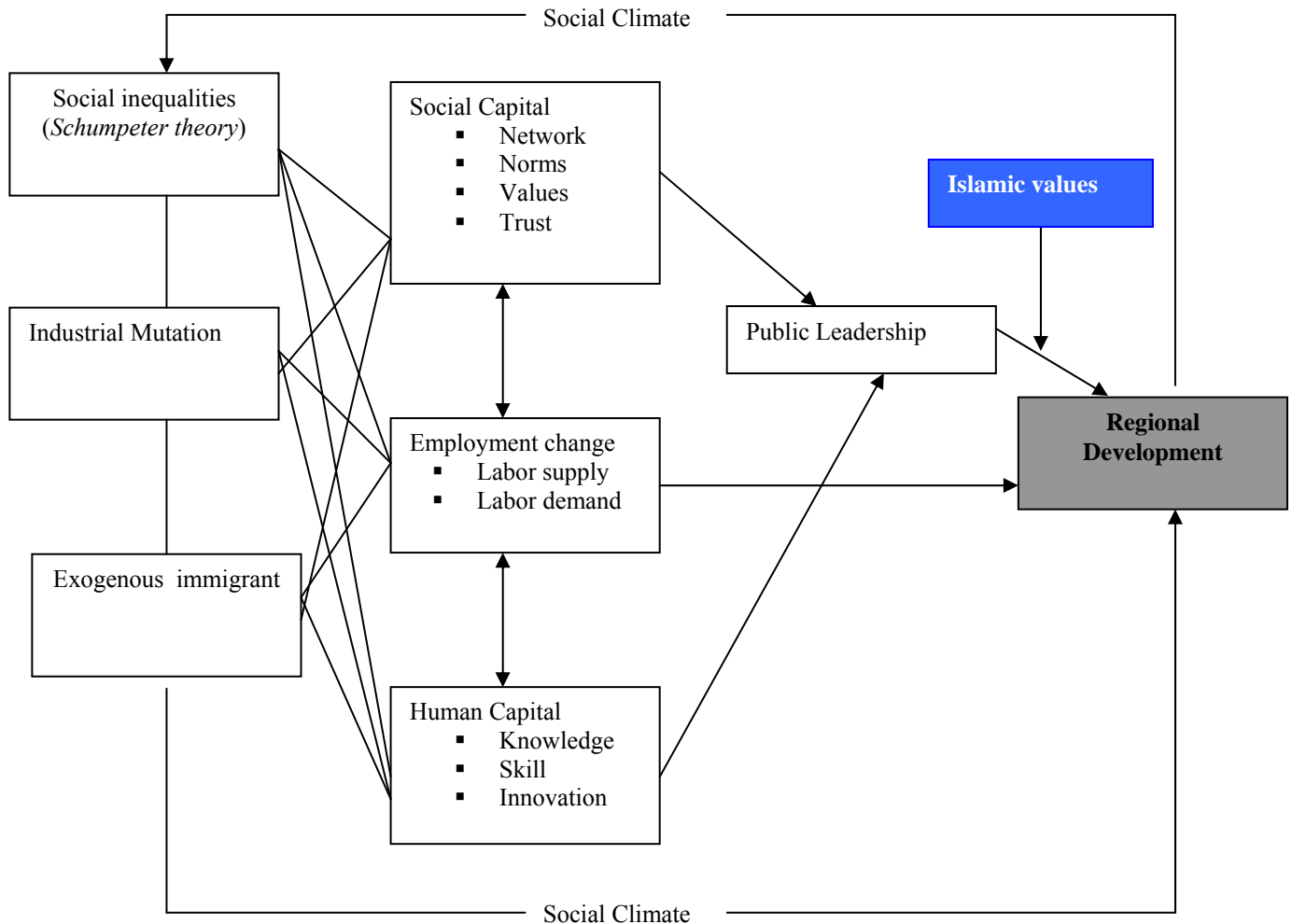
Drennan (2005), Glaeser and Saiz (2004), Simon and Nardinelli (2002), Simon(1998), Glaeser, Scheinkman, and Shleifer(1995), Carihfield and Panggabean (1995) and Rauch (1993) examine determinants of growth for regional development and find that human capital has a powerful impact on economic performance, as measured by population, employment, and income growth, as well as on productivity. This suggests that state and local economic development officials should focus their efforts on encouraging education and retaining and attracting better educated residents. This is supported by Hammond and Thompson's(2008) research on the human capital investment among metropolitan and non- metropolitan areas. They found that human capital investment has a stronger impact on income growth in metropolitan areas than in non- metropolitan areas. In contrast to the large positive impact of human capital investment on growth, we find little correlation between public capital outlays and income growth. This mirror the results reported in the literature for both metropolitan and

non-metropolitan areas and suggest that this type of investment should not be targeted by state and local officials in order to spur economic development. Finally, we find that private physical capital investment in the manufacturing sector encourages per capita income growth in non-metropolitan areas but not in metropolitan areas. This likely reflects the relative decline of one manufacturing in metropolitan areas during the period and the resiliency of manufacturing activity in non-metropolitan areas.

PROPOSED CONCEPTUAL MODEL OF REGIONAL ECONOMIC DEVELOPMENT

Based on the above theory introduced by previous regionalist on regional economic development, a comprehensive model is proposed. This is due to lack of studies addressing the connection on the effects of all dimensions to the regional economic development. Below is the proposed model of regional economic development.

Figure 1: Conceptual Model of Economic Regional Development



CONCLUSION

Economic regional development according to the 2008 World Economic and Social Survey, involves economic insecurity which arises from the exposure of individuals, communities and countries to adverse events. It also due to their inability to cope with and recover from the downside losses. The insecurity have been associated with a significant rise in inequality, that is a hollowing out of middle-class lifestyles and reduced welfare protection. On the other hand, economic shocks and premature deindustrialization have raised fears of an insufficiency of the formal sector jobs needed to accommodate an expanding urban population.

These local concerns have been compounded by new global threats. Unregulated financial markets and international capital flows are currently threatening economic livelihoods across the world economy. On the other hand social climate change, imposes the threat of greater local cultural damage and increasingly distort local value and religiosity. Therefore, factors of public leadership as a precondition for the formation of human groupings will be important to hinder or eliviate change. The moderating roles of islamic values in public leadership will enhance the development of the region according to islamic perspectives since majority of inhabitants of ECER are predominantly Malay and Moslem.

The attention brought in this article is to present the significant impact of regional development. Social capital in relation to changing relationship of territory and function on social construction of regional systems of production were brought into attention. Much emphasis has been put in recent work on the concept of social mobility and social structure. Regional economic development were also found to be driven by changes in labor demand and labor supply as well as the human capital. They found that human capital investment has a stronger impact on income growth in the developed region.

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SMEs AND HALAL CERTIFICATION

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ABSTRACT

This paper reports on a survey of SMEs and their perception towards Halal Certification. Based on 136 SMEs which participated in the study, only 64.9 per cent of these SMEs have obtained Halal certification and 44.3 per cent of these entrepreneurs are Muslims. A test of association between religion and certification was found to be significant. Although more than 60 per cent have ventured internationally, there is no significant association between halal certification and venturing internationally. Among those that have obtained Halal certification, only 50.7 per cent agree that Malaysia has a proper monitoring mechanism on Halal certification compliance and only 38.2 per cent of them agree that information on Halal hub in Malaysia is sufficient. This is an implementation gap which needs to be addressed.

Keywords: *halal certification, SMEs, halal hub*

INTRODUCTION

Islam is the fastest growing religion on earth. The total number of Muslims worldwide is estimated at 1.4 billion with approximately 11 million Muslims live in North America and their population is growing three times faster than any other minority group (Islamic Food and Nutrition Council of America, 2004). Western Europe has a Muslim population of approximately 12 to 13 million Muslims who originate from North Africa and other Arabic-speaking countries, Turkey, the Indian subcontinent, Africa, and the Balkan region. Some European cities have a Muslim population of 10% or more, such as Brussels with 17% (De Ley, 2004). There are about 150,000 Muslims living each in Austria and Switzerland, and more than 2 millions in the Federal Republic of Germany (Herbert et al., 2006). The global halal industry is huge and worth US\$500bil to US2 trillion, coupled by the surge in demand for halal products and services worldwide (The STAR, 4 August 2008). As such, the Muslim population constitutes a considerable market segment in today's food market. In Malaysia, incentives have been formulated to encourage more business to go halal and financial institutions have targeted SMEs in particular to achieve halal certification (The STAR, 4 August 2008).

BACKGROUND

The halal industry has seen considerable growth and development over the years fuelled by the escalation in awareness of it among consumers and product manufacturers. With the global emphasis in food marketing, it is thus imperative that the food industry understands the requirements of the Muslim consumers if it wants to tap the Muslim market which represents 24 per cent of the world's total population in 2005 (one man out of four) and this figure will attain 33% in 2050 (one man out of three), and it could reach 37% in 2100 (one man out of 2.7) (Global Leader, 2008).

In many societies, religion plays one of the most influential roles in food choice (Musaiger, 1993; Dindyal, 2003). The impact of religion on food consumption depends on the religion itself and on the extent to which individuals follow the teachings of their religion. As for the Muslim, halal is a credence quality attribute, i.e a product characteristic that cannot be evaluated or ascertained by the individual consumer, even upon or after consuming the good (Darby and Karni, 1973). As a product attribute, "halal" refers to the nature, origin, and the processing method of the foods and foods produced taking animal welfare or sustainability issues into account, as such the presence of the credence quality has to be clearly communicated through its labeling. Hence the communication source and message conveyed with respect to the credence quality have to be trustworthy and believable (Verbeke, 2005).

RESEARCH QUESTIONS

Being the first country to introduce Halal status and Halal logo, which was introduced in 1971; in fact, since 2004, Malaysia has also introduced its halal standard MS 1500 which was later adopted by other countries. Halal certification is important as it is the sole identifying mark that the product meets the halal requirements. While there have been efforts to create organizations such as Muslim Consumer Group to certify food products as halal, however, up to date there is no one global Halal standard. Currently, there is no worldwide authority on halal, neither a consistent trademark and there are over 15 halal logos in the market, although international harmonization efforts have begun (Dorothy Minkus-McKenna, 2007). In the 1990s there was a movement towards developing a universal Halal standard spearheaded by the ASEAN organisation, but this did not materialise because of different religious standards around the world. Instead, a set of ASEAN guidelines were drawn up, and endorsement for food products or services is bestowed by third party organisation, usually an Islamic body. However, Malaysia is the only country in the world where certification is done by the government (Eileen Ng, 2007). With the above scenario, there is a need to get a market leader that can lead the others in developing as well as capitalizing from the highly lucrative global Halal industry. As such, is the Malaysian government able to be the market leader in promoting its halal certification and be one of the worlds' halal hubs for food products? Does the government provide enough support to achieve the nation's aim of being the regional hub for halal food products? To answer these two questions, we need to get some feedback from the customers of the Malaysian halal certification like the SMEs which have obtained halal certification.

CONTRIBUTION OF THIS STUDY

This paper is able to highlight some weaknesses that the Malaysian government needs to look into and provides some suggestions in strategizing to be the leader in halal certification besides promoting Malaysia to be one of the worlds' halal hubs for food products.

LITERATURE REVIEW

Halal Certification in Malaysia

In producing halal foods, there are two main considerations: the use of proper ingredients and the avoidance of cross contamination. Halal certification is important as it is the sole identifying mark that

the product meets the halal requirements. A detection technique for halal-labeled food developed by researchers from the International Islamic University Malaysia is expected to contribute the establishment of Malaysia to become the leading world halal hub (Farouk et al., 2006).

The main goal of halal certification is to ensure that the halal requirements of the goods are in place. A halal designation means a product complies with Islamic principles of hygiene and humane treatment of animals, and other rules involving the production processes. Halal certification of foods is becoming increasingly important as the country's Muslim population grows. Nowadays, Muslims are making their presence felt socially and politically and are requesting halal-labeled food products. In France, for example, the first fast food restaurant, Beurger King Muslim, opened in 2005 targeting young Muslims desiring halal convenience foods. It differentiates itself from other ethnic, halal restaurants by publicly confirming its Islamic identity and thereby it responds to the rise of a strong Islamic attitude among young Muslims expressed by consuming halal foods and wearing Islamic inspired clothing (Bergeaud-Blackler, 2006).

There are several steps outlined by the Jabatan Kemajuan Islam Malaysia (JAKIM), agency entrusted with issuing halal certification like:

Document Evaluation – application forms and supporting documents with detailed analysis on the company's profile with declared ingredients, suppliers' details, manufacturing process and procedures, etc.

Inspection – physical inspection includes an assessment of declared ingredients, storage methods of raw materials, and finished products, cold rooms, processing plant manufacturing flows and handling aspects of production, packaging materials, general hygiene, quality control and assurance practices;

Report preparation – technical inspectors will write a full report on the status of the application based on its site inspection;

Evaluation Committee and Recommendation – report will be tabled and evaluated; and

Issuing of Halal Certificate – once approved, JAKIM will issue the Halal certificate and permission to use the Halal logo will be granted. The certificate is valid for two years with renewal of the application to be submitted three months before the expiry date. JAKIM will carry out constant monitoring to ensure conformity to the Halal standards.

The Malaysian government, through various initiatives has shown determination to develop as well as capitalise from the highly lucrative global Halal industry. Among the most significant step taken in this direction is the establishment of a private organisation Halal Industry Development Corporation (HDC), which was incorporated in 2006 and is placed under the National Industry Task Force within the Prime Minister's Department and is tasked with realising Malaysia's global Halal Hub ambitions by 2010. It is directly responsible to attain the vision of elevating Halal as the preferred choice of

global standard. In line with the needs of global society, HDC will work with various multinational giants including Nestlé, Carrefour, Tesco and McDonald's since they are in tune with the needs of global consumers in every segment of the industry that they represent.

To date, there are two Islamic standards available – the Malaysian Halal Standard MS 1500:2004 and Quality Management Systems (QMS) MS 1900:2005. The former, launched in 2004 (Norzuhaira Ruhanie, 2008), made Malaysia the first country to issue such a standard for the manufacturing, preparation, management and storage of halal foods. It covers food safety principles and hazard analysis critical control points, as well as good cleaning practices for small and medium food industries. The standard was developed by the Industry Standards Committee (ISC) on Halal Standards, which includes the Department of Islamic Development Malaysia (JAKIM), Department of Standards, IKIM and Malaysian Institute for Industrial Research and Standards (SIRIM), based on a previous standard developed by SIRIM (MS 1500:2000). While the latter (QMS MS 1900:2005) was introduced in 2005 and specifies the requirements for a QMS to be Syariah-compliant, ensuring that organisations are managed in accordance with values such as justice, honesty, truthfulness, sincerity, timeliness and discipline. It details the halal and non-halal aspects of all processes necessary for the delivery of services and products to be identified, communicated and effectively implemented.

World Halal Hubs

Port of Rotterdam is the only certified European Halal Hub (Halal Journal, 2007). According to Mackelenbergh (BERNAMA, 2008), currently only three percent of the capacity at the Port of Rotterdam was utilised for halal products. He said there was a great demand for halal products in England, France and Germany where there was a large population of Muslims. Hence Malaysian exporters are urged to seize the opportunity to network in Europe and build up partnerships with the right European suppliers in order to cater to this growing demand. Further he expressed that it is difficult for Muslim consumers in Europe to get halal goods from hypermarkets and many halal products are sold at smaller shops due to the lack of supply chain. By producing halal products that met the required standards and having a good business plan, Malaysian exporters have a good chance of supplying their halal goods to the European market.

Initiatives Undertaken by Malaysia

As a pioneer in promoting halal food globally, Malaysia's locally developed halal certification serves as an example for other nations and has been commended by the United Nations as a model system. In fact the country's credence has further strengthened following the recognition by the Organisation of the Islamic Conference (OIC) on the nation's halal certification (The STAR, 4 August 2008). Currently, halal products certified in Malaysia run the gamut from processed chicken and beef products to ice cream, chocolate and food supplements. This is in line with the nation's aim of being the regional hub for halal food products.

Given that Malaysia's potential to spearhead and further promote the global halal industry, the Halal Industry Development Corporation would have a launching grant of RM25 million to draw up

strategies, to coordinate and ensure the integrated and comprehensive development of the industry hence be able to dominate the global halal market (BERNAMA, 2006). A sum of RM50 million was also allocated to set up halal parks in Pasir Mas, Kelantan; Gambang, Pahang; Chendering, Terengganu and Padang Besar, Perlis. The SME Bank was also allocated a sum of RM20 million to finance entrepreneurs to develop these products. The Scheme provides assistance to Small and Medium Enterprises (SMEs) for productivity and quality improvement and to achieve international quality standards and certification

Grants also have been allocated to aid SMEs in becoming producers. One such grant is the SMIDEC matching grant for the development and promotion of Halal products where 50% of eligible expenses is borne by the Government (SME Annual Report, 2006). The expenses include product development and formulation, acquisition of machinery and equipment, and any other related costs for compliance to Halal certification. As a further incentive, the Government has allowed an Investment tax Allowance of 100% on qualifying capital expenditure incurred within a period of five years. The allowance can be offset against 100% of statutory income in each year of assessment. To fuel the growth of SMEs, the Government in collaboration with Bank Negara had introduced a myriad of incentives. It recently launched two financing facilities of up to RM1.2bil to help SMEs cope with the impact of higher costs (The STAR, 4 August 2008). The RM700mil SME Assistance Facility and the SME Modernisation Facility, with an allocation of RM500mil, are expected to help SMEs ride through the current higher food and raw material prices.

In November 2006, HDC tied up with Intertek Group Plc, a global leader in testing, inspecting and auditing, and certification (SME Annual Report, 2006). Intertek certification includes ISO 90000 and global food safety management standards including the British Retail Consortium Food Technical Standard (BRC) and Hazard Analysis & Critical Control Points (HACCP). A total of RM21 million is to be invested in building a centre of excellence for Halal testing and training in Kuala Lumpur. The training centre will also house state-of-the-art testing laboratories catering to the Halal food industry. The intention is for the institute to assist the industry in innovating Halal products through training and education, and ultimately, to institutionalise global Halal best practices and guidelines.

In order to assist SMEs in marketing Halal products, vendor programs have been set up with Parkson, Nestle, Tesco and Carrefour. Nestle Malaysia in 2006 set up a mentoring program to assist Halal SME (SME Annual Report, 2006).

METHODOLOGY

Data collection

The primary empirical data used in this study is based on 136 SMEs owners who responded to our questionnaire during the MIHAS Showcase (7-11 May 2008) and Seminar on Certification for exporting food products on 18 June 2008 at MATRADE. The targeted respondents were the owner of the SME involved in producing halal foods domestically, internationally or both. This is done to elicit their feedback regarding their perceptions on halal certification as currently practiced by Malaysia.

Questionnaire design

The instrument used is a questionnaire that has been divided into four parts. Part I captures the demographic and background of the entrepreneur. While Part II requires the entrepreneur to rate a set of Five-point Likert scale question based on his or her personal perceptions regarding the halal certification requirements by the Malaysian Government. Similarly, Part III requires the entrepreneur to rate on a set of Five-point Likert scale question according to his or her perceptions on the ability, support and monitoring system by the Malaysian Government in achieving its objective to become a halal hub. Finally Part IV requires the entrepreneur to assess his/her satisfaction with information dissemination on the Malaysian halal hub through media like television, radio and internet.

RESULTS AND DISCUSSION

SMEs entrepreneurs and halal certification

Table 1: Muslim entrepreneurs and halal certification

Do you consider yourself a Muslim?		Owned halal certification				Total	
		Yes	%	No	%	No.	%
	Yes	58	44.3	27	20.6	85	64.9
	No	18	13.7	28	21.4	46	35.1
TOTAL		76	58.0	55	42.0	131	100.0

Out of 136 responses we received, only 131 answered these questions, whereby 64.9 % of these SMEs owned halal certification and 44.3% are Muslims. When tested at 95% confidence level between religion and halal certification, there is a significant relationship between these two. Hence we can deduce that there is a significant relationship between religion of entrepreneurs and owning a halal certification at 95% confidence level.

However, not all Muslim entrepreneurs owned halal certification. As proven in Table 2, among respondents who owned halal certification, 56% of them agreed that the process of getting halal certification was tedious and stringent. Some other reasons given by this group: the process is not user friendly, and claimed that they will never get the certification if they do not operate in a proper business premise. Further, if the entrepreneur sells several products, he or she needs to get certification for every product, hence it will be very costly. Some of the entrepreneurs only managed to get the MS ISO 1500:2004 for their food quality and did not proceed for the halal certification because the process is a bit tedious and takes time. They were also of the opinion that it makes no difference for them to proceed for the halal certification since they have already met the quality standard.

SMEs perceptions on halal certification

Table 2 : SMEs perceptions on halal certification

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
a) Owned halal certification: The process of getting halal certification is tedious * Missing 1.	15	20	27	36	18	24	10	13.3	5	6.7
b) Owned halal certification: The process of halal certification is stringent	12	16	30	40	22	29.3	11	14.7	0	0

Both groups (owned and do not own halal certification) agree that halal certification is important in increasing their market share and market competitiveness and both are significant at 95% confidence level. However some failed to own halal certification. This could support the claims made by the entrepreneurs who failed to own halal certification (as discussed under Section VII.I) or could be due to lacking in market orientation.

61.3% of entrepreneurs who ventured internationally owned halal certification and it is not significant at 95% confidence level. Again this finding also could support the claims made by the entrepreneurs who failed to own halal certification or could be due to lacking in market orientation. Thus we can deduce that these SMEs are able to penetrate international market although they do not own halal certificate.

With regards to their consumers, both groups agreed that their consumers are very particular about halal certificate and the certification is able to promote confident, trust and satisfaction amongst their consumers. Both of these statements are significant at 95% confidence level.

Perceptions on Malaysia to lead the halal certification

Overall I agree that Malaysia has the potential to lead the halal certification

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	4	2.9	2.9	2.9
Disagree	4	2.9	2.9	5.9
Neutral	11	8.1	8.1	14.0
Agree	52	38.2	38.2	52.2
Strongly agree	65	47.8	47.8	100.0
Total	136	100.0	100.0	

Majority of our respondents (about 86%) agreed that Malaysia has the potential to lead the halal certification. Similarly most of our respondents (about 85.3%) agreed that Malaysia has the potential to be a halal hub (as tabulated in Table 3).

Perceptions on Malaysia to be a halal hub

Table 3: Perceptions on Malaysia to be a halal hub

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
a) Overall I agree that Malaysia has the potential to be a halal hub.	60	44.1	56	41.2	11	8.1	7	5.1	2	1.5
b) As far as infrastructure in Malaysia is concerned, the regulatory framework for halal hub has sufficient standards`.	11	8.1	65	47.8	38	27.9	17	12.5	5	3.7
Malaysia has a proper monitoring mechanism for companies to comply with halal certification	12	8.8	57	41.9	31	22.8	30	22.1	6	4.4
Malaysian government is proactive in enforcing the halal certification * Missing 1	19	14.0	67	49.3	30	22.1	17	12.5	2	1.5
Malaysian transportation system is effective to support the hub * Missing 1	16	11.8	63	46.3	38	27.9	14	10.3	4	2.9
Malaysian government has provided facilities for halal products' research centers	18	13.2	54	39.7	46	33.8	15	11.0	3	2.2

However the percentage decreases to about 55.9% of our respondents agreed that the regulatory framework for halal hub has sufficient standards, interestingly only 50.9% of our respondents agreed that Malaysia has a proper monitoring mechanism for companies to comply with halal certification. This implies that the government needs to upgrade its monitoring system and focus more on the regulatory framework and its standard. 63.7% of our respondents agreed that the Malaysian government is proactive in enforcing the halal certification, but only 58.1% of respondents agreed that Malaysian transportation system is effective to support the hub. Thus the government needs to upgrade its transportation system in achieving its mission. Similarly, only 52.9% of respondents were of the opinion that Malaysian government has provided facilities for halal products' research centers. This suggests that the government needs to pay more attention to research activities related to the halal industry.

Information dissemination

Table 4: Information dissemination

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
a) The content of information about the halal hub is sufficient	6	4.4	46	33.8	47	34.6	34	25.0	3	2.2
b) The content of information about the halal hub is up to date.	5	3.7	44	32.4	57	41.9	26	19.1	4	2.9
c) The content of information about the halal hub is published in a regularly accessed media.	8	5.9	50	36.8	42	30.9	30	22.1	6	4.4
d) The information about halal hub is relevant.	11	8.1	69	50.7	39	28.7	15	11.0	2	1.5
e) There is sufficient number of websites on the halal products	5	3.7	55	40.4	54	39.7	17	12.5	5	3.7

Regarding information dissemination, most of our respondents were on the neutral. However, the highest disagreement falls on the insufficiency of the content of information (27.2%). The other disagreements are as follows: The content of information about the halal hub is published in a regularly accessed media (26.5%), the content of information about the halal hub is up to date (22%), there is sufficient number of websites on the halal products (16.2) and lastly only 12.5% disagree that the information about halal hub is relevant.

CONCLUSION AND SUGGESTIONS

We can conclude that there is a significant relationship between religion of entrepreneurs and owning a halal certification, whereby most of those who have halal certification are Muslim. However, not all Muslim entrepreneurs own halal certification. This could be due to the process of getting halal certification was tedious and stringent or the process is not user friendly like the Malaysian authority needs the entrepreneur to get certification for every product that he or she sells and need to have a proper business premise as a precondition for certification. Although both groups (owned and do not own halal certification) agreed that halal certification is important in increasing their market share and market competitiveness and both are significant at 95% confidence level, the relationship between ventured internationally and owned halal certification is not significant.

Majority of the respondents agreed that Malaysia has the potential to lead the halal certification and has the potential to be a halal hub. However the government needs to improve on the regulatory framework for halal hub, and improve monitoring mechanism for companies to comply with halal certification. Although majority of our respondents were of the opinion that the Malaysian government is proactive in enforcing the halal certification, the government needs to upgrade its transportation system and concentrate on providing more facilities for halal products' research centers in achieving its

vision. Regarding information dissemination, the authority needs to improve on the sufficiency of the content of information, publish it in a regularly accessed media and always update the information.

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ISLAMIC MICROFINANCE: AN ETHICAL ALTERNATIVE TO POVERTY ALLEVIATION

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ABSTRACT

*The primary mission of microfinance is to help the poor in assisting themselves to become economically independent. The main aim of the paper is to assess the potential of Islamic financing schemes for micro financing purposes. Islamic finance has an important role to contribute for furthering socio-economic development of the poor and small (micro) entrepreneurs without charging interest (read: *riba*). Islamic financing schemes also have moral and ethical attributes that can effectively motivate micro entrepreneurs to thrive. The paper argues that Islamic finance offers various ethical schemes and instruments that can be advanced and adapted for the purpose of microfinance. Comparatively, *qardhul hasan*, *murabahah* and *ijarah* schemes are relatively easy to manage and will ensure the capital needs (*qardhul hasan*), equipments (*murabahah*) and leased equipments (*ijarah*) for potential micro entrepreneurs and the poor. Participatory schemes such as *mudarabah* and *musharakah*, on the other hand, have great potentials for microfinance purposes as these schemes can satisfy the risk sharing needs of the micro entrepreneurs. These schemes, however, require specialized skills in managing risks inherent in the structure of the contracts. In theory, different schemes can be used for different purposes depending on the risk profile of the micro entrepreneurs.*

Keywords: *microfinance, Islamic financing, poverty, entrepreneurs*

INTRODUCTION

Microfinance means “programme that extends small loans to very poor people for self employment projects that generate income in allowing them to take care of themselves and their families” (Microcredit Summit, 1997). The World Bank has recognized microfinance programme as an approach to address income inequalities and poverty. The microfinance scheme has been proven to be successful in many countries in addressing the problems of poverty. The World Bank has also declared 2005 as the year of microfinance with the aim to expand their poverty eradication campaign.

The main aim of the paper is to assess the potential of Islamic financing schemes for micro financing purposes. The paper argues that Islamic finance has an important role for furthering socio-economic development of the poor and small (micro) entrepreneurs without charging interest (read: *riba*). Furthermore, Islamic financing schemes have moral and ethical attributes that can effectively motivate micro entrepreneurs to thrive. The first part of the paper introduces the concepts of microfinance and presents a case for Islamic microfinance. The paper then discusses, the potentials of

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various Islamic financing schemes that can be advanced and adapted from microfinance purposes including techniques to mitigate the inherent risks.

MICROFINANCE AND POVERTY ALLEVIATION

Microfinance grew out of experiments in Latin America and South Asia, but the best known start was in Bangladesh in 1976, following the wide-spread famine in 1974. Advocates argue that the microfinance movement has helped to reduce poverty, improved schooling levels, and generated or expanded millions of small businesses. The idea of microfinance has now spread globally, with replications in Africa, Latin America, Asia, and Eastern Europe, as well as richer economies like Norway, the United States, and England.

Among the features of microfinance is disbursement of small size loan to the recipients that are normally micro entrepreneurs and the poor. The loan is given for the purpose of new income generating project or business expansion. The terms and conditions of the loan are normally easy to understand and flexible. It is provided for short term financing and repayments can be made on a weekly or longer basis. The procedures and processes of loan disbursements are normally fast and easy. Additional capital can also be given after the full settlement of the previous loan. Microfinance is an alternative for micro entrepreneurs, which are normally not eligible or bankable to receive loans from commercial banks.

The basic principle of microfinance as succinctly expounded by Dr. Muhamad Yunus, the founder of Grameen Bank Bangladesh, and the recipient of the Nobel Peace Prize in 2006, that credit is a fundamental human right. The primary mission of microfinance is, therefore to help poor people in assisting themselves to become economically independent. Credit or loan is given for self employment and for financing additional income generating activities. The assumption of the Grameen model is that the expertise of the poor are under utilized. In addition, it is also believed that charity will not be effective in eradicating poverty as it will lead to dependency and lack of initiative among the poor. In the case of Grameen Bank of Bangladesh, women comprised of 95% of the borrowers, and they are more reliable than men in terms of repayments (Gibbons and Kassim, 1990).

In order to facilitate loan process for the poor, loan is given without collateral or guarantor, and normally is based on trust. Microfinance is an alternative for loan because the conventional banking system recognized the poor as not-credit worthy. Loan facility is provided based on the belief that “people should not go to the bank but bank should go to the people”. In order to obtain the loan, the prospect borrower needs to join the recipient group of microfinance. The group members are given small loans, and the new loans will be given after the previous loans are repaid. The repayment scheme is on short term basis on a scale of a week or every two weeks. The loans are also given together compulsory saving package (e.g. compulsory saving in the group fund) or voluntary saving. The loan priority is for establishing social capital through group joint projects established among the loan recipients.

The loan contract of a Grameen model has a twist, and this is what has interested academic economists most. (De Aghion & Morduch, 2005). The twist is that should a borrower be unable to repay her loan (about 95% of borrowers are women), she will have to quit her membership of the bank – as will her fellow group members. While the others are not forced explicitly to repay for the potential defaulter, they have clear incentives to do so if they wish to continue obtaining future loans. This helps micro-lenders overcome “adverse selection” problem. The problem is that a traditional bank has a difficult time distinguishing between inherently “risky” and “safe” borrowers in its pool of loan applicants; if it could, the bank would charge the same (high) rates to all potential borrowers. The outcome of traditional lending activities is inefficient since, in an ideal world, projects undertaken by both risky and safe borrowers should be financed. Therefore, the advantage of the group lending methodology is that it can put local information to work for the outside lender. Adverse selection is mitigated as villagers (safe and risky) know each others’ types. From the standpoint of the micro-lender, bringing the safe borrowers back into the market lowers the average incidence of default and thus lowers costs. With lower costs, the micro-lenders can in turn reduce interest rates even further.

Another strand of argument in support for group lending methodology is that it can potentially mitigate *ex ante* moral hazard problems. Moral hazard problems arise from the fact that financial institution cannot effectively monitor borrowers and therefore cannot write a credible contract that enforces prudent behaviour. Stiglitz (1990) explains that under group lending methodology, group members agree to shoulder a monetary penalty in the case of default by a peer, the group members have incentives to monitor each other, and can potentially threaten to impose “social sanctions” when risky projects are chosen. Since neighbours can monitor each other more effectively than a bank and thus the effective delegation takes place for *ex ante* monitoring from micro-lender to borrowers.

Another potential benefit of group lending is it reduces *ex post* moral hazard problems. Moral hazard problems arise as it is assumed that the financial institution cannot observe such returns and thus borrowers have incentives to pretend that their returns are low or default on their debt obligations. Group lending with joint responsibility as prescribed by the Grameen model, however; can lower the incidence of strategic default when project returns can be observed by the borrowers’ neighbours, under the fear of suffering from social sanctions, borrowers will declare their true return and repay their debt obligation (De Maghion & Murdoch, 2005). By lowering the incidence of strategic default, group lending can potentially bring interest rates down as well.

ETHICAL PRINCIPLES OF ISLAMIC FINANCE

Islamic finance is founded on the prohibition of *riba’*. *Riba’* was prohibited in all forms and intentions.⁷⁶ Thus, the main aim of Islamic finance and banking is to provide the Muslim society with an ethical Islamic alternative to the conventional banking system that was based on *riba’* (Ziauddin,

⁷⁶The revelation on the prohibition of *riba’* in the *Qur’an* can be classified into 4 stages; the first stage was on the moral denunciation of *riba’* in *ar-Rum* verse 39; the second stage was on comparing *riba’* with the Jews in *an-Nisa’* verse 61; the third stage was on the legal prohibition in *Al-Imran* verse 130-132; and finally, the fourth stage was on *al-bay’* (trading) as the alternative to *riba’* in *al-Baqarah* verse 275-281.

1991). *Riba'* can be classified into at least two main types, namely credit *riba'* (*riba' al-nasi'ah*) and surplus *riba'* (*riba' al-fadl*) (Az-Zuhayli, 2006). Credit *riba'* is any delay in settlement of a due debt, regardless whether the debt is in the form of goods sold or loan. Muslim jurists define *riba' al-nasi'ah* as bringing to the lender a fixed increment after an interval of time, or extension of time over the fixed period and increase of credit over the principal. On the other hand, surplus *riba'* (*riba' al-fadl*) is the sale of similar items with a disparity in amount in the six canonically-forbidden categories of goods: gold, silver, wheat, barley, salt, and dry dates. This *riba'* is by way of excess over and above the quantity of the commodity advanced by the lender to the borrower. *Riba'* also exists if there is either inequality or delay in delivery of the goods offered.

As explained by Qureshi (1991), Imam Fakhruddin Razi in his book *al-Tafsir al-Kabir* emphasizes that there are basically 3 ethical reasons for the unlawfulness of *riba'*. The first reason is where the creditors can ensure its income from the interest paid by the debtor that will lead to exploitation and living in reduced circumstances which is a massive inequity. Charging excess or surplus in exchanging one commodity against the other will lead to the exploitation of the borrowers. The borrowers would have to pay back the interest on top of the principal. This will make the lenders better off at the expense of the borrowers. In addition, the strong condemnation of interest based transactions is intended to uphold equity and the protection of the poor (i.e. the borrower). In other words, interest or *riba'* supports the possibility for wealth to be accumulated in the hands of a few, and thereby shows that a man's concern for his fellow men is decreased.

Secondly, since interest or *riba'* is predetermined and the creditor is certain to receive the interest imposed, it may prevent the creditor from being involved in any occupation because it is certainly easy to receive income from the interest of a loan (Qureshi, 1991). In this situation, the creditor has not made any effort or undergone any hardship in acquiring income and this will hinder the progression of worldly affairs. Finally the unlawfulness of *riba'* is due to an end of mutual sympathy, human goodness and obligations because the practice of *riba'* may lead to borrowing and squandering (Qureshi, 1991).

As an alternative to *riba'*, the profit and loss sharing arrangements are held as an ideal mode of financing in Islamic finance. It is expected that this profit and loss sharing will be able to significantly remove the inequitable distribution of income and wealth and is likely to control inflation to some extent (Siddiqui, 2001). Furthermore, the profit and loss sharing may lead to a more efficient and optimal allocation of resources as compared to the interest-based system. Since the depositors are likely to get higher returns leading to richness, it is hoped that progress towards self-reliance will be made through an improved rate of savings. Thus, this will ensure justice between the parties involved as the return to the bank on finance is dependent on the operational results of the entrepreneur (Siddiqui, 2001).

Historically, Prophet Muhammad was among the poor and later became a successful trader for many years before he became a prophet. This was mainly due to the microfinance capital for his ventures that was provided on a PLS based on *mudharabah* by a wealthy widow, Khadijah, who later

became his wife. Trade, with its associated risks, was fundamental to the economy of Arabia, since communities tended not to be self-sufficient and they depended on the movement of goods over large distances, in difficult and dangerous terrain, which required substantial risk capital. The Qur'an indeed commends trade (Al-Baqarah, verse 198), and defines the poor (Al-Baqarah, verse 273) as those that need alms.

In support of providing access to Islamic financing to the poor and small entrepreneurs, Chapra (1992, pp. 260 - 261) has succinctly argued that: "Lack of access of the poor to finance is undoubtedly the most crucial factor in failing to bring about a broad-based ownership of businesses and industries, and thereby realizing the egalitarian objectives of Islam. Unless effective measures are taken to remove this drawback, a better and widespread educational system will only help raise efficiency and incomes but ineffective in reducing substantially the inequalities of wealth. This would render meaningless the talk of creating an egalitarian Islamic society. Fortunately, Islam has a clear advantage over both capitalism and socialism which is built into its value system and which provides biting power to its objective of socio-economic justice."

Chapra (1992, pp. 269) further emphasized that: "While there may be nothing basically wrong in large enterprises if they are more efficient and do not lead to concentration of wealth and power. It seems that the adoption of a policy of discouraging large enterprises except when they are inevitable, and of encouraging SMEs, as much as possible, would be more conducive to the realization of the *Maqasid Ash-Shari'ah* (Goals of Islamic Law). This would have a number of advantages besides that of reducing concentration of wealth and power. It would be more conducive to social health because ownership of business tends to increase the owners' sense of independence, dignity and self-respect."

The Grameen Bank is an outstanding example of a successful microfinance institution. The award of the Nobel Prize in 2006 to the founder of the Grameen Bank, Muhammad Yunus, brought microfinance to international attention. Although Bangladesh is a predominantly Muslim country, the Grameen Bank is not a *shari'ah* compliant financial institution as it charges interest on loans, and pays interest to depositors. Even though Grameen Bank calculates its rates of interest in simple rather than in compounded terms, it does not mitigate the *riba'* transactions (Wilson, 2007).

There are also wider concerns with conventional microfinance from a Muslim perspective. Although the provision of alternatives to exploitative lending is applauded, there is issue of whether these are sustainable if they conflict with the values and beliefs of local Muslim communities. As interestingly pointed by Wilson (2007), simply extending materialism and consumerism into rural poor communities and urban shanty town settlements could actually undermine social cohesion, by raising false expectations which could not be fulfilled, resulting in long term frustration and possible discontent or even economic crime. Supporters of Islamic alternatives to conventional microfinance have as their aim the enhancement of Islamic society, rather than with the promotion of values that might be contrary to *shari'ah*. Comprehensive Islamic microfinance should involve not only credit through debt finance, but the provision of equity financing via *mudarabah* and *musharakah*, savings

schemes via *wadiah* and *mudarabah* deposits, money transfers such as through *zakat* and *sadaqah*, and insurance via *takaful* concept.

Ahmed (2002) noted several distinctions that distinguish conventional microfinance from Islamic Microfinance. Both conventional microfinance and Islamic Microfinance can mobilize external funds and saving of clients as their source of fund. However, Islamic microfinance can also exploit Islamic charity such as *zakat*⁷⁷, and *waqf*⁷⁸ as their source of fund for funding. For modes of financing, conventional microfinance can easily adapt interest-based financing while Islamic microfinance should eliminate interest in their operation. Therefore, Islamic microfinance should explore possible modes of Islamic financing as instruments in their operation.

Islamic microfinance can also maximize social services by using *zakat* to fulfill the basic needs and increase the participation of the poor. In conventional microfinance, the institution can directly give cash to their client as the financing. In contrast, Islamic microfinance does not give cash to their client as loan is not allowed in Islam unless there is no interest or any incremental amount charge on that loan.

Conventional microfinance had also been questioned on its overall desired impact since the poor are subjected very high interest rate some up to 30%. Some even argued that disbursing credit to the poor to make financial gains out of the same cannot be the aim of microfinance institutions. Interest charged is rather oppressive for their poor receivers, and thus fails to achieve the noble objective of microfinance. According to various studies, a notable number of the recipients were also found to be well above the poor category.

Islamic microfinance, on the other hand, utilises Islamic financial instruments which are based on PLS schemes rather than loan. Conventional microfinance institutions focused mainly on women as their client. On the other hand, Islamic microfinance institution should not only focus on women but must also be extended to the family as a whole. Moreover, conventional microfinance used group lending as a way to mitigate risk in their operation. Islamic microfinance may also use similar technique, but they can also developed Islamic ethical principles to ensure their client pays the payment regularly.

⁷⁷ *Zakat* is the third of the five basic pillars of Islamic faith. *Zakat* is a levy normally at the rate of 2.5% charged on certain types of wealth such as business wealth, personal income etc. Only the Muslims who own the wealth beyond the minimum limit are charged *zakat*. In a way, it is a compulsory levy imposed on the Muslims so as to take surplus money or wealth from the comparatively well-to do members of the Muslim society and give it to the destitute and needy. In Islam, all resources belong to God and the wealth is held by human beings only in trust. *Zakat* is also a part of a social system of Islam as the poor has certain rights in the wealth of the rich. Thus, *zakat* acts as a mechanism for the distribution of wealth, which helps closing the gap between the poor and the rich.

⁷⁸ The word *waqf* in Arabic literally means “confinement and prohibition” or causing a thing to stop and stand still. In Islamic legal terminology, *waqf* is defined as protecting an asset in order to refrain the usage, and will be utilized and benefited for the purpose of charity.

There are a number of *shari'ah* compliant microfinance schemes, notably those operated by Hodeibah microfinance program in Yemen, the UNDP *Murabahah* based microfinance initiatives at Jabal al-Hoss in Syria, *Qardhul Hasan* based microfinance scheme offered by Yayasan Tekun in Malaysia, various schemes offered by Bank Rakyat Indonesia, and Bank Islam Bangladesh. Many argued that Islamic microfinance is best provided by non-banking institutions while some argued that with *mudharabah* and *musharakah* profit sharing microfinance there is scope for commercial undertakings, but arguably specialized finance companies rather than banks, even Islamic banks, may be appropriate institutions to get involved (Wilson, 2007). The preceding section will discuss the Islamic microfinance schemes that can be developed to assist the poor and micro-entrepreneurs.

ISLAMIC MICROFINANCE INSTRUMENTS: ETHICAL ALTERNATIVES & RISK MITIGATIONS

The following principles have great potentials to be advanced and adapted as Islamic microfinance schemes:

Mudharabah

Mudharabah has the potential to be adapted as Islamic microfinance scheme. *Mudharabah* is where the capital provider or microfinance institution (*rabbul Mal*) and the small entrepreneur (*mudharib*) become partners. The profits from the project are shared between capital provider and entrepreneur, but the financial loss will be borne entirely by the capital provider. This is due to the premise that a *mudharib* invests the *mudharabah* capital on a trust basis; hence it is not liable for losses except in cases of misconduct. On the other hand, the *mudharib* becomes liable for the amount of capital if there are negligence and breach of the terms of *mudharabah* contract.

Mudharabah structure could be based on a simple or bilateral arrangement where microfinance institution provides capital and the micro-entrepreneur acts as an entrepreneur.

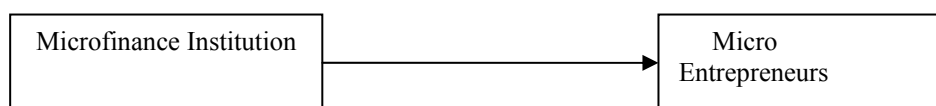


Figure 1: Simple Mudharabah

Mudharabah structure may also be based on two-tier structure or *re-mudharabah* where 3 parties i.e. capital provider (public, government, *zakat*, *waqf* etc.), intermediate *mudharib* (microfinance institution) and final *mudharib* (micro entrepreneur).

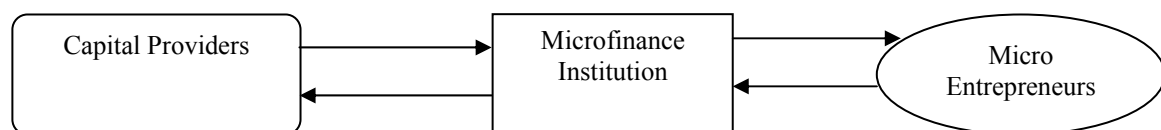


Figure 2: Re-Mudharabah

The profit-sharing ratio on *mudharabah* is pre-determined by only a percentage of the business profit and not a lump sum payment. The profit allocation ratio must be clearly stated and must be on the basis of an agreed percentage. Profit can only be claimed when the *mudharabah* operations make a profit. Any losses must be compensated by profits of future operations. After full settlement has been made, the business entity will be owned by the entrepreneur. The entrepreneur will exercise full control over the business without interference from the Islamic bank but of course with monitoring. On the practical side, there is a problem to determine the actual total profit to be shared because micro entrepreneurs normally do not have proper accounts or financial statement (Dhumale and Sapcanin, 1999).

Meanwhile, *muzara'ah* is a form of *mudharabah* contract in farming where microfinance institution can provide land or monetary capital for farming product in return for a share of the harvest according to the agreed profit sharing ratio. In the context of microfinance, the capital provider may need huge capital and expertise to manage such initiative and may need to manage higher risk because the microfinance institutions need to involve directly in the farming sector through provision of asset such as land.

In the case of *mudharabah*, the microfinance institution may face capital impairment risk as loss making operations of micro entrepreneurs expose the microfinance institution to the risk of capital erosion. In addition, in *mudharabah*, the microfinance institution should not request collateral which may in turn expose microfinance institution to credit risk on these transactions. As part of risk mitigation, even though the entrepreneur exercises full control, microfinance institution can still undertake supervision (Iqbal and Mirakhor, 1987).

Musharakah

Musharakah can also be developed as a micro finance scheme where microfinance institution will enter into a partnership with micro entrepreneurs. If there is profit, it will be shared based on pre-agreed ratio, and if there is loss, it will then be shared according to capital contribution ratio. The most suitable technique of *musharakah* for microfinance could be the concept diminishing partnership or *musharakah mutanaqisah*.

A: (Microfinance Institution 80%) B: (Micro Entrepreneur 20%)

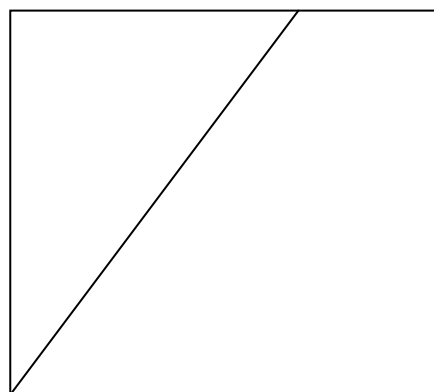


Figure 3: Musharakah Mutanaqisah

The above diagram shows that in the case of *musharakah mutanaqisah*, capital is not permanent and every repayment of capital by the entrepreneur will diminish the total capital ratio for the capital provider. This will increase the total capital ratio for the entrepreneur until the entrepreneur becomes the sole proprietor for the business. The repayment period is dependent upon the pre-agreed period. This scheme is more suitable for the existing business that needs new or additional capital for expansion.

Another form of *musharakah* is *musaqat*. *Musaqat* is a profit and loss sharing partnership contract for orchards. In this case, the harvest will be shared among all the equity partners (including entrepreneur as a partner) according to the capital contributions. All the *musharakah* principles will be applicable for this form of *musharakah*. This scheme, however, could be of high risk, since it needs the capital and expertise to directly involve in the business especially in managing the orchards.

Musharakah capital may also be subjected to capital impairment risk, where the capital may not be recovered, as it ranks lower than debt instruments upon liquidation (Haron and Hock, 2007). The normal risk mitigation techniques that can be adopted by Islamic banks are also applicable in the case of microfinance i.e. through a third-party guarantee. This guarantee can be obtained and structured for the loss of capital of some or all partners through the active role of the so called Credit Guarantee Corporation (CGC) as practiced in the case of SME financing in Malaysia.

Murabahah

Using *murabahah* as a mode of microfinance requires microfinance institution to acquire and purchase asset or business equipment then sells the asset to entrepreneur at mark-up. Repayments of the selling price will be paid on installment basis. The microfinance institution will become the owner of the asset until full settlement is made. This scheme is the most appropriate scheme for purchasing business equipment. This mode of financing has already been introduced in Yemen in 1997. In 1999, there are more than 1000 active borrowers (Dhumale and Sapcanin, 1999). Borrowers must form a group of 5 micro entrepreneurs where all members will act as guarantor if there is default among their group members. The benefit of this mode of financing is continuous monitoring, and entrepreneurs with a good reputation of repayment will be offered extra loan.

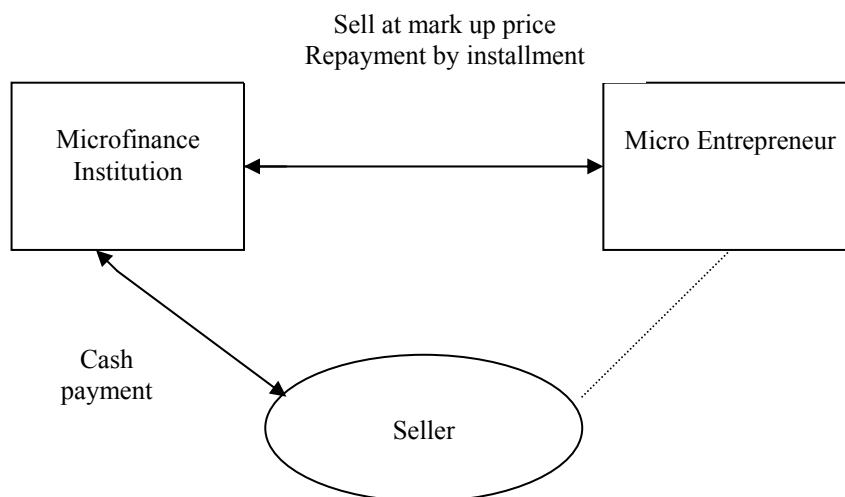


Figure 4: Murabahah to the Purchase Orderer

Dhumale and Sapcanin (1999) in their study on the feasibility of Islamic microfinance funded by the World Bank, have evaluated Islamic financing schemes namely *murabahah*, *mudarabah* and *qardhul hasan* as potential schemes to be advanced for Islamic micro finance. *Murabahah* has been found to be more practical and most suitable scheme for Islamic microfinance. This is due to the fact that the buy-resell model which allows repayments in equal installment is easier to administer and monitor.

The above diagram indicates the application of the extended concept of *murabahah* i.e. Murabahah to the Purchase Order. This is where a micro-entrepreneur enters into a sale and purchase agreement, or memorandum of understanding to purchase a specific kind of goods or equipments needed by the micro-entrepreneur with the microfinance institution. The microfinance institution then sells the goods to the entrepreneur at cost plus mark-up, and entrepreneur can pay back later in lump-sum or by installments (*bai muajal*). A number of *shariah* principles must be met for the contract to be valid (Haron and Hock, 2007), such as the goods must in existence at the time of sale; ownership of the goods must be with the bank; the goods must have commercial value; the goods are not to be used for a “*haram*” purpose; the goods must be specifically identified and known; the delivery of goods is certain and not conditional upon certain other events; and, the selling price is fixed at cost plus mark up

Murabahah could be easily implemented for microfinance purposes and can be further exemplified by the used of deferred payment sale (*bai’ al-muajal*). *Murabahah*, however, it may expose microfinance institution to credit risk. This, however, can be mitigated by requesting for an *urbun*, a third party financial guarantee, or pledge of assets. In addition, microfinance institution can also institute direct debit from the entrepreneur’s account, centralize blacklisting system, and minimize non-compounded penalty to deter delinquent entrepreneurs. Murabahah to the Purchase Orderer also exposes microfinance institution to delivery risk where goods may not be delivered, goods may not be delivered on time, or goods may be delivered not according to specification by the entrepreneur after

payment is made by the microfinance institution. To mitigate delivery risks, microfinance institution may request a performance guarantee from the seller to give assurance on the delivery of goods (Haron and Hock, 2007).

Ijarah

Ijarah by definition is a long term contract of rental subject to specified conditions as prescribed by the *shari'ah*. Unlike conventional finance lease, the lessor (microfinance institution) not only owned the asset but takes the responsibility of monitoring the used of asset and discharges its responsibility to maintain and repair the asset in case of mechanical default that are not due to wear and tear. The microfinance institution should first purchase the asset prior to execution of an *ijarah* contract. The institution takes possession of the assets and subsequently offers the asset for lease to customer. The institution then is responsible for the risks associated with the asset.

Ijarah Muntahia Bitamleek is an elaborate concept of *ijarah* where the transfer of ownership will take place at the end of the contract and pre-agreed between the lessor and the lessee. The title of the asset will be transferred to the lessee either by way of gift, token price, pre-determined price at the beginning of the contract or through gradual transfer of ownership. *Ijarah Muntahia Bitamleek* is more suitable for micro finance scheme especially for micro entrepreneurs who are in need of assets or equipment. Microfinance institution will purchase the assets required by the entrepreneurs and rent the assets to qualified entrepreneurs. In this case, the entrepreneurs can just rent the asset over a period of time and pay the rentals at regular intervals. The entrepreneur as a lessee will be responsible to safeguard the asset whereas the lessor will monitor their usage.

For *ijarah*, the microfinance institution may be exposed to settlement risk where the entrepreneur as a lessee is unable to service the rental as and when it falls due***. Similarly, the microfinance institution can request an *urboun* from the entrepreneur which can also be taken as an advanced payment of the lease rental. Alternatively, the microfinance institution as the owner of the asset should have the right to repossess the asset (Haron and Hock, 2007).

Qardhul Hasan

Another simple concept that can be advanced for microfinance purposes is *qardhul hasan* or simply means an interest free loan. In Arabic, *qardhul hasan* means a 'beautiful loan' perhaps because as the Qur'an asserts, these loans are made to Allah rather than to the borrower and this eases the pain of 'tearing away' part of one's wealth and lending it to someone in need. Perhaps the words *hasan*, understood in the context of *ihsan*, is meant to imply that the transaction is possible only when a person is fully aware that he or she is making a loan to someone in need without expecting anything in return from him, but only in order to please Allah (Mirakhor and Iqbal, 2007). The difference between *qardhul hasan* and *sadaqah* (charity), is that *qardhul hasan* has to be repaid while *sadaqah* is pure charity.

Microfinance institution can provide this scheme to the entrepreneurs who are in need of small start-up capital and have no business experience. The microfinance institution then will only be allowed to charge a service fee. The term of repayment will be on installment basis for an agreed period. The scheme is also relevant for micro entrepreneurs who are in need of immediate cash and has good potential to make full settlement. Here, the microfinance institution will bear the credit risk and they need to choose the right technique to ensure repayments will be received as agreed.

CONCLUSION

The paper argues that Islam has the potential to provide various schemes and instruments that can be advanced and adapted for the purpose of microfinance. Comparatively, *qardhul hasan*, *murabahah* and *ijarah* schemes are relatively easy to manage and will ensure the capital needs (*qardhul hasan*), equipment (*murabahah*) and leased equipment (*ijarah*) for potential micro entrepreneurs and the poor. Participatory schemes such as *mudarahah* and *musharakah*, on the other hand, have great potentials for microfinance purposes as these schemes can satisfy the risk sharing needs of the micro entrepreneurs. These schemes, however, require specialized skills in managing risks inherent in the structure of the contract. In theory, different schemes can be used for different purposes depending on the risk profile of the micro entrepreneurs.

Islam as a system of ethics, treating Islamic ethos as an ideal through which socio-economic policies dealing with poverty reduction may consider the axiomatic approach developed by Naqvi (1994). The axiomatic approach is based on four basic tenets of the Islamic ethical system:

- i. Unity (*tawhid*): this axiom indicates the vertical dimension of the ethical system. It provides freedom of action whereby each individual is viewed as an integral part of the whole.
- ii. Equilibrium (*al-`adl wa'l-ihsan*): this axiom provides a horizontal dimension of equity leaving a lot of freedom for policy details.
- iii. Free-will (*ikhtiyar*): although individual freedom is guided by broad guidelines, and individuals may travel their own paths, careful interlection is required to interpret-reinterpret that freedom within specific societal contexts, and to suit the needs of changing times.
- iv. Responsibility (*fard*): this axiom states that although 'responsibility' is voluntary, individuals and society need to conserve for the public good. Hence, there is a social aspect of every asset owned or managed by private or public entities.

In the present discussion, the system of Islamic axioms may serve as an ethical 'filter' mechanism to assess Islamic microfinance schemes before it can be put into practice. The paper reviews the concepts of microfinance, and argues that the main objectives of microfinance schemes to alleviate poverty and to enable the poor to empower themselves are in line with the Islamic ethical principles as provided by the above four axioms and the economic principles of justice. The conventional microfinance schemes and operations based on interest (*riba*) are prohibited in Islam and thus, cannot be used by and for the Muslims. Hence, various Islamic financing schemes based on the concepts of *mudarahah*, *musharakah*, *murabahah*, *ijarah* etc. have the salient features and characteristics that can

contribute towards a more ethical economic and financial development of the poor and micro entrepreneurs.

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ST(01)

PREDICTIVE FACTOR AND RISK OF LOW BIRTH WEIGHT INFANT

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ABSTRACT

The main purpose of this study was to investigate the predictive factor and risk of Low Birth Weight (LBW) in Malaysia for 2006. The data was obtained based on the National Neonatal Registry (NNR) for year 2006. 8987 samples were obtained with all the missing value omitted from this study. This study was analysed by using the Statistical Package for Social Science (SPSS 13.0) and STATA 10.0. Method of analysis that were used were the Linear Regression, the Logistic regression and the Odd Ratio (OR). This study revealed that mother's age, birth growth status, sex and races determines the increase and the decrease of birth weight (BW). Furthermore the most influential factor to predict BW are the birth gestational week, mother's age and birth growth status. 79.9% of total variation of BW are explained by this three factors. Mother that are of the age of less than 20 years old have a high risk of having LBW babies than mothers of the age of 21 years and above. Races that have a high risk of having LBW babies are Orang Asli (OR=0.59). Male babies are less likely to have LBW than female babies (OR=0.75). Babies with LBW are more likely to be diagnosed with RDS, Infection of sepsis, and Edward Syndrome. Therefore the researcher recommends that all health care providers and governments to pay more attention to this problem. Campaigns about the importance of enough nutrition, healthcare, and dietary regime should be launched to avoid this problem which is as a direct consequence of the mothers lifestyle. Besides that, babies with LBW should be given more attention on their healthcare to avoid them from being diagnosed with dangerous diseases.

Keywords: birth weight, healthcare

INTRODUCTION

As a newborn, the most important task is to grow. In the first year of a newborn's life, they do it in a big way. During that time most babies triple their birth weight and increase their length by about 50% from their delivery length.

From the first day of a newborn, health provider will keep track of their weight, length and head size. Do you know why the growth of new born is important? It is because the growth of a baby is a good indicator of a baby's general health. A baby whom grows well is generally healthy. But what should we do if our newborn has a low birth weight? Low birth weight (LBW) is defined as a newborn whose delivery weight is less than 2500gm. This is a common problem and sometimes goes unnoticed. Low Birth weight (LBW) is not just merely related to the weight but it also a risk factor to an infant with certain diagnosis. This study investigates and predicts which factors contribute to LBW infant and risk of having LBW infant.

Previous studies shows that there are a few factors that contributes to LBW of an infant, factors such as age of the mother, race, birth growth status and gender of the baby. Besides that, those with LBW also have a high risk to developed Respiratory Distress Syndrome (RDS), Renal disease,

Congenital Anomalies such as Down Syndrome, Edward Syndrome, and Patau Syndrome, infection of Sepsis which have a low survival rate.

RESPIRATORY DISTRESS SYNDROME (RDS)

RDS is a complication commonly seen in premature infant. The condition makes it difficult to breathe. It occurs because the lungs are not yet fully developed. RDS is mainly caused by a lack of a slippery, protective substance called surfactant, which helps the lungs to inflate with air and keeps the air sacs from collapsing. This substance normally appears in a fully developed lungs (mature infant). It can also be as a result of genetic problems with lung development.

RENAL DISEASE

Renal disease or also known as renal failure refers to a temporary or permanent damage to the kidneys resulting in loss of normal kidney function. There are two different types of renal failure: acute and chronic. Acute renal failure has an abrupt onset and is potentially reversible. Chronic failure progresses slowly over at least three months and can lead to permanent renal failure. The end stage of renal failure (ESRD) is when the kidneys permanently failed to function.

INFECTION OF SEPSIS

Sepsis is a serious medical condition characterized by a whole-body inflammatory state caused by infection. Sepsis is broadly defined as the presence of various pus-forming and other pathogenic organisms, or their toxins, in the blood or tissues. While the term sepsis is frequently used to refer to septicemia (blood poisoning), septicemia is but one type of sepsis. Bacteremia specifically refers to the presence of bacteria in the bloodstream.

DOWN SYNDROME(DS)

Down syndrome is a condition in which extra genetic material causes delays in the way a child develops, and often leads to mental retardation. It affects 1 in every 800 babies born. The symptoms of Down Syndrome can vary widely from child to child. While some children with Down Syndrome need a lot of medical attention, others lead very healthy and independent lives. Though Down syndrome cannot be prevented, it can be detected before a child is born. The health problems that can go along with Down Syndrome can be treated, and there are many organisations to help kids and their families who are living with the condition.

EDWARD SYNDROME

Edwards syndrome is a severe chromosome abnormality where the child has an extra chromosome 18 in every cell. A chromosome is a rod-like structure present in the nucleus of all body cells, with the exception of the red blood cells, and which stores genetic information. Normally humans have twenty-three pairs of chromosomes, the unfertilized ovum and each sperm carrying a set of twenty-three chromosomes. Upon fertilisation the chromosomes combine to give a total of forty-six (twenty-three pairs). A normal female has an XX pair and a normal male an XY pair.

The survival rate of Edwards Syndrome is very low. About half die in utero. Of live born infants, only 50% live to 2 months, and only 5–10% will survive their first year of life. Major causes of death include heart abnormalities.

PATAU SYNDROME

Patau syndrome, also called Trisomy 13, is a congenital (present at birth) disorder associated with the presence of an extra copy of chromosome 13. Patau syndrome causes serious physical and mental abnormalities including: heart defects; incomplete brain development; such unusual facial features as a sloping forehead, a smaller than average head, small or missing eyes, low-set ears, and cleft palate or hare lip; extra fingers and toes, and mental retardation. Due to the severity of these conditions, fewer than 20% of those affected with Patau syndrome survive beyond infancy. Most infants with the syndrome die within the first three months of life; the average life expectancy of the rest is about 10 years.

PROBLEM STATEMENT

Birth weight is one of important indicator whether baby is healthy or not. It is current major problem Asian country where there is a steady increase of low birth weight (LBW) infant . LBW is the single most important factor affecting neonatal mortality and significant determinant of postneonatal mortality. LBW infant who survives are at higher risk for having health problems like respiratory, renal, and congenital anomalies.

On March 15, 2007 Utusan Malaysia revealed that 40,000 children die everyday in developing countries which is almost 28 child per minute. Almost 25% of them die on the fifth day of their delivery. One of the causes of children death is LBW. This phenomenon seems to hinder the aim of Tun Dr. Mahathir to achieve 70 million population by the year 2100.

Furthermore Malaysian Pediatrics Association revealed that babies with LBW have 60-70% risk of dying within the first week of their delivery and they also have a higher risk of contracting dangerous diseases thereafter.

Besides that LBW also represents a major public health problem and it is great economic burden to developing countries. LBW and children death is one of indicator of the level of our health status and our socioeconomic development.

In this case the researcher have decides to find the factor and risk of Low Birth Weight (LBW) so that we can achieve the target of 70 million citizen by 21 century and at the same time prevent LBW phenomenon and baby death at young age in the future.

OBJECTIVES

- i. To determine the factor that influences Birth Weight (BW)
- ii. Predict on which age of mother, races and gender of babies will more risky to have LBW infant.
- iii. Investigate whether Respiratory Distress Syndrome (RDS), Infection of Sepsis, Down Syndrome, Edward Syndrome, Patau Syndrome, Renal Disease will be the outcome of having LBW infant.

LITERATURE REVIEW

There is a lot of factor that influence LBW as Ozdenerol, Esra PhD have stated that infant low birth weight was associated with race, sex of newborn, age of mother, marital status, gestation, prenatal visit, multiple birth and tobacco use.

Age of mother appears to be an important factor in the likelihood of LBW particularly at a younger ages. National Center for Health Statistics United State (1982) state that the proportion of babies born with LBW are to mothers under age of 15 is nearly twice as high than mother 15 and older. Atlas of Canada (2004) supported this finding and state that teen mother often has higher proportion of LBW babies than do mother in the 20-39 years age group.

However, Nancy E. Reichmann et al. (2006) revealed that teenaged fathers were 20% less likely to have low birth weight babies and fathers older than 34 years were 90% more likely to have low birth weight babies than fathers aged 20 to 34 years

Pediatric and pregnancy nutrition surveillance system (2005) state that teenagers, particularly young teens, and women 40 years of age and older are more likely to have infants who are low birth weight. The prevalence of low birth weight for teenagers less than 15 years of age was 10.5% and 11.7% for women greater than or equal to 40 years of age compared to the overall prevalence of all women of 7.7% for the state.

Prematurity are baby that are born before 37 week of gestation are the main causes of LBW as mentioned by Judith Pojda and Laura K. Elley (2000) which stated that most LBW in industrial countries is due to preterm birth or baby that have not completed their gestational week.

Tessa Wardlaw et. al(2004) in their report mentioned that LBW is one of the result of gestational week that less than 34 week. They also stated that Gestational week related to the infant, the mother or the physical environment play an important role in determining the infants BW and future healths. The shorter the gestational age, the smaller the baby and the higher the risk of death.

Besides that Trotter and Carol Wiltgen PhD from University Of Missouri, Saint Louis from their study found that Gestational Age is highly correlated with birth weight.

Malaysian Pediatric Association in their analysis found that in Malaysia the highest birth rates of LBW infant are Indian babies and the lowest are Chinese babies. This statement has been support by Y.H. Chong et.al (1977) which stated that Indians have a higher incidence of LBW which is 14.5 % compared to Chinese (5.6%) and Malay (7.6%).

Thus by Martin Mac Dorman and Mathew (1997) stated that black Hispanic infants have higher risk to have LBW than white Hispanic. This finding also has been supported by Narayan Sastry and Jon Hussey (2002) which found that BW for Mexican origin Hispanic Black were only slightly lower than the average for non hispanic whites but more substantially above those for non Hispanic blacks.

Janet W Rich Edward et.al from their study have revealed that the risk of low birth weight appears more quickly with maternal age for black woman than it does for white woman.

Thomas P. Stranjord MD et. al in their study entitled 'RDS and Maternal Birth Weight Effect' has found that the risk for RDS was inversely related to BW and gestational age. 40% in all ethnic groups with BW under 1250 grams were affected by RDS. They also found that incidence of RDS did not appear to be associated with BW in infant over 2500 grams.

Hackmann E. Emanuel I (1983) on Hospital based study found that RDS has significantly lower maternal BW than other infants.

Daniel T. Lackland et.al (2000) mentioned low birth weight (LBW) was associated with End Stage of Renal Disease (ESRD) among men and women as well as blacks and whites. Among people whose birth weight was less than 2.5 kg, the odds ratio for ESRD was 1.4 (95% confidence interval, 1.1-1.8) compared with people who weighed 3 to 3.5 kg

Congenital anomalies in this study have been divided into 3 syndrome, which are Down, Edward and Patau syndrome. Emel Altuncu et.al from their study entitled The Incidence of Low Birth Weight in 5000 Live Born infant and The Etiology of Fetal Risk Factors using cross tabulation has found that 6.2 % from LBW infant diagnosed congenital anomaly such as Patau Syndrome, and down syndrome compare to NBW only accounted 3.3%.

METHODOLOGY

For this study, the data are analyzed using the SPSS 13.0 and STATA 10.0. This study are analyzed using statistical method such as the Linear Regression for continuous data, the Logistic Regression for categorical data, The researcher also use descriptive statistics to explain on the characteristics of respondent.

The descriptive statistics in this study was used describe that characteristics of respondent distribution such as, mother age distribution, races distribution, gestational week distribution, gender distribution, and birth weight category. This distribution has been measured using mean or average of total distribution, minimum value, maximum value and the highest frequency or mode

Cross tabulation is use to summarize the data of two variables simultaneously. Cross tabulation allow us to explore the relationship between normally just two categorical variables. It shows a table of joint frequency distributions. As a rule of thumb, the dependent variable has been chosen as row variable and independent variable as the column variable. Cross tab has been done to summarise the percentage of Low Birth weight (LBW) and Normal Birth weight (NBW) by the predictive factor and risk of LBW. This cross tab explains how many baby that LBW are at risk in having certain disease and what criteria show the highest or lowest in the number of LBW infant.

LINEAR REGRESSION MODEL

Linear Regression Model is used to describe relationship between variables and to predict the factor of Low Birth weight (LBW). The linear Regression model that was used are:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 D_1 + \beta_4 D_2 + \varepsilon$$

First of all after the selection of variables have been made, Univariate regression is fitted. This is important in order to check whether there is significant relationship between the dependent variable and the independent variable.

Simple Linear Regression Analysis is used to fit the Birth gestational week, and the Mother Age with the Birth Weight one by one. Each significant variable will be included in the Linear Regression model. The variable that are included in the variable selection are as in table 1

Table 1: List of variable

No	Variables	Description	Type of Variable	Unit
1	Birth Weight	Baby weight after delivery which has been measured less than 1 hours after delivery	Dependent, Continuous and Quantitative	Grams
2	Mother Age	Age of mother at time she delivered her baby.	Independent Continuous and Quantitative	year
3	Birth gestational Week	Week of gestation when she delivered her baby	Independent Continuous and Quantitative	Week
4	Birth Growth Status	Status of baby at the time she/he was born whether Small Gestational Age (<36 week), Appropriate Gestational Age (36-42 week) or Large Gestational Age(42 week)	Independent Qualitative Dummy variable	$\left. \begin{matrix} D_1=1 \\ D_2=0 \end{matrix} \right\} \text{SGA}$ $\left. \begin{matrix} D_1=0 \\ D_2=1 \end{matrix} \right\} \text{AGA}$ $\left. \begin{matrix} D_1=0 \\ D_2=0 \end{matrix} \right\} \text{LGA}$
5	Races	Race of baby	Independent Qualitative Dummy variable	Malay, Chinese, Indian, Orang Asli, Bumiputra Sabah, Bumiputra Sarawak, Foreigner and Other

VARIABLE SELECTION CRITERIA

Variable selection criteria is an important process in ensuring that the linear regression model contains variables that are statistically significant in describing the factor of dependent variable. Each independent variable is fitted individually with the Birth Weight to check the significance of the variable. Thus the independent variable selected in table 3.1 are based on these circumstances.

MODEL ESTIMATION

Procedure that develops the best subset of X variables is either general to specific or specific to general. Each predictor variable is fitted one by one with the dependent variable (BW) to test the significance (Refer to appendix 2, Multivariate analysis). Any irrelevant variable are remove from the model. The variable that are selected into the model are Birth Gestational Week and Mother's age and Birth growth Status.

STATISTICAL VALIDATION AND TESTING PROCEDURE

Model validation involve issues of validation of the regression model appropriateness of the variables selected, checked the magnitudes of the regression coefficient and the predictive ability of the model.

F-test for regression relation are use to test whether there is a regression relationship between the response variable Birth weight (BW) and the set of predictor variable which are Birth gestational week and mother age. The significant level of F-Test selected are at 95% of significant level.

If the model is significant, each individual coefficient is tested using t-test to check whether there is a relationship between independent variable and dependent variable. In other word to test whether Birth Gestational Week, mother's age, birth growth status and race will be among the factor that influence the BW.

Then the coefficients of multiple determination (R^2) has been calculated. R^2 measures the proportionate reduction of total variation in BW associated with the Birth gestational week, mother's age, birth growth status and races variable. It represents that the proportion of total variation presented in BW are explained by a change in Birth gestational week, mother's age, birth growth status and race.

After that multicollinearity problem will be checked against all explanatory variable. Multicollinearity problem exist when there is a linear relationship between independent variable. This problem is checked using the variation inflation factor (VIF) value. If the VIF value are greater than 10 it show that multicollinearity problem exist in the model.

MODEL ADEQUACY CHECKING

Model Adequacy checking is important to ensure that the assumptions underlying the method of least square are fulfilled. The diagnostic measure are checking the normality, and the heterocedasticity test or test of unequal variance.

LOGISTIC REGRESSION

Logistic regression is a technique of making prediction when the dependent variable is a dichotomy and the independent variable is continuous or discrete. Logistic regression model (Refer to Appendix 3, Risk of having Low Birth Weight) is used for prediction of the probability of occurrence of an event.

The Simple logistic regression equation:

$$\log(p/(1 - p)) = \log(odds) = \log it = b_0 + b_f X_f$$

Where b_0 is a constant and is the intercept

b_f is the slopes , or regression coefficient that gives the expected log odds with each unit of change in the independent variable

Logistic regression is used to finding the probability of getting a particular value of a dependent variable which is risk of having Respiratory Distress Syndrome (RDS), Down Syndrome, Patau Syndrome, Edward Syndrome, and renal disease with the independent variable Birth Weight . It also used to predict the probability of getting a particular risk as mention above.

ODD RATIO (OR)

Odd ratio is a ratio of odd of and event to occur between the two groups. Odd Ratio is used to predict factors that influence LBW infant. (Refer to Appendix 3, factor of Low of Birth Weight). Since that the independent variable such as Mother’s age, races, and gender are recoded into categorical data. Each variable are test using Odd Ratio. Intrepretation of Odd Ratio as in table 2.

Table 2 :Interpretation of Odd Ratio (OR)

<i>Condition of OR</i>	<i>Intrepretation</i>
OR=1	No Risk effect
OR<1	Protective Effect, The event is less likely to occur in group 1(reference group) compare to group 2
OR>1	Risk Effect, the event is more likely occur in group 1(reference group) compare to group 2

ANALYSIS AND FINDING

LINEAR REGRESSION

Univariate Analysis

Table 3: Univariate Analysis

<i>Model</i>	<i>Explanatory Variable</i>	<i>Parameter Estimates</i>	<i>Standard Error</i>	<i>Degree of Freedom</i>	<i>P-Value</i>	<i>t-Value</i>	<i>P=0.05</i>
1	Constant	-3528.640	47.382	8985	0.000	14932.11	yes
	Birth Gestational Week	163.914	1.341				
2	Constant	1939.93	39.544	8985	0.000	58.571	yes
	Mother Age	10.105	1.32				

Referring to table 3 for selecting the variable, each variable have been done univariate analysis. The result shows that both variable are significant with p-value are less than 0.05 at 5% significant level. Since all variable included in this study are significant, both two variable are selected to be included in this study. The model that can explained the Birth Weight (BW) as below:

$$y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \varepsilon$$

Where $y =$ Birth Weight

$x_1 =$ Birth Gestational Week

$x_2 =$ Mother age

$\varepsilon =$ Error Term

Multivariate Analysis On Factor Of Low Birth Weight

Table 4: Multivariate Analysis on Factor of LBW

Model	Explanatory Variable	Parameter Estimates	Standard Error	t-value	p=0.05	VIF	R ²
1	Constant	-3528.640	47.382	-74.261	Yes	1.000	0.624
	Birth Gestational Week	163.914	1.341	122.197	Yes	1.000	
2	Constant	-3639.292	51.804	-70.251	Yes		0.626
	Birth Gestational Week	163.491	1.341	121.909	Yes	1.003	
	Mother Age	4.635	0.812	5.71	Yes	1.003	
3	Constant	-2930.256	41.445	-70.702	Yes		0.799
	Birth Gestational Week	171.851	0.987	174.040	Yes	1.013	
	Mother Age	2.713	0.596	4.552	Yes	1.007	
	Stat 1	-1466.642	19.049	-76.992	Yes	4.393	
	Stat 2	-841.433	17.861	-47.110	Yes	4.378	
4	Constant	-2919.767	44.423	-65.727	Yes		0.800
	Birth Gestational Week	171.677	0.870	173.893	Yes	1.017	
	Mother Age	2.235	0.600	3.725	Yes	1.025	
	Birth Growth Status 1	-1465.283	19.014	-77.063	Yes	4.394	
	Birth Growth Status 2	-841.622	17.838	-47.182	Yes	4.384	
	Race 1	20.895	16.711	1.250	No	4.361	
	Race 2	21.690	19.988	1.085	No	2.493	
	Race 3	-13.950	21.410	-0.652	No	2.094	
	Race 4	-138.153	36.945	-3.739	Yes	1.215	
	Race 5	-28.318	23.432	-1.209	No	1.776	
Race 6	-40.249	22.768	-1.768	No	1.869		
Race 7	49.997	45.581	1.097	No	1.131		

Referring to table 4, of multivariate analysis on the factor of Birth Weight, it was discovered that after both variable, Birth Gestational Week and Mother's Age are entered into the model there is 62.6 % of the total variation of Birth Weight explained by Birth Gestational Week and Mother's Age. Then when one qualitative variable, Birth growth status are entered as dummy variable the model indicates that 79.9 % of the total variation are explained by this three variable. Finally one more dummy variable entered shows that almost 80% are explained but some of this variable shows insignificant. Since that final model that show the best model is model 3 as below.

$$\hat{y} = -2930.56 + 171.851X_1 + 2.713X_2 - 1466.642D_1 - 841.433D_2$$

Where \hat{y} = Birth weight (BW)

x_1 = Birth Gestational Week

x_2 = Mother Age

D_1 = 1 if SGA, 0 Otherwise

D_2 = 1 if LGA, 0 Otherwise.

Model Adequacy Checking

NORMALITY TEST

i) Normal Probability Plot

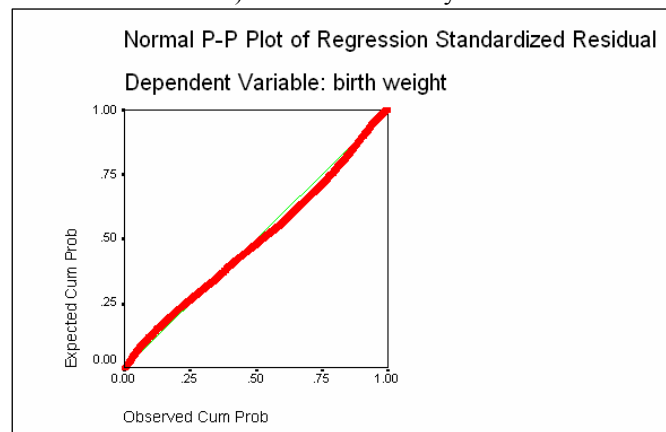


Figure 1 Normal Probability Plot

From figure 1 it is prove that model 3 above have fulfill normality assumption since all point are lies at 45 degree of straight line.

ii) Histogram

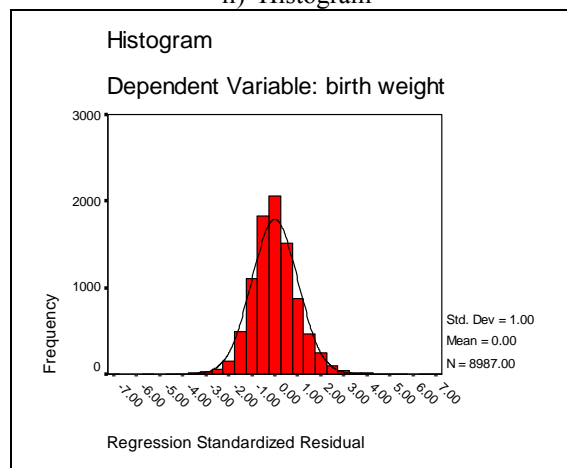


Figure 2 :Histogram of model 3

Referring figure 2, since the histogram have bell shape curve, it have assumption of this model are fulfilled

showed that normality

HETEROCEDASTICITY TEST (UNEQUAL VARIANCE)

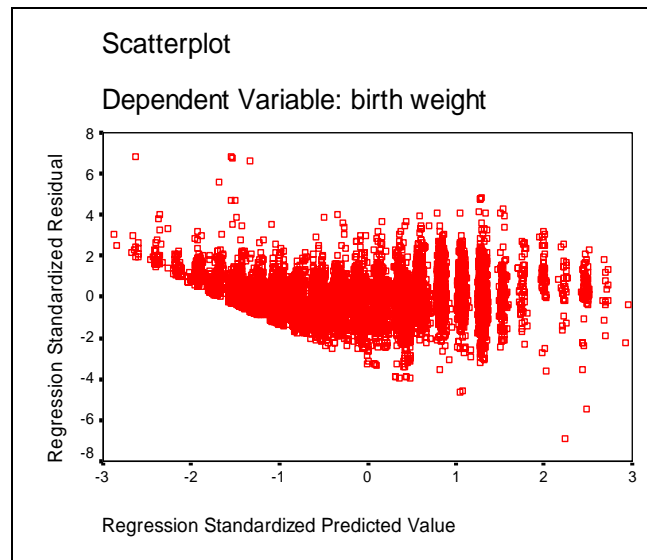


Figure 3: Scatter Plot Predicted value versus Residual

Referring to figure 3, the figure show that there is no obvious pattern in this scatter plot and it is show that the model has approximately constant variance. So that linear regression model assumption is fulfilled.

ESTIMATE OF FINAL MODEL

The final models of that show the factor of LBW are as table 5

Table 5: Final Estimate Model

Model	Explanatory Variable	Parameter Estimates	Standard Error	t-value	p=0.05	VIF	R ²
1	Constant	-2930.256	41.445	-70.702	Yes		0.799
	Birth Gestational Week	171.851	0.987	174.040	Yes	1.013	
	Mother Age	2.713	0.596	4.552	Yes	1.007	
	Birth Growth Status_1	-1466.642	19.049	-76.992	Yes	4.393	
	Birth Growth Status_2	-841.433	17.861	-47.110	Yes	4.378	

$$\hat{y} = -2930.56 + 171.851X_1 + 2.713X_2 - 1466.642D_1 - 841.433D_2$$

Where \hat{y} = Birth weight (BW)

x_1 = Birth Gestational Week

x_2 =Mother Age

D_1 = 1 if SGA, 0 Otherwise

D_2 =1 if LGA, 0 Otherwise.

Interpretation:

$\beta_1 = 171.851$ means that one week increase in gestational week will increase the Birth Weight by 171.851 grams while other variable remain constant.

$\beta_2 = 2.7132$ means that one year increase in mother age will increase the Birth Weight by 2.7132 grams while other variable remain constant.

$D_1 = 1$ } $\beta_3 = -1466.642$ means that if the birth Growth status are
 $D_2 = 0$ } Small gestational Age (SGA) (which is $D_1 = 1$). Birth Weight will decrease by 1466.642 grams while all the other variable remains constant

$D_1 = 0$ } $\beta_4 = -841.433$ means that if the birth Growth status are
 $D_2 = 1$ } Appropriate gestational Age (AGA) (which is $D_2 = 1$) Birth Weight will decrease by 841.433 grams While other variable remains constant

$D_1 = 0$ }
 $D_2 = 0$ } If birth growth status are large at gestational age Birth Weight will decrease up to 2930.56 grams while other variable remain constant

LOGISTIC REGRESSION

Predictive Factor Of LBW

Table 6: Predictive Factor of LBW

<i>Factor</i>	<i>Odd ratio</i>	<i>CI 95%</i>
Mother Age		
Less than 20		
21 to 30	2.09	(1.75,2.49)
30 to 40	2.07	(1.74,2.49)
40 above	1.86	(1.44,2.41)
Race		
Malay		
Chinese	1.00	(0.87,1.15)
Indian	0.88	(0.74,1.04)
Orang Asli	0.59	(0.39,0.89)
Bumiputera Sabah	0.86	(0.70,1.05)
Bumiputera Sarawak	0.57	(0.46,0.70)
Foreign	1.07	(0.89,1.29)
Others	0.95	(0.59,1.53)
Sex		
Male		
Female	0.75	(0.68,0.82)

Referring on table 6 OR (odd ratio) for all mother age , OR>1 at 95% confidence interval means the odd of having LBW among mothers age less than 20 years old are higher than mothers older than 21 years old..

Then, for race, the table 6 explain that all race have a risk of having LBW infant but the race that have higher risk are Orang Asli (OR=0.59 95% CI [0.39,0.87]) group and Bumiputra Sarawak (OR=0.57 95% CI [0.46,0.70]) group. Researcher predict that foreigners that delivered their baby in Malaysia have a less risk to have a LBW infant and almost most of them are white babies. For this study Chinese have no risk effect to LBW.

Finally the gender that have a higher risk to have LBW is female babies (OR=0.75 95% CI [0.68, 0.82]) than male babies

From the result above what can be concluded here is that the predictive factor of LBW infant are mother age, race and gender of the infant.

PREDICTIVE RISK OF HAVING LBW

Table 7: Predictive Risk of LBW

<i>Outcome</i>	<i>Constant</i>	<i>B</i>	<i>odd ratio</i>	<i>95% CI</i>	<i>P=0.05</i>
Respiratory Distress syndrome (RDS)	-2.201	2.459	11.693	(10.320,13.250)	Yes
Down Syndrome	-3.405	-0.665	0.514	(0.389,0.681)	Yes
Edward Syndrome	-6.163	2.155	8.630	(4.037,18.587)	Yes
Patau Syndrome	-5.622	0.571	1.771	(0.920,3.408)	No
Renal Disease	-4.667	-0.094	0.911	(0.579,1.433)	No
Infection Sepsis	-2.456	0.271	1.312	(1.126,1.528)	Yes

RESPIRATORY DISTRESS SYNDROME (RDS)

The OR=11.693 with 95% CI [10.320, 13.250] explain that the odd of having RDS among LBW infant are 11.693 higher than NBW. Then the Simple Logistic Regression for RDS can be describe as

$$y = -2.201 + 2.459X_f$$

Where $y = \log(\text{Odds})$ for having RDS

$$X_f = \text{LBW}$$

The model explain that an increase one unit of LBW infant will lead to an increase of 2.459 unit of infant that have RDS. P-value less than 0.05 prove that RDS is significant outcome among LBW infant.

DOWN SYNDROME

The OR of having syndrome down among LBW infant is 0.514 at 95% CI [0.389, 0.681]. Since OR<1.0 explain that LBW infant have less risk to have Down Syndrome. The equation that explain of less risk of having down syndrome among LBW infant can be describe as below:

$$y = -0.808 - 3.410X_f$$

Where $y = \log(\text{Odds})$ for having Down Syndrome
 $X_f = \text{LBW}$

Since p-value less than 0.05 the logistic regression model for Down Syndrome is significant to explain relationship between low birth weight and down syndrome.

EDWARD SYNDROME

The probabilities of having Edward Syndrome among LBW infant can be explained as below:

$$y = -6.163 + 2.155X_f$$

Where $y = \log(\text{Odds})$ for having Edward Syndrome
 $X_f = \text{LBW}$

This model explains that an increase of one unit in LBW infant will lead to an increase in the number (2.155 unit) of infant having Edward Syndrome. Besides that OR=8.630 at 95% CI[4.007,18.587] means that the odds of having Edward Syndrome among LBW infant is 8.630 higher than NBW infant

PATAU SYNDROME

The probability of having Patau syndrome among LBW infant is 1.771 higher than NBW infant at 95% CI [0.920,3.408]. The equation that explain this prediction are:

$$y = -5.622 + 0.571X_f$$

Where $y = \log(\text{Odds})$ for having Patau Syndrome
 $X_f = \text{LBW}$

This model explain that one unit increase in number of LBW will lead to an increase of 0.571 unit of babies that having Patau Syndrome. But p-value for this model show this model insignificant so that the model cannot be use to describe the relationship of low birth weight and patau syndrome.

INFECTION OF SEPSIS

OR =1.312 with 95% CI [1.126, 1.528], explained that the probability of having Infection of Sepsis among LBW infant is 1.312 higher than NBW infant. Besides that, the Simple Logistic Regression model for Infection of Sepsis for this case is:

$$y = -2.456 + 0.271X_f$$

Where $y = \log(\text{Odds})$ for having Infection of Sepsis
 $X_f = \text{LBW}$

This model explained that increase one unit in LBW infant will lead to an increase of 0.271 unit of babies that having infection of Sepsis

RENAL DISEASE

At 95% CI [0.579,1.433] OR=0.911 explained that only few of LBW have a risk of having renal disease. Its also show that not all of LBW infant will have Renal disease.This statement also can be described by this model:

$$y = -4.667 - 0.094X_f$$

Where $y = \log(\text{Odds})$ for having Renal disease

$$X_f = \text{LBW}$$

Since p-value greater than 0.05, The equation show that renal is not significant model to describe relationship between renal disease and low birth weight..

CONCLUSION

From the analysis it was discovered that risk of LBW such as RDS, Infection of Sepsis, Down Syndrome and Edward Syndrome also will effect the Birth Weight .This study also discovered that the factor that influence the Birth Weight are Birth gestational Week , mother's Age, and Birth Growth Status. Increase in Birth gestational Week , suitable age of mother, and LGA growth status will give appropriate Birth Weight.

Besides that it was also discovered that factor that influence the LBW are Mother age, Races and Sex. Mothers that of the age of less than 20 is more likely to have LBW infant than mothers that of the age of 21 years above, The suitable age of mothers to deliver their baby is around 21 to 30 years old. Races that are most likely to have LBW infant are Orang Asli and Bumiputra Sarawak Foreigner have a less risk to have LBW infant. It is also discovered that female babies is more risky to have LBW than male babies.

From the result, LBW infant have a higher risk to be diagnosed with RDS, Edward Syndrome and Infection of Sepsis.

RECOMMENDATION

After considering the result from the finding and analysis, this researcher have come up with some recommendation which are illustrated as follow:-

Researcher

This study have generated more information to the researcher whereby the researcher has gained the understanding on the factor and risk of having LBW infant. Furthermore the researcher also has also benefited from the experience in conducting the study. The study can be set as a benchmark for the researcher to improve her ability and performance in conducting future research.

Future Researcher

Any researcher who is interested in studying and exploring can follow these recommendation as a guideline to complete the research and avoid any error or problem that may occur in the process of completing this study. They are:-

- a) Try to use another analysis besides Regression Analysis such as trend analysis or other method to find factor and risk of LBW.
- b) The researcher can try to find more variable or factor and risk that the most influence to LBW infant. For example mother's lifestyle, mother's health and parental nutrition as factor of LBW, deaf, blindness, mental retardation as the risk of LBW.

Health Care Provider And Government

Health care providers should pay more serious attention to this LBW problem. Mother at young age who are pregnant should take a lot of attention and care from the beginning of their pregnancy until delivery. They take enough nutrition to avoid LBW problem.

Besides that, the government should initiate a campaign especially to the ethnic communities in the rural areas about the important of eating nutritious food , balanced dietary and health care during pregnancy. Furthermore health providers should more concern with LBW infant health since the risk of LBW of being diagnosed with certain diseases are very high and it is revealed that it constitutes 60%-70% of fatalities for babies in the first week after delivery.

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ST(02)

SCIENCE AND MATHEMATICS AS PROOFS TO THE POWER OF ALLAH'S SWT CREATIONS

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ABSTRACT

The ingenuity in planning and managing the whole world is a clear evidence on the existence of Allah as the creator of this universe. Allah has furnished all living things its extraordinary characteristics as a proof of His existence and power. This can be traced back to the Koran which depicts Allah's power which can be proven via scientific research and mathematical theories. This paper explains how the power of Allah swt is embellished in His creation as found in bees, spiders and eagles. Some related verses from Koran are quoted to support the ideas of God's amazing creation to make man think about His existence.

Keyword: scientific Quran, mathematics in al Quran

INTRODUCTION

Throughout the history, man has always been curious to discover how this universe began, where it is heading and the rule applies in maintaining its equilibrium in functioning. By admiring the creation of the universe and its content, man has developed thinking skills via the 'tafakkur' (meditation) and 'tadabbur' the reasoning behind those creations. Such thinking means not just viewing things the way they appear but it brings man to question on the nature and process of creation. Things do not exist out of nothing without any reason. Although human's thinking capability may not be able to answer all their questions but there are basic guidelines to enable men to relate the factor of existence and creation. Therefore, as Moslem thinkers, the thinking process must be based on 'tawheed' and 'proven with research and mathematics.'

The Fact Of Universe Creation And Proving It Via Scientific Research And Mathematics

The Koran has explained 1000 signs of Allah's creation that can be proven via science and mathematics.

"And how many signs in the heavens and in the earth that they pass by? Yet they turn (their faces) away from them?" (Sura Yusuf verse 105).

"To him is due the primal origin of the heavens and earth: How can he have a son when He has no consort? He created all things, and He has knowledge of all things." (Sura Al Anaam: 101).

The Koran also mentioned the onset process of creation and demolition of this universe in Sura Al Anbiyaa verse 30:

"Do not the unbelievers see that the heavens and earth were joined together (as a unit of creation), before we clove them asunder? We made from water every living thing. Will they not then believe?"

The truth of this verse had been proven by Albert Einstein who found the general relativity theory which claims that space and time are not separate entity with the universe and all the creatures in it. They are interrelated and depended on each other. The general relativity mathematical model also discovered the existence of the universe and forecasted the demolition of the universe. The discovery of the general relativity rule has led modern scientists to name the onset of universe as the “Big Bang” followed by the “evolution” and ended by “Big Crunch” where the whole universe will stop from evolving and will come together as mentioned in the Koran regarding the concept of doomsday.

*“When the sun (with its spacious light) is folded up.
When the stars fall; losing their lustre.
When the mountains vanish (like a mirage)” (Sura At Takwir: 1-3).*

One of the most important reasons for the great equilibrium in the universe is the fact that celestial bodies follow the specific paths. Stars, planets and satellites all rotate around their own axes together with the system of which they are a part. The verse which reads,

“ I swear by Heaven with its cyclical systems” (Quran, 86:11) indicates this truth. Naturally at the time when the Quran was revealed, people had no telescopes with which to study bodies millions of kilometers away in space. The Quran however, revealed at that time, provided clear information concerning at that fact.

It is stressed in the Quran that the sun and moon follow specific trajectories.

“It is He who created night and day and the sun and moon, each one swimming in a sphere.” (Quran 21:33)

The word “swim” in the above verse is used to describe the movement of the sun in space. It means that the sun does not move randomly through space but it rotates around its axis and follows a course as it does so. The fact that the sun is not fixed in position but rather follows a specific trajectory is also stated in another verse:

“And the sun runs to it resting place. That is the decree of the Almighty, the All-Knowing”. (Quran 36:38)

These facts set out in the Quran were only discovered by means of astronomical advances in our time. According to astronomer’s calculations, the sun moves along the path known as the Solar Apex in the path of the Star Vega at an incredible speed of 720 000 kmph. In rough terms, this shows that the sun traverses some 17.28 million km a day.

“It is He who appointed the sun to give radiance and the moon to give light, assigning it phases so you would know the number of years and the reckoning of time. Allah did not create these things except with truth. We make the signs clear for people who know.” (Quran, 10:15)

In the first of the above verses, Allah has clearly revealed that the moon will be a mean of measurement for people to calculate a year. In former times, a month was calculated as the time between 2 full moons, or the time it took the moon to travel around the earth. According to this, one month was equal to 29 days 12 hours and 44 minutes. This is known as the “lunar month”. Twelve lunar months represent one year, according to Hijri Calendar.

“He has created the heavens and earth for truth. He wraps the night up in the day and wraps the day up in night”. (Quran 39:5)

The word “wrap” means to make one thing lap over another, folded up as a garment that is laid away. The information given in the verses include accurate information about the shape of the world. This can be true only if the world is round.

“Company of jinn and men, if you are able to pierce the confines of the heavens and earth, pierce through except with a clear authority (Quran,55:33)

The definition of “the confines of the Heavens” indicates the spherical structure of space. It is in the same way that the diameters of space will be different from different points in space. So the diameters of a constantly expanding space will also display differences.

The Arabic word ‘confines’ meaning “diameter” and refers to the skies and the earth have many diameters. A three dimensional body can only be said to have a single diameter if it is perfectly spherical. This word chosen in the Quran is important indicating the geoid shape of the earth.

Today, the relativity of time is a proven scientific fact. This was revealed by Einstein’s theory of relativity during the early part of the 20th century. However the Quran had already included information about time being relative. Some verses about the subject read,

“A day with your Lord is equivalent to a thousand years in the way you count.” (Quran,22:47)

“Your Lord is Allah, who created the heavens and earth in six days and himself on the throne” (Quran 7:54).

In 1915 Einstein proposed that time was relative (passage of time altered according to space, the speed of the person traveling and the force of gravity at the moment).

When a six days period of time is calculated according to relativity of time, it is equivalent to six trillion days. It is because universal time flows million time faster than time of the earth.

$$\frac{6 \times 10^{12}}{365.25} \text{ days} = 16.427104723 \text{ days}$$

The quranic description of the sequence of day and night, would, in itself, be rather common place were it not for the fact that it is expressed in terms that are today. The quran uses the verb “kawwara” in chapter Az-Zumar to describe the way the night winds or cools itself around the day and the day around the night.

“He coils the night upon the day and upon the night”

The original meaning of the verb “coil” is like a turban around the head. It is not until man landed on the moon and observed the earth spinning on its axis that the dark half of the globe appeared to wind itself around the light and the light half appeared to wind itself around the dark.

The Creation Of Human Being And Its Evidence Using Scientific Research

The purpose for human creation in this world is to be the caliphs and God’s slaves to undertake and fulfill the responsibilities bestowed to them. Eventually, they will be judged and placed either in Heaven or Hell based on the good deeds or sins that they have convicted while they were alive. The history of the creation of man has been mentioned in the Koran when Allah said to the Angels:

Behold, thy Lord said to the Angels: “I will create a vicegerent on the earth. They said, “Wilt Thou place one who will make mischief therein and shed blood? Whilst we do celebrate Thy praises and glorify thy holy (name). He said: “I know what ye know not”. (Sura Al Baqarah: verse 30)

According to the evolution theories practitioners, human remains have been found all over the world and human are divided into several species. Every species are known with specific terms based on their respective identities. Adam and his descendents are the homosapiens.

“We have honoured the sons of Adam; provided them with transport on land and sea; given them for sustenance things good and pure; and conferred on them special favours, above a great part of our creation” (Sura Al Isra: 70)

Then Allah said,

“Say: travel through the earth and see how Allah did originate creation: so will Allah produce a later creation: for Allah has power for all things.” (Sura Al Ankabut: 20).

“Allah is He who raised the heavens without any pillars that ye can see; is firmly established on the throne (of authority); He has subjected the Sun and the Moon (to His law)! Each one runs its course for a term appointed. He doth regulate all affairs, explaining the signs in detail, that ye may believe in certainty the meeting with your Lord.” (Sura Ar Ra’d: 2)

The creation of human being from a cell is mentioned in Quran,

“He creates you stage by stage in your mothers’ wombs in a threefold darkness. That is God, your Lord. Sovereignty is His. There is no God but Him. So what has made you turn away from Him.” (Quran,39:6)

Today we know that the baby under goes three stages of embryonic development while it is in the mothers womb. But this information which has taken long years of research was made known in the Quran 1400 years ago. It will be noticed that three distinct stages occur in the development of a human being while it is in the mother's womb. Basic human embryology, a standard basic work of reference on embryology makes the following statement:

‘The life in uterus has three stages that are pre embryonic which is the first 2 weeks, embryonic which is until the end of eighth week and fetal which is from eighth week to labour.’

When we examine the verses in Quran that deal with attachment of the embryo to the uterus, we see one of the greatest wonders of the Quran. In the Quran ,while referring to the embryo's attachment to the uterus and the beginning of its development, God uses the word ‘Alaq’.

“Recite in the name of your Lord who created man from alaq. Recite: And your Lord is the most generous” (Quran, 96:1-3)

The word “alaq” in Arabic means “something that clings, a leech like substance”. The Quran came down to us 1400 years ago and the fact that God uses this word is to describe the development of the embryo in the mother's womb is one of its wonders.

Until very recently embryologists assumed that the bones and muscles in an embryo developed at the same time. Yet, recent research has revealed a very different fact. First, the cartilage tissue of the embryo ossifies. Then, muscular cells that are selected amongst tissue around the bones come together and wrap around the bones. This fact which has recently been discovered by science was related to man in the Quran 1400 years ago.

“Then we formed the drop into an alaq (embryo) and formed alaq into a lump and formed the lump into bones and clothed the bones in the flesh thus bringing forth another creature. Blessed be God, the Best of Creators (Quran, 23:14)

This event of which the Quran informed us 1400 years is thus described in a scientific publication titled Developing Human. In that book Moore (1982) wrote,

‘The shape of the skeleton determines the general appearance of the embryo in the bones stage during 7th week. Muscles do not develop at the same time but their developments follows around the bones throughout the body and therefore clothe the bones. Thus, the muscles take their well known forms and structures.’

In short, man's developmental stages as described in the Quran are in perfect harmony with the findings of the modern embryology. God had given this information to man centuries ago.

The Truth Of Allah's Power By The Amazing Creation Of Animals With Special Characteristics

The creation of living things with extraordinary characteristics is meant to prove to human on Allah's existence and power. According to Harun Yahya (2008), a clear evidence among the living

things which can be seen in His creations is for instance, honey and the design of the honeycomb in the hexagon form. Mathematicians seek answers to this question and came across with a very interesting conclusion that hexagon is the most suitable geometry form to maximize a space. Termites with its miniscule size are capable to build their homes in a dead wood or decomposed soil of three hundred times bigger than its size. There are air system, drainage systems, larvae rooms, corridors, security exit doors, rooms for summer and winter built inside their home. Another example is the capabilities of spiders to build their magnificent cobwebs with mechanical design and chemistry structure. Spiders have no intelligence to study and memorize and they do not have brains to do tasks. Therefore, it proves that their capability has been given by its creator, Allah the Most Powerful. Eagles are prey bird with sharp eyes to allow them to calculate a perfect distance when attacking its prey. This is made possible with the one million cells for sight in eagles' eyes. Their eyes also have a vision of up to 300 million degree and enlarge a received image up to six to eight times. Eagles can scan an area of 30000 hectares while flying 4500 meters above the ground. They can easily and accurately detect a rabbit amongst the grass. This is a proof of the amazing structure of the eagles' eyes which have been specially designed.

CONCLUSION

There are many signs of Allah's power in the Koran to encourage man to study the nature and to be reflective on its existence. This is done in order to come out with the best solution that combines Allah power and to regard the study of science and mathematics as part and parcel of life.

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ST(03)

A STUDY ON RISK FACTORS ASSOCIATED WITH HEMORRHOIDS (PILES) CASES IN KELANTAN

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ABSTRACT

Precisely why hemorrhoids develop is unknown. However, several contributing factors had been identified to become a risk factor in contributing to hemorrhoidal disease. This study is carried out to identify risk factors that contribute to hemorrhoidal disease, considering some variants as well as socio-demographic variables which include age category, gender, race, marital status, BMI category and ever suffer. Using the cohort survey that consists of patients attending surgical unit, this study attempts to compare the findings with data collected in a control population. Logistic Regression analysis is used in finding out the relationship between dependent and independent variables. Based on the analysis, it was found that age category, ever suffer, months of pregnancy, chronic diarrhea, not exercise, long time on toilet bowl and lifted heavy weight objects are more risky to hemorrhoids.

Keywords: *hemorrhoids, hemorrhoidal disease, case-control study, logistic regression*

INTRODUCTION

Hemorrhoids (also known as 'piles') are swollen veins at or near the anus, the opening through which stool passes ([Amarillo, 1999](#)). This happens when pressure in the abdomen increases, causing the blood to back up inside blood vessels, making them bulge and stretch out of shape. The hemorrhoidal veins are normal anatomic structures that can be seen in the human embryo from the eighth week of gestation ([Henry, 1992](#)) and along with the complex neuromuscular system of the anus (sphincters, nerves, mucosae and skin), contribute to the process of faecal continence ([Loder, 1994](#)).

Symptoms of hemorrhoids include: anal itching, anal ache or pain, especially while sitting, bright red blood stain on the toilet tissue, stool, or in the toilet bowl; pain during bowel movements; one or more tender lumps near the anus. Hemorrhoids are one of the most common ailments for men and women alike. In the United States (US), the [prevalence](#) is about 4.4%. It is estimated that approximately one half of all Americans have had this condition by the age of 50 and that 50% to 85% of the world's population will be affected by hemorrhoids at some time in their lives. Annually, only about 500,000 in the United States are medically treated for massive hemorrhage, with 10% to 20% of them requiring surgeries. Looking at this scenario, this study attempts to further identify the risk factors that contribute to hemorrhoidal disease by considering socio-demographic variables which include age category, gender, race, marital status, BMI category and ever suffer for a case-control study of all hemorrhoids patient in Kelantan from January to April 2008.

Epidemiologically millions of people in the United States (US) are affected by hemorrhoidal disease; the incidence rate is 4.4% with an age distribution that shows prevalence between 45-65 years old subjects while constipation has an exponential increase with age (Ann, 2001). [Böhler \(1994\)](#) revealed that its frequency also increases with age, being higher in women after the age of 60, especially if they have had one or more births.

Johanson and Sonnenberg (1990) stated that constipation also has significant relationship with hemorrhoids. It is also supported by [Delcò and Sonnenberg \(1998\)](#). Abramowitz et al. (2002) have previously demonstrated that hemorrhoidal thrombosis, which occurs in 20% of women after delivery, is favored by constipation. Pigot et al. (2005) has found the significant relationship between young patients, especially those who suffer constipation due to hemorrhoids.

Seventy per cent of women who consulted for hemorrhoids have had one or more pregnancies ([Habr-Gama, 1994](#)). During pregnancy there are no precise data on the prevalence of symptomatic hemorrhoids but it is well known that the percentage is higher than in non-pregnant women of the same age ([Medich, 1995](#)).

Sielezneff et al. (1998) also noted higher consumption of spices in patients consulting for hemorrhoidal disease than in controls, but others were unable to confirm the relationship in research conducted under the same conditions. Pigot et al. (2005) has also found a significant relationship between young patients with hemorrhoids, especially those who like taking spicy meals.

Johanson and Sonnenberg (1990) found that 4.4% of the general population in the US had symptomatic hemorrhoids with one third of them needing medical consultation ([Johanson, 1990](#)). Other authors found a low prevalence of the condition in Africa where people have mainly fibre-based diets ([Burkitt, 1975](#)) in contrast to industrialised countries where rates of up to 50% to 60% in middle aged people were found ([Hiams, 1970](#)).

Johanson (1990) and [Delcò and Sonnenberg \(1998\)](#) concluded that hemorrhoids is associated with diarrhea. Heator et al. (1993) also reported that an evidence in the relationship between hypertension with hemorrhoids.

Since hemorrhoids is one of the most common ailment that can affect the quality of life for men and women, therefore this research was conducted to identify the risk factors associated with hemorrhoids and to measure their relationship so that the best solution can be proposed. Another aim is to determine which factors contribute mostly to hemorrhoids.

METHODS

Primary data is used for this research. The data is obtained from a questionnaire distribution. The questionnaires are distributed among patients visiting Surgical Unit (Surgical Clinic and Surgical Ward) at Hospital Universiti Sains Malaysia (HUSM) during the study period (January to April 2008). This is a case-control study that can be divided into two groups of patients which are hemorrhoids

patients and non-hemorrhoids patients. The sampling technique employed is simple random sampling that ensures every sampling unit in the target population has a known, equal and nonzero chance of being selected.

Data collected is analyzed with the latest version of Statistical Package for Social Science or commonly known as SPSS 15.0. The reliability analysis is used to test the reliability of the data measurement that is used in this study and the descriptive statistics were used to calculate frequency distribution of socio-demographic variables and risk factors for hemorrhoids patients and non-hemorrhoids patients. The Pearson Chi-Square test is applied to determine the statistical significant relationship between hemorrhoids and socio-demographic variables and risk factor variables. Checks on multicollinearity are also done for this study to make sure the correlation among the independent variables does not exist. Finally, this paper presents logistic regression in order to get a better model to explain the risk factors that is associated with hemorrhoids cases.

RESULTS

Reliability analysis

From the analysis, it was found that the Cronbach's Alpha value is 0.610. Since the lower cut-off point is 0.6, the questionnaire is satisfactory and can be confidently used as a reliable measuring instrument for this study.

3.2 Descriptive Analysis

Out of 108 respondents who answered the questionnaire, 27 (50%) patients are male and also 27 (50%) are female for case group. Whereas, for control group with non-hemorrhoids patients, 21 (38.9%) are female and 33 (61.1%) are male.

From 54 respondents for control group, about 51 (94.4%) patients are Malay, 2 (3.7%) are Chinese and only 1 (1.9%) is Indian. Whereas out of 54 respondents from the case group, 44 (81.5%) are Malay, 10 (18.5%) are Chinese and none of the respondents are Indian.

Most of the respondents are married - 45 (83.3%) patients for case group and 42 (77.8%) patients for control group. Whereas, very few are divorced - only 3 (5.6%) patients for case group and 2 (3.7%) patients for control group. Another 6 (11.1%) patients are single for case group and 10 (18.5%) patients are single in control group.

From the responses of the respondents, it was found that a majority of the respondents are 51 years old and above for both groups. Another 4 (7.4%) patients are below 18 years old and between 26 to 35 years old for control group and same goes to patients between 19 to 25 years old for case group. Fifteen (27.8%) and 8 (14.8%) are between 36 to 50 years old for control group and case group respectively. While the rest, 12 (22.2%) patients are between 26 to 35 years old for case group. Only 3 (5.6%) patients are between 19 to 25 years old for control group and 1(1.9%) is below 18 years old for case group.

Thirty one (57.4%) patients are in the same level of normal body mass index (BMI) category for both groups while another 14 (25.9%) patients and 10 (18.5%) patients are from case group and control group respectively in overweight BMI category. And only 5 (9.3%) patients for case group are from underweight BMI category. Standing at the same level in control group are 7 (13%) respondents. The rest 4 (7.4%) patients for case group and 6 (11.1%) patients for control group are categorized as obese.

Out of 108 respondents, only 30 (27.8%) said that they have suffered from hemorrhoids before while the rest have not. Majority stated that they have no family history of hemorrhoids. Only 5 (4.6%) patients are pregnant. For patients who had ever suffered from other disease, 34 (31.5%) respondents said that they had chronic constipation, 16 (14.8%) patients had chronic diarrhea, 5 (4.6%) respondents had heart disease and 25 (23.1%) patients had hypertension. Most of the respondents said that they did not exercise and did not smoke. For daily diets, many respondents like to take spicy meal, fruits and vegetables. There was not such a big difference in taking a long time in the toilet. So many respondents were not taking laxatives when they had got constipation. From the response of the respondents, many patients were unemployed followed by self employed, government, others and non-government. Lastly, 58 (53.7%) have not lifted heavy objects.

Checking for multicollinearity

Correlation matrix of predictor variables has been done using Spearman's rho correlation to find out the existence of multicollinearity. If the correlation coefficient among predictor variables themselves are greater than 0.8, hence multicollinearity is said to exist.

For Hemorrhoids patients or case groups, the correlation matrix shows that only Spearman's rho correlation between age category and marital status has significant relationship, where p-value equal to 0.002 that is less than 0.01. The multicollinearity does not exist since r_s equal to 0.410 is less than 0.8. It is only a weak positive relationship. The other correlation among socio-demographic variables has no significant relationship. From the Spearman's rho correlation matrix, only seventeen shows that there is a significant relationship. In spite of having significant relationship, the Spearman's rho correlation shows that there is only a weak significant relationship whereas other risk factors have no significant relationship. There is a weak negative significant relationship between pregnant and chronic constipation, chronic constipation and eating vegetables, chronic constipation and standing, smoking and taking laxatives and also between eating vegetables and heavy lifting. The rest have weak positive significant relationships. All r_s values are less than 0.8. Therefore, multicollinearity does not exist.

On the other hand, for non-hemorrhoids patients (control group), the Spearman's rho correlation matrix indicates only three shows there is a significant relationship. Age category and marital status has a moderate positive significant relationship, where r_s is equal to 0.575 and p-value=0.000 is less than $\alpha=0.01$. There is a weak positive significant relationship with r_s is equal to 0.279 with p-value=0.041 less than $\alpha=0.05$. r_s equals to 0.334 means that marital status and BMI category has a weak positive significant relationship with p-value=0.014 less than $\alpha=0.05$. Therefore, we can conclude that there is no multicollinearity since all the significant relationship has r_s less than 0.8. Out of 54 respondents of

non-hemorrhoids patients, the correlation matrix shows that only fourteen correlations have significant relationship, but all were less than 0.8. It means that no multicollinearity existed. Spearman’s rho correlation between family sufferers and classes of children and also between eating fruits and vegetables are moderate positive significant relationship with rs equals to 0.510 and 0.508 respectively. Pregnancy and classes of children have moderate negative significant relationship, where rs equals to -0.537 and p-value is 0.000 less than $\alpha= 0.01$. There are weak positive significant relationships between family sufferers and chronic diarrhea, pregnancy and smoking, chronic constipation and chronic diarrhea, chronic constipation and heart disease, smoking and types of occupation and also between types of occupation and class of stand.

Association Test

Chi-square test is used in order to test the association between hemorrhoids and socio-demographic variables and between hemorrhoids and risk factor variables.

Table 1: Association between Hemorrhoids and Socio-demographic Variables

Variables	Chi-square Value	p-value	Sig. (p-value<0.05)
Hemorrhoids * Age category	8.091	0.088	No
Hemorrhoids * Gender	1.350	0.245	No
Hemorrhoids * Race	6.849	0.033	Yes
Hemorrhoids * Marital status	1.303	0.521	No
Hemorrhoids * BMI category	1.400	0.706	No
Hemorrhoids * Ever suffer	41.538	0.000	Yes

Table 1 shows the results on the association test between hemorrhoids cases and Socio-demographic variables. The results show that there are significant association (p-value<0.05) between hemorrhoids and race and between hemorrhoids and ever suffer. Ever suffer contributes more to hemorrhoids since the Chi-square value is larger (41.538). Other socio-demographic variables have no association with hemorrhoids. People with factors of race and ever suffer potentially suffer from hemorrhoids.

Table 2: Association between Hemorrhoids and Risk Factor Variables

Variables	Chi-square Value	p-value	Sig. (p-value<0.05)
Hemorrhoids * Family suffer	0.087	0.767	No
Hemorrhoids * Pregnancy	6.641	0.036	Yes
Hemorrhoids * Chronic constipation	10.989	0.001	Yes
Hemorrhoids * Chronic diarrhea	4.696	0.030	Yes
Hemorrhoids * Heart disease	0.210	0.647	No
Hemorrhoids * Hypertension	0.052	0.820	No
Hemorrhoids * Exercise	4.856	0.028	Yes
Hemorrhoids * Smoke	0.711	0.399	No
Hemorrhoids * Spicy meal	1.403	0.236	No
Hemorrhoids * Eat fruits	1.597	0.206	No
Hemorrhoids * Eat vegetables	0.293	0.588	No
Hemorrhoids * Long period of time in toilet	17.951	0.000	Yes
Hemorrhoids * Laxatives	1.174	0.279	No
Hemorrhoids * Occupational category	11.632	0.020	Yes
Hemorrhoids * Stand	36.184	0.000	Yes
Hemorrhoids * Heavy lifting	0.000	1.000	No

Table 2 explained the association between hemorrhoids and risk factor variables. There are significant associations (p-value<0.05) between hemorrhoids and pregnancy, chronic constipation, chronic diarrhea, exercising, long period of time in the toilet, occupational category and also standing. Therefore, people with these factors will suffer from this disease. However, risk factors of family sufferers, heart disease, hypertension, smoking, spicy meals, eating fruits and vegetables, laxatives and heavy lifting have no association with hemorrhoids.

Logistic Regression Model

Table 3: Logistic Regression Model

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for Exp(B)	
							Lower	Upper
Age category(1)	2.774	1.048	7.010	1	0.008	16.022	2.055	124.890
Ever suffer(1)	25.971	5650.000	0.000	1	0.996	190116033189.519	0.000	.
Months	8.022	4862.060	0.000	1	0.999	3047.624	0.000	.
Diarrhea(1)	2.606	1.171	4.951	1	0.026	13.546	0.364	134.515
Exercising(1)	-2.665	1.111	5.757	1	0.016	0.070	0.008	0.614
Toilet(1)	2.650	0.857	9.569	1	0.002	14.154	2.640	75.868
Heavy lifting	0.051	0.018	8.099	1	0.004	1.052	0.016	1.090

Table 3 shows the results of Logistic Regression Model. Based on the above logistic regression results, the final model that explained the factors associated with the hemorrhoids cases is

$$Y = -4.813 + 2.774X_1 + 25.971X_2 + 8.022X_3 + 2.606X_4 - 2.665X_5 + \dots\dots\dots 2.650X_6 + 0.051X_7 \quad (1)$$

where,

- Y = The dependent variable of the group of patients having hemorrhoids and no hemorrhoids
- X1 = The independent variable of age category
- X2 = The independent variable of ever suffer
- X3 = The independent variable of months of pregnancy
- X4 = The independent variable of chronic diarrhea
- X5 = The independent variable of exercising
- X6 = The independent variable of long period of time on the toilet bowl
- X7 = The independent variable of lifting heavy objects

Variables which are significant were included in the model. Since the p-value is less than 0.05, it was found that variable age, chronic diarrhea, exercising, long period of time on the toilet bowl and heavy lifting were found to be significantly associated with the outcome. Besides, by looking at the Wald value, both ever suffer and months of pregnancy factors are significantly associated with hemorrhoids since the values are equal to 0.000 which is less than $\alpha=0.05$.

The ratio-change in the odds of the age is equals to 16.022, which means those with older age are about 16 times more likely to be having hemorrhoids compared to those younger in age (OR = 16.022, p-value = 0.008, 95% CI 2.055,124.890). The odd ratio for chronic diarrhea is 13.546. It means that people who have chronic diarrhea is almost 14 times more likely to get hemorrhoids compared to those without chronic diarrhea (OR = 13.546, p-value = 0.026, 95% CI 1.364, 134.515).

The odd ratio for exercise is equals to 0.070. This means that people who do not exercise have (1/0.070=14.2857) times more likely to get hemorrhoids compared to those who exercise (OR = 0.070, p-value = 0.016, 95% CI 0.008, 0.614). On the other hand, the odd ratio for long period of time on the toilet bowl is 14.154. This means that people who spend a long time on the toilet bowl is about 14 times more likely to have hemorrhoids compared to those who do not (OR = 14.154, p-value = 0.002, 95% CI 2.640, 75.868). The ratio-change in the odds ratio of lifting heavy objects is 1.052. This means that people who had lifted heavy objects have 1 time more likely to get hemorrhoids compared to those who do not lift heavy objects (OR = 1.052, p-value = 0.004, 95% CI 1.016, 1.090).

The adequacy of the model has been checked by using the method of Forward Stepwise (Likelihood Ratio). After 7 steps, the Hosmer and Lemeshow statistics indicates that the model adequately fits the data since the p-value is 0.990 which is greater than $\alpha=0.05$. The classification table also shows the practical results of using the logistic regression model. The improvement in classification indicates wellness of the model performs. Overall, correctly classified percentages are reported as 88.9 percent. Therefore, based on the Hosmer and Lemeshow test and overall correctly classification table above, the model was considered to be fit for the data.

CONCLUSION

The findings support the evidence that age category, ever suffer, months of pregnancy, chronic diarrhea, not exercising, long period of time on the toilet bowl and heavy lifting are significantly associated with hemorrhoids. It was also found that other independent variables like gender,

overweight, heredity, chronic constipation, heart disease, hypertension, smoking, spicy meals, low fiber diets, taking laxatives and prolonged sitting are not significantly associated with hemorrhoids disease.

RECOMMENDATIONS

After considering the result from findings and analysis, this study comes out with some recommendations as follows.

Patients should exercise. Staying active can reduce pressure on the veins, which can occur due to long periods of standing or sitting, and to help prevent constipation. Exercise can also help to lose excess weight. Avoid reading or spending excess time on the toilet. If it takes more than 3-5 minutes to have a bowel movement, then something is wrong. Reading in the bathroom is considered a bad idea because it adds to the time one spends on the toilet and may increase the strain placed on the anal and rectal veins. Avoid the overuse of medication or poisoning food. It will affect the bowels because they may cause diarrhea which can irritate hemorrhoids. Use medication only when absolutely necessary. Avoid frequent heavy lifting. Do not hold breath when lifting heavy objects.

This study also recommends that future researchers should come out with other factors which may influence the dependent variables such as chronic cough, sneezing, vomiting, sedentary lifestyle and cirrhosis of the liver. More independent variables could be added in order to get a better relationship among the patients who suffer from hemorrhoids. The findings and analysis result may be more favorable as there are many types of independent variables included in the study. This study also strongly recommends that future researchers add this suggested independent variable in getting more significant result. It is also recommended for other researchers in the future to collect or obtain the data in a longer period of observation. Perhaps, more sample data can be used in order to get the best result or output.

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VISUALIZING COMPLEX MATHEMATICAL FUNCTIONS AND SURFACES

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ABSTRACT

Mathematical visualization is at a cornerstone of mathematical reasoning process since the times of the ancient geometers. The art of 'seeing' an abstract mathematical objects and processes for many years had remain as an exclusive right to the mathematicians who flexibly manipulated them in their mind effortlessly. However with the advent of high-performance interactive computer graphics systems such as Maple, a new era begins and some of the abstract mathematical entities can now be represented in a concrete manner. Even more exciting these mathematical visualization techniques revealed a different windows to doing the theoretical mathematics normally encountered. The beauty of fractals discovered in the 70s created a huge interest in the art of visualizing an infinite possibilities of the new generated mathematical surfaces. Many essential features of these complex mathematical functions displayed an interactive nature of the images which allows mathematical experimentation with an ease. This paper shall briefly highlight some of Maple applications that have been used to visualise these abstract mathematical functions.

Keywords: *complex functions, mathematical surfaces, technology, visualization.*

INTRODUCTION

A complex valued function of $f(z)$ is a rule that assign each complex number z in a particular set of domain D to one complex number w in another set of codomain R ie $w = f(z)$; w is the image of z under f . Just as z can be expressed by its real and imaginary part, $z = x + iy$ we can also write $f(z) = w = u + iv$. Because u and v depends on x and y , these variables can be represented as a real valued functions of real variables x and y ie $u = u(x, y)$ and $v = v(x, y)$. Following this convention we write f as follows,

$$f(z) = f(x + iy) = u(x, y) + iv(x, y) \quad (1)$$

Figure 1 illustrates this idea with the following mapping of f from domain D set to its range R (codomain)

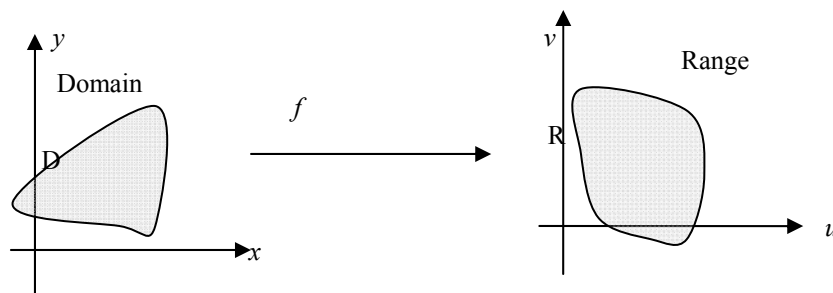


Figure 1: The complex function mapping of $w = f(z)$

Complex functions are widely used in science and technological advance applications. In engineering, for example the components of electrical signal wave behaviour can be analyzed using transfer function $H(z)$ where z is a complex number. Visualizing this function however is not straight forward and easy due to the fact that two real dimensions for the range and two more for the domain are needed. This therefore, requires four real dimensions which is an impossible task with ordinary drawing tools.

Traditionally the method of visualizing complex mapping was done from point to point. In this case it is not easy to detect where the image of each points goes, since mapping will be from one region onto another (refer to Figure 1). Attempt towards visualizing these complex function in the beginning had mainly focused on reducing the graph from four to two two-dimensional space. Advancement of technological tools such as Mathematica and Maple software made it possible to manipulate and visualize various elementary and complex mathematical functions towards better understanding of processes involve when solving mathematical problems related with these functions. Care however need to be exercised since mathematical visualization with computer algebra systems had features that set it apart from general computer graphics and requires special techniques.

In this paper we shall briefly highlighted some of the applications of the techniques that have been used to visualize surfaces of complex mathematical functions made possible using Maple. Maple was developed at the University of Waterloo, in the 1980's (Geddes et al.,1992). This software includes a rich set of functions and tools which have grown tremendously since the 90s. Incorporation of various features of symbolic, numeric, and graphic calculus made it one of the most powerful problem solving tool in science and mathematics field.

COMPLEX PLOT

Three of Maple complex plot commands; `conformal`, `complexplot`, `complexplot3d`, are designed specifically for dealing with complex numbers and functions. First the real points are obtained by expressing $f(z)$ algebraically into its real and imaginary parts. For example consider $f(z) = 1/z$.

$$\frac{1}{z} = \frac{1}{x + iy} = u + iv \quad , \quad u = \frac{x}{x^2 + y^2}, \quad v = \frac{-y}{x^2 + y^2}$$

Three dimensional plot of $f(z)$ surface can be viewed with the following command;

$$\text{plot3d}\left(\frac{x}{x^2 + y^2}, x = -1 .. 1, y = -1 .. 1, \text{grid} = [40, 40]\right)$$

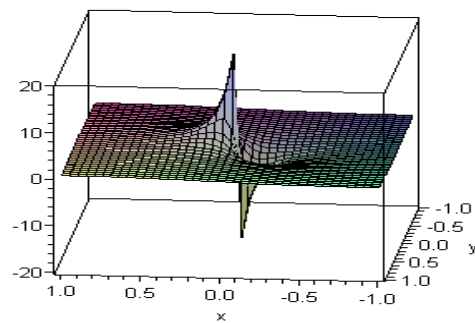


Figure 2: Three dimensional plot of Real of $f(x + iy)$

Figure 2 shows the three dimensional surfaces plot of real part of $f(x+iy)$. Likewise the view of three dimensional surface plot of imaginary part of $f(x+iy)$ is also possible. Alternatively we could also visualize both parts of the graph of $f(x+iy)$ on the same axis to give a better insight of the singularity behaviour of f at $x = 0$ or $y = 0$. Figure 3 gives the figure where graph of domain and image are plot on same surface.

$$\text{plot3d}\left(\left[\frac{x}{(x^2 + y^2)}, \frac{-y}{(x^2 + y^2)}\right], x = -1 \dots 1, y = -1 \dots 1\right)$$

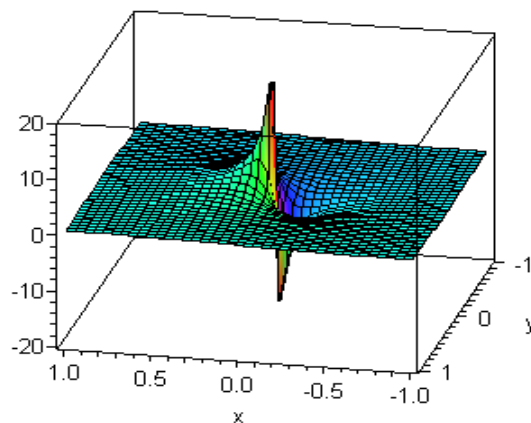


Figure 3: Plot of real and imaginary part of $f(x + iy)$

With `complexplot3d` and notation $f(z)$ instead of $f(x + iy)$ represent mapping from \mathbb{C} to \mathbb{C} . Interestingly a rather different surface are obtained as shown in Figure 4.

$$\text{complexplot3d}\left(\frac{1}{z}, z = -3 - 3 \cdot I \dots 3 + 3 \cdot I\right)$$

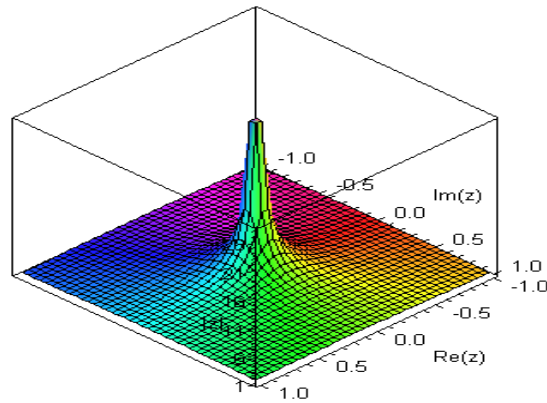


Figure 4 Three dimensional plot of $f(z)$

Complexplot3d $f(z)$ command plot magnitude of $f(z)$. While the argument of $f(z)$ are represented as colours on the surface in Figure 4. Hence a totally different graph as compared with Figure 3 is obtained despite actually plotting the same functions. A better insight of the behaviour of this function can be further explored by plotting package commands such as contourplot, densityplots or polarplots to produce a more intuitive graphs of this complex-valued function. Figure 5 shows contour plot of $|f(z)|$ for $f(z)=1/z$ which clearly illustrates the behaviour of magnitude of $f(z)$. Obviously from figure 5, it can be clearly seen that as x or y increases the magnitude of $f(z)$ decreases. Maple command used is as follows:

$$\text{contourplot3d} \left(\left| \frac{1}{x + I \cdot y} \right|, x = -1 .. 1, y = -1 .. 1, \text{grid} = [40, 40] \right)$$

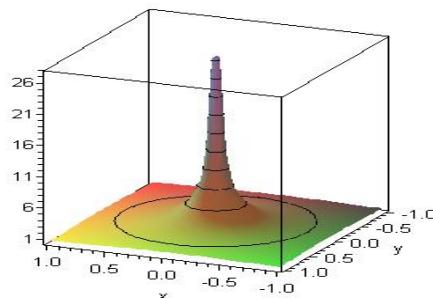


Figure 5 Contour plot of $\text{mod } f(z)$

Farris (1998) proposed another interesting method of visualizing complex functions. According to him complex plane could be assigned colours that is similar to those in a traditional colour wheel. In addition each pixel in the domain of the function value can be computed and color be associated with that input value. This implies that each colour has a value representing each pixel used. With this method each complex number are each associated with a particular colour. By convention, red colour is used as the complex number 1, with green and blue at the other two cube roots of unity. Hues are then interpolated, giving secondary and tertiary colours. This follows with a continuous blending of the colour. For example, (Hue,0.9) is violet, while (Hue,0.0) is red. By default MAPLE hue colours used rainbow colour as primary colours.

One of the most crucial behaviour of complex function is poles or singularity points. In this example, Maple has made it possible to explore and analysed the behaviour of $f(z)=1/z$ singularity at $z=0$. Alternatively we can also look at this graph by mapping codomain magnitude to height and argument to colour of $f(z)$. Of course if we used complex plot 3d with colour =HUE, the image obtained highlighted tremendous amount of vital information about the function. Another option is to use density plot which produces spectacular images of $f(z)$. Densityplot will plot each real and imaginary point for image $f(z)=1/z$ to obtain figure 6a. Using Hue as colourstyle, each $f(z)$ value are assigned to one particular colour. Therefore each point takes one colour in the region. Two types of region plotted using different coordinates system, mainly rectangular and polar coordinates each shall produce different orientation of figures as shown in figure 6 and figure 7.

$$\text{densityplot}\left(\frac{-y}{(x^2 + y^2)}, x = -1 .. 1, y = -1 .. 1, \text{colourstyle} = \text{HUE}\right)$$

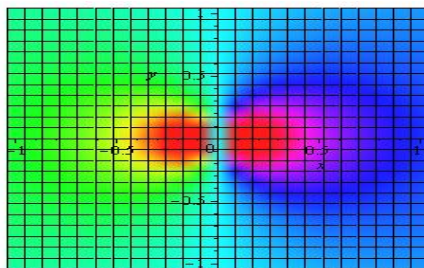


Figure 6a:

Real part of $f(z) = 1/z$

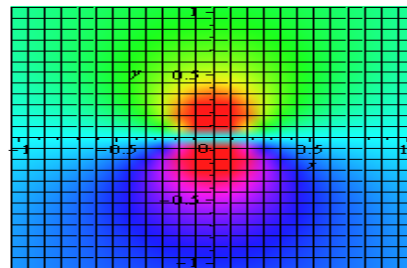


Figure 6b:

Imaginary part of $f(z)=1/z$

The graph of $f(z)$ can be further viewed using polar coordinates where $f(z) = r e^{-i\theta}$, θ is the argument and r is the magnitude of $f(z)$ (Figure 7). This graph accentuates the property that modulus of f increases.

$$\text{plots}[\text{implicitplot}]\left(\frac{1}{r \cdot e^{i \cdot \theta}}, r = 0 .. 1, \theta = 0 .. 2 * \pi, \text{coords} = \text{polar}, \text{outlines}, \text{grid}\right) \\ = [5, 5], \text{style} = \text{point}, \text{axiscoordinates} = \text{polar}];$$

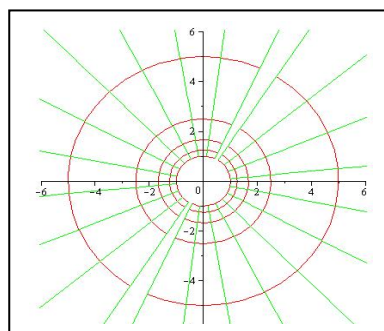


Figure 7: Polar graph of $f(z)=1/z$

CONFORMAL PLOT

A more concise way of visualizing complex mapping is analyzing behaviour of curves of domain mapped onto codomain. As shown in Figure 8, the image of rectangular grid are mapped under the

transformations $f(z) = 1/z$ onto a region contained between the two curves. Vertical lines represent real values are mapped onto parabolic curve which are horizontal symmetrically along x-axis. Similarly horizontal lines are mapped to parabolic shape symmetrically along y-axis. Colours used indicated conformal maps of each lines from domain onto codomain. Green and red colours differentiate how these points are transformed by the function.

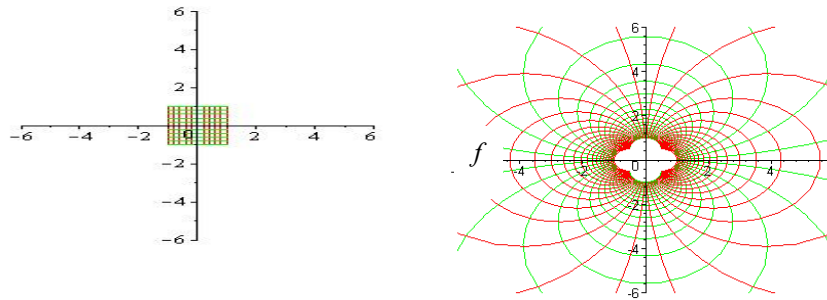


Figure 8: Conformal map of $f(z)=1/z$

GENERATIVE FUNCTIONS

Using function of the form $z_{n+1} = f(z_n)$ a series of a complex variables can be generated. This series generated from an initial point z_0 on some partition of the complex plane (Gaston Maurice Julia & Benoit Mandelbrot, 1970) are called generative functions producing fractals shapes. In the case of the Mandelbrot fractals the complex function used was $f(z_n) = z_n^2 + c$ where z and c are complex numbers. A basic picture of the Mandelbrot set is shown in Figure 9. Maple command used to produce this image is as follows:

```
mandelbrot:=proc(x, y) local c,z,n; z:=evalf(x +I*y); c:=z; n:=0; while abs(z) < 10
do z:=z^2 + c; n:=n+1; if n > 30 then break end if; end do; return n; end proc;
plot3d(mandelbrot, -2 .. 0.75, -1.3 .. 1.3, style = patchnogrid,
numpoints = 16000);
```

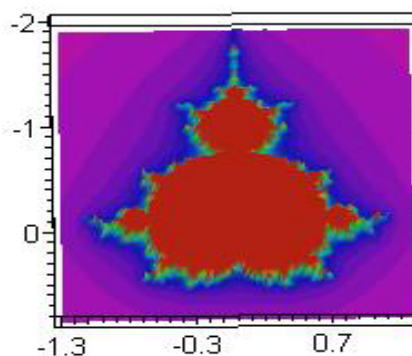


Figure 9: Simple Manderbrot fractals

The underlying mathematical transformations on the basic Mandelbrot set such as scalings, rotations, reflections and translations operations create other set of points to produces various images. These images despite a simple formula, involving only multiplication and addition, are capable of producing a shape of great beauty and infinite subtle variations. Other variations of self-similarity are

naturalistic fractals, landscapes fractals and many more that produced more interesting graphics. Some examples of more elaborate Mandelbrot sets graphics are illustrated in Figures 10a and 10b.

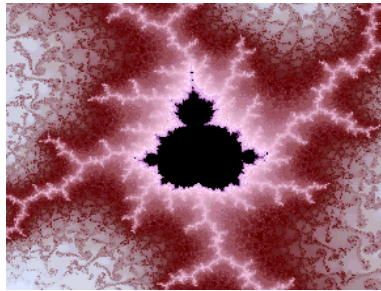


Figure 10a

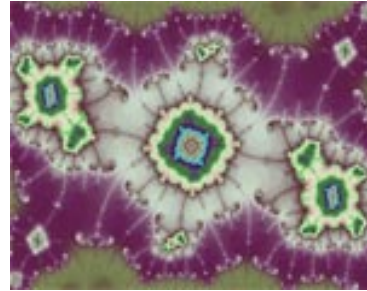


Figure 10b

CONCLUSION

Functions $f(x, y)$ in the field of complex functions are extremely abstract mathematical objects and hence are difficult to visualize. Since graph of complex functions if drawn in a four-dimensional space with coordinates $(x, y, \text{Re}(f), \text{Im}(f))$, cannot be easily sketch on paper, aids for visualizing would be most beneficial. Technological software such as MAPLE offers useful tool towards these need. Computer graphics or animations can be a very powerful tool towards visualization of these functions found in practical phenomena or applied as an explanation of mathematical models in various field especially in engineering. The use of colors to enhance visualization of complex values have proved to be very useful in understanding the complexity of mathematical functions and surfaces. Computer software such as C++ have proved to be also very powerful interface medium towards bridging a more powerful illustration of extraordinary graphics derived from mathematics generative functions such as found in fractals (Kawski,2008). Nevertheless it should be stressed that the methods that have been very briefly discussed do not actually portray the actual graphs of the complex mathematical functions, rather they offers some reflections and aesthetic values as related. Researches are ongoing related to how to make complex surfaces more accessible to all categories of audiences.

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SEMIOTIC KNOWLEDGE TOWARDS HERITAGE PRODUCT IN TOURISM INDUSTRY: A CASE OF TERENGGANU

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ABSTRACT

In order to provide an appropriate context for the current state of the heritage product in tourism industry, semiotic knowledge has become an important role to know deeply the identity, philosophy, and also the meaning of behind the actual product. Scott (2000) stresses the requirement of aesthetic and semiotic content in a creative product, instead of creativity. But, how many of retailers and salespersons in heritage product think semiotic as knowledge to present the product and opportunities in their selling? According to Kotler (2000) a good personal selling will provide a detailed explanation or demonstration of the product. The message can be varied by the salesperson to fit the motivations and interests of each prospective customer. So, the purpose of this paper is to closely examine the level of awareness among retailers and salesperson towards the importance of semiotic knowledge as part of strategic persuasion in a selling process. This survey study will develop a sample among retailers and salesperson in Kuala Terengganu as respondents who give the feedback to fulfill the research questions.

Keywords: *semiotic, heritage product, personal selling, persuasion, tourism*

INTRODUCTION

Terengganu is rich of traditional and heritage products like traditional food, batek, silk, songket, wood curving, music, dance and other traditional product. The growth of tourism industry in Terengganu has contributed to the demand of local heritage product, and directly it will give advantage to practitioners especially for those who are involved in producing, retailing, distributing and supplying heritage product. Actually, most of the tourists are eager to visit Terengganu because of its attractive heritage resource. The demand of tourism product in certain country on global scale is caused by environment, social-culture and also heritage. In fact, heritage become the backbone of UK tourism industry (DCMS and DTLR, 2001).

A good retailer or salesperson will have a selling strategy to communicate with potential buyers of a product with the intention of making a sale. Basically, personal selling focuses initially on developing a relationship with the potential buyer. Then, the primary role of salesperson is to persuade and encourage a buyer to make a decision to buy the product in retail. Information becomes a main tool to persuade and encourage the consumer to make decision to buy the product. Normally, salespersons that have a semiotic knowledge will highly successful in attracting consumer to their product, especially for those who are involved with the heritage product in tourism market. Retailers and salespersons have to know the benefits of semiotic knowledge in heritage product in order to communicate with the tourist everyday. In fact, the knowledge of semiotic among salesperson and retailers also makes it easy for them to describe their product properly and makes consumer become interested to buy the product. The

success of any retailers in heritage product does not totally depend on the core product itself, but it will also depend on their persuasion strategies and how they clearly deliver the product information.

Heritage product in tourism industry

Malay culture is symbolic and clearly describes social identity in terms of attitude, thinking, and value. Basically, the term culture includes beliefs, values, attitudes, customs and institutions, which influence the way of life of a particular society. Taib Osman and Wan Abdul Kadir (1987) have highlighted that performance of culture, politic, economy and socio-organizing as a result of knowledge and that impact of belief, value, custom and attitude. Nowadays, the variables of beliefs, values, attitudes, and customs are highly contributed to the development of heritage product in tourism industry in Malaysia (Rais Yatim, 2006).

So, the implication of tourism is to revitalise the heritage and enhance it to promote heritage product, to nurture cultural knowledge, reinforce civic pride and national identity, and to facilitate economic development. The government of Terengganu since 2004 has adopted and implemented measures aimed at making the state an important tourist destination. Under *Rancangan Pembangunan Negeri Terengganu 2004 – 2008 (PPNT)*, tourism was tagged as one of the “growth poles” to propel national economic growth to high levels. Instead of hotel and restaurant services, telecommunication and efficient transportation system, the implication of tourism must be supported by good heritage products that meet international consumer standards.

The heritage tourism phenomenon has often been criticised for converting local cultures and lifestyles into commodities for sale to foreign audiences (Arthur, Mensah, 2006). However, it is possible for heritage entrepreneur to serve multiple products to tourist without altering the principle historical status and value. In fact, M. Taib Osman & Wan Kadir (1987) also highlighted that culture is not static and single direction, but it is dynamic to meet the societies’ needs and want. Hence, the adaptive re-use of heritage product in modern culture are inspired by reasons to develop the product/service in tourism market, and the local retailer will benefit from the activity. But, how many of the retailers and salespersons in Terengganu are able to describe the heritage product in a context to persuade and encourage modern consumer?

Definition of semiotic

The term semantic is widely used in language study. The semantic study is engaged with meaning of words, phrases and so on, while the semiotic study is more general. The name itself comes from the Greek word for “mark” or “sign”, semeion, and was originally used by John Locke in his 1690 essay *Concerning Human Understanding* (although with a different spelling) (Paul Cobley and Litza Jansz, 1997). Philosophy of language pays more attention to natural languages or to languages in general, while semiotics focuses on non-linguistic signification. There were philosophers who were also linguists interested in semiotic study like Ferdinand de Saussure (1857–1913) and Charles Sanders Peirce (1839–1914).

According to Dewan Bahasa (2000) definition, semiotic is “a study on signs and symbols and their relationships with things or idea intended”. As mentioned in Encarta (2008) in on line dictionary which cited as follow “the study of signs and symbols of all kinds, what they mean, and how they relate to the things or ideas they refer to”.

This discipline is frequently seen as having important anthropological dimensions. However, some semioticians focus on the logical dimensions of the science. They examine areas belonging also to the natural sciences - such as how organisms make predictions about, and adapt to, their semiotic niche in the world. In general, semiotic theories take *signs* or sign systems as their object of study: the communication of information in living organisms is covered in biosemiotics or zoosemiosis.

In this paper, semiotic is perceived on traditional based craft's product. These products such as batik, songket and mengkuang were believed to have semiotic background. The study will interpret semiotic term during the symbols, history, usefulness and so on of the products. Any new information of these products which was not expected earlier will contribute to this study.

Problem statement

Lacking of semiotic knowledge among salesperson and retailers in selling their heritage product has become a major problem in a market demand toward this product. Actually, some buyers make a decision to buy a product because they have enough information about the product. Normally, clear information is the main factor for consumer to make a decision. But, how many of our retailers or salespersons in heritage product are able to explain the advantage of product to persuade or encourage consumer to buy the product in a context of semiotic knowledge. Hence, the purpose of this paper is to closely examine the level of awareness among retailers and salespersons towards the importance of semiotic knowledge as part of strategic persuasion in a selling process.

Research on knowledge, attitudes, and practices of the retailer regarding semiotics knowledge towards product heritage may help to inform policy-makers in Terengganu or Malaysia. Unfortunately little or no research has been conducted in this area in the country. Therefore the aim of our study is to evaluate the extent of knowledge, attitudes and practices of semiotic knowledge in Terengganu with the view of identifying a plausible strategy in increasing the volume of sale to our product heritage. Our study focuses on knowledge, attitudes and practices of retailers or producers because the success of sale or demand starts from them for our industry in heritage and tourism in Malaysia.

Objectives

General Objective

- To study knowledge, attitude and practices (KAP) of semiotic knowledge among retailers at Pasar Kedai Kepayang Kuala Terengganu from January to February 2008.

Specific Objectives

- To identify the level of knowledge on semiotic in general with reference to:- symbol, explanation of story and functions of the product heritage.
- To determine the attitude of retailers with regard to semiotic knowledge in the way of sale.
- To determine the practice of retailers with regards to:- lifestyle -regular exercise
- To find out the correlation between knowledge, attitude and practice regarding semiotics knowledge of the product among retailers.

LITERATURE REVIEW

The field of semiotics emerged in the 19th century as a systematic way to study signs, both individually and as they appear grouped into symbol systems. Included in this concept is the study of how meaning is created, understood, and conveyed to others. As such, semiotics is a broad, cross-disciplinary endeavour that spans fields such as philosophy, linguistics, sociology, and anthropology, to name a few. The name itself comes from the Greek word for “mark” or “sign”, *semeion*, and was originally used by John Locke in his 1690 essay *Concerning Human Understanding* (although with a different spelling) (Paul Cobley and Litza Jansz, 1997). It is perhaps useful to denote the unique characteristics that distinguish semiotics from other similar, related field; perhaps in this respect semiotics is easier to define by what it is not, rather than what it is.

Semiotics is not communication studies; as communication studies are interested in information theory, and how to most effectively transmit data from one point to another, utilizing the most efficient delivery method possible. Thus, communication theorists construct algorithms and models to explain the biology, psychology, and mechanics involved in this process. Obviously, once the data is received by the recipient, it must be decoded, and here is the tangential connection to semiotics; however, although there are shared concepts between the two fields, the emphasis between the two approaches is different (Daniel Chandler, 2006). Linguistics is a bit harder to distinguish, especially because of semiotic’s origins as a sub-discipline of linguistics.

Although both start from the same point, semiotics links linguistic and non-linguistic information to offer plausible conclusions that place the interpretation of language in a social context (sometimes termed the *semiosphere*). Pure linguistics takes on a more systematic approach, and deals with the lower-level components of languages, syntax and grammar. Possibly most challenging is the distinction between semiotics and the philosophy of language. It has been argued that the difference is one of traditions more than subjects, as different authors have called themselves “philosopher of language” or “semiotician” almost interchangeably. Philosophy of language pays more attention to natural languages or to languages in general, while semiotics focuses on non-linguistic signification.

METHODOLOGY

This cross-sectional survey was carried out in February 2008 at the *Pasar Kedai Kepayang* in Terengganu, which is one of the popular places for buying the heritage product in Terengganu. The

Pasar too has many heritage products of Terengganu which could be found somewhere in Terengganu's village. The products to be related in this study are categorized into four items as below:

1. **Batik:** a fabric printed by an Indonesian method of hand-printing textiles by coating with wax the parts not to be dyed; *also:* the method itself (Mariam Webster Dictionary, 2008). There are differences between Malaysian method and Indonesian method on batik's product.
2. **Songket:** a fabric embroidered with gold or silver string (Kamus Dewan, 2000). The price of songket is normally expensive and been used during occasion such marriage, Raya and so on. Songket also has a name regarding to the price, place and history.
3. **Mengkuang:** is a plant known as *pandanus aurantiacus* which is popular in craft product industry. Traditionally, Malays used this plant to make mengkuang's mat, basket and cap. But nowadays they use mengkuang to create a craft product in different and various shapes.
4. Copper and Rattan & bamboo's craft

Population and sampling

The population of the retailers at Pasar Kedai Payang in Kuala Terengganu are 100 retailers who sell heritage products like Batik, Copper, Rattan & bamboo's craft, Songket and Mengkuang and Wood's craft. A convenient sample of 31 retailers of the Pasar Kedai Kepayang retailer in heritage product was selected for the study. Data was collected by a self-administered questionnaire. A convenience sampling method was used. All retailers are eligible for the survey. However, only retailers who were present in the Pasar Kedai Kepayang at the time the study is conducted actually participated in the survey.

On the day of administration of the questionnaire, retailers who are found in the Pasar Kedai Kepayang are requested to answer the questionnaire. They are then informed of the survey, its objectives and procedures, and assured that the information collected would be treated as confidential and used only for research purposes. Retailers who gave their verbal informed consent were provided with the 2 page of self-administered questionnaire. They are also asked to request for clarification if any item in the questionnaire was not clear. The exercises take about half an hour.

Study instrument

We used a 2-page self-administered questionnaire for data collection. The questionnaire had both close and open-ended questions. It was composed of two parts. The first part contained information on the demographic characteristics of the study participants. The second part has three sections which are A, B and C. The A section assessed the knowledge of retailers about semiotic knowledge; the B section evaluated their attitudes while the C section was concerned with their practices as regard to semiotic knowledge.

We determined the knowledge about semiotic using five items rated on a five-point Likert scale as (1) very don't know, (2) don't know (3) little bit know (4) know and (5) very know. The four questions to evaluate the level of knowledge about semiotics were: (1) "Do you know how to identify this product?" (2) "Do you know how to classify this product?", (3) "Do you understand how to explain the origin function of this product?", (4) "Do you know how to describe the symbolic/motif for this product?". 5) "Do you know what is the story behind the symbol for this product?"

The retailers' attitudes were measured using four items rated on a five-point Likert scale as (1) strongly disagree, (2) disagree, (3) neither agree/ nor Disagree (4) agree and (5) strongly agree. The four items were: (a) "I would have the initiative to study or gain effort on the information about the symbol of the product", (b) "The symbol must be added in the design of the product", (c) "I would recommend semiotic of the product to a customer" and (d) "Providing semiotic for the product would encourage our industry". We decided that a high score was indicative of positive attitude while a low score would be indicative of a negative attitude.

The questionnaire for part two in section C required the retailers to state their prior practice with semiotic knowledge practices. It consisted of three items rated on a five-point Likert scale as (1) very seldom, (2) seldom, (3) normal (4) often and (5) very often. The three items were: (a) "Based on you product knowledge, how often do you apply it in the promotion of product?" (b) "How often do you introduce more detail of the product? and (c) " Do you use the product based on semiotic in you life?" We decided that a high score was indicative of positive practice while a low score would be indicative of a negative practice.

The test-retest reliability method was carried out on the items of the questionnaire to ascertain the reliability of the items and also the instrument as a whole. The first run of test, which was administered on 31 respondents, yielded the cronbach alpha reading of 0.863 for the component on knowledge, 0.795 for the component on attitude and 0.899 for the component on practise. The overall cronbach alpha reliability level of the all the components were .885, thus proving a strong reliability level.

Generally, the instrument possesses very strong reliability, mainly .8 and above. This will prove that the items and its sub-items in the instrument are very reliable and can be used confidently to measure the intended feedback from the respondents.

STATISTICAL ANALYSES AND FINDING

The data was entered and analyzed with the Statistical Package for Social Sciences (SPSS) software programme (version 13.0). For descriptive statistics, results were expressed in terms of proportions or percentages and for analytical statistics, odds ratios were used to examine the relation between variables. The Pearson correlation analysis was used to examine the relationship between knowledge, attitude and practice.

Table 1: Demography by Frequency and Percentage

Variable	Frequency	Percentage	Mean	Standard Deviation
Business Status				
Producer	1	3.2	2.84	0.454
Distributor	3	9.7		
Retailer	27	87.1		
Main Product				
Batik/Songket	18	58.1	1.90	1.274
Cooper	5	16.1		
Craft	2	6.5		
Gold	5	16.1		
Scarf	1	3.2		
Job Position				
Owner	12	38.7	1.61	0.495
Worker/Salesman	19	61.3		
Race				
Malay	31	100.0	1.000	0.000
Gender				
Male	12	38.7	0.61	4.95
Female	19	61.3		
Marital Status				
Single	11	35.5	1.45	0.675
Married	19	61.3		
Others	1	3.2		
Age				
Under 20 years	1	3.2	2.29	0.529
20 – 35 years	20	64.5		
36 – 65 years	10	32.3		
Number Year of Working				
Less than 1 year	6	19.4	3.32	1.536
1 – 2 years	4	12.9		
3 – 5 years	5	16.1		
6 – 10 years	6	19.4		
More than 10 years	10	32.3		
Education				
Primary			1.90	0.396
School/UPSR	4	12.9		
Secondary	26	83.9		
School/SRP/SPM	1	3.2		
STPM/Diploma				

The Table 1 has a listing for demography of respondents in this study. Researchers have identified nine factors to be concluded in this part. The first factor, business status has showed that most of the respondents are retailers which are 87.1% in percentage. The second one is main product which is 58.1% of the respondents are involved in Batik and Songket. The third factor, job position has proven that most of the respondents are workers or salesmen. They are 61.3% compared to the owners who are 38.7%. The fourth factor informs that all the respondents are Malays. The gender, which is the fifth factor proves that female ratio is bigger with 61.3%. Looking at marital status as sixth factor, married respondents are the highest with 61.3%. Respondents in the age between 20-35 years dominate this profession during this research was conducted as noted in the seventh factor with 64.5%. In this table also, it indicates 32.3% of the respondents have been involved in the business for more than 10 years. Their education is really moderate with the highest percentage, 83.9% for Secondary School, Primary School with 12.9% and STPM/Diploma with 3.2%.

In summary, respondent`s demographics in this study is well collected. It will help the researchers to find out the detail which will meet the objectives in this study. The following table will relate these factors to the domain analysis of the study.

Table 2: The respondents` knowledge toward semiotic

	Item	Very don't know	Don't know	Little bit know	Know	Very know
1.	Do you know how to identify this product?	2 (6.5%)	1 (3.2%)	9 (29.0%)	12 (38.7%)	7 (22.6%)
2.	Do you know how to classify this product?	1 (3.2%)	2 (6.5%)	11 (35.5%)	9 (29.0%)	8 (25.8%)
3.	Do you understand how to explain the origin function of this product?	1 (3.2%)	1 (3.2%)	10 (32.3%)	14 (45.2%)	5 (16.1%)
4.	Do you know how to describe the symbolic/motif for this product?	1 (3.2%)	2 (6.5%)	16 (51.6%)	6 (19.4%)	6 (19.4%)
5.	Do you know what is the story behind the symbol for this product?	1 (3.2%)	6 (19.4%)	13 (41.9%)	6 (19.4%)	5 (16.1%)

Based on the Table 2, 19 respondents or 61.3% know and very know that they know how to identify the products. 17 respondents or 54.8% know how to classify the products. 19 (61.3%) respondents know and very know that they understand how to explain the origin function. To describe the symbolic/motif for the product, only 12 (3.8%) respondents know and very know and 16 (51.6) just little bit know. Only 11 (35.5%) respondents know and very know and 13 (41.9%) respondents just little bit know the story behind the symbol for the product. So based on the result we can conclude the whole items has a moderate level for knowledge among respondents towards semiotic.

Table 3: The respondents` attitude toward semiotic

	Item	Strongly disagree	Disagree	Neither agree/ Nor Disagree	Agree	Strongly agree
1.	I would have the initiative to study or gain effort on the information about the symbol of the product	1 (3.2%)	3 (9.7%)	1 (3.2%)	18 (38.7%)	8 (25.8%)
2.	The symbol must be added in the design of the product	1 (3.2%)	2 (6.5%)	6 (19.4%)	15 (48.4%)	7 (22.6%)
3.	I would recommend semiotic of the product to a customer	0 (0.0%)	2 (6.5%)	4 (12.9%)	19 (61.3%)	6 (19.4%)
4.	Providing semiotic for the product would encourage our industry	1 (3.2%)	3 (9.7%)	6 (19.4%)	16 (51.6%)	5 (16.1%)

From the Table 3, 26 respondents or 64.5% agree and strongly agree that they would have the initiative to study or gain effort on the information about the symbol of the product. 22 respondents or

71.0% agree and strongly agree that the symbol must be added in the design of the product. 25 (80.7%) respondents agree and strongly agree that they would recommend semiotic of the product to a customer. Only 21 (67.7%) respondents agree and strongly agree that providing semiotic for the product would encourage our industry. So we can conclude the whole items is in high good level for attitude among respondents towards semiotic knowledge in heritage product.

Table 4: The respondents' practise toward semiotic

	Item	Very seldom	Seldom	Normal	Often	Very often
1.	Based on your product knowledge, how often do you apply it in the promotion of product?	1 (3.2%)	7 (22.6%)	5 (16.1%)	11 (35.5%)	7 (22.6%)
2.	How often do you introduce more detail of the product?	0 (0.0%)	4 (12.9%)	12 (38.7%)	8 (25.8%)	7 (22.6%)
3.	Do you use the product based on semiotic in your life?	0 (0.0%)	4 (12.9%)	10 (32.3%)	11 (35.5%)	6 (19.4%)

Table 4 shows 18 respondents or 58.1% often and very often that they apply semiotic knowledge in the promotion of product. Only 15 respondents or 48.4% often and very often introduce more detail of the product. 17 (54.9%) respondents often and very often used the product based on semiotic in their life. So we can conclude the whole items is in moderate level for practise among respondents towards semiotic knowledge in heritage product.

Table 5: Respondents Knowledge, Attitude and Practise with Mean and Standard deviation for demography

Variable	Knowledge		Attitude		Practise	
	Mean	SD	Mean	SD	Mean	SD
Business Status						
Producer	3.0000	0.50332	3.5000	0.00000	2.3333	0.19245
Distributor	3.0667	0.84368	3.5000	0.25000	3.8889	0.98966
Retailer	3.6222	0.81970	3.8889	0.77625	3.5802	0.95527
Main Product						
Batik/Songket	3.6556	0.73502	3.8889	0.51608	3.6481	0.90368
Cooper	3.1600	1.07145	3.1500	1.05475	3.2667	1.14018
Craft	4.1000	1.27279	4.5000	0.70711	4.3333	0.94281
Gold	3.2800	0.83187	3.9500	0.87321	3.4000	1.14018
Scarf	3.8000	0.0000	4.5000	0.00000	3.0000	0.00000
Job Position						
Owner	3.5500	0.69348	3.8750	0.71111	3.4722	0.88144
Worker/Salesman	3.5474	0.90883	3.8158	0.77209	3.6316	1.01771
Race						
Malay	3.5484	0.81970	3.8387	0.73753	3.5699	0.95527
Gender						
Male	3.7667	0.93355	3.6250	0.98569	3.5278	1.03921
Female	3.4105	0.73174	3.9737	0.51299	3.5965	0.92682
Marital Status						
Single	3.3818	0.68966	3.7727	0.64667	3.3636	0.87502
Married	3.6947	0.87526	3.8947	0.81358	3.6845	1.02724
Others	2.6000	0.00000	3.5000	0.00000	3.6667	0.00000
Age						
Under 20 years	2.6000	0.71163	3.5000	0.00000	3.6667	0.00000

20 – 35 years	3.3700	0.87939	3.9125	0.53971	3.3833	0.81846
36 – 65 years	4.0000	0.81970	3.7250	1.07658	3.9333	1.18426
Number Year of Working						
Less than 1 year	2.9667	0.34448	3.7917	0.43060	3.5556	0.62063
1 – 2 years	3.3000	0.47610	4.0000	0.20412	3.2500	0.73912
3 – 5 years	3.8400	1.06207	3.9500	0.67082	3.7333	1.25610
6 – 10 years	3.9333	1.04051	3.7917	1.05376	3.7222	1.18165
More than 10 years	3.6200	0.76855	3.7750	0.92384	3.5333	1.04468
Education						
Primary School/UPSR	3.3500	1.18181	3.0000	1.30703	3.7500	1.50000
Secondary School/SRP/SPM	3.5615	0.78998	3.9423	0.55366	3.5000	0.87560
STPM/Diploma	4.0000	0.00000	4.5000	0.00000	4.6667	0.00000

From Table 5 shows the average or mean score and standard deviation (SD) for the demographics of the respondents' knowledge, attitude and practise based on score scales of 1 to 5, with 5 as the highest and 1 as the lowest score of knowledge, attitude and practise among respondents towards semiotics knowledge in heritage product.

a) Knowledge in semiotic

As for business status, the mean score for retailer is higher 3.6222 as compared to the distributor and producer towards the knowledge of semiotic. As for the main product, those under the craft and other category show a higher mean at 4.1000 as compared to those scarf, batik and others. In terms of job position, it shows that those under the owner group has a higher mean score of 3.5500 as compared to the worker/salesman group with the mean score of 3.5474. As for gender, the mean score for male respondents is higher as compared to the females towards the knowledge of semiotic. As for marital status, those under married show a higher mean as compared to those unmarried or singles and other category. As for the age factor, it shows that the older the respondent the higher is the mean (4.0000). Based on the number of working years factor, those with 6 – 10 years category has a higher mean score of 3.9333, followed by 3 – 5 years and more than 10 years more category. In education level, those with the higher level of education STPM/Diploma, shows a higher knowledge of 4.000 as compared to those with the low level of education.

b) Attitude in semiotic knowledge

Respondent's attitude toward semiotic value in the heritage product has the highest mean score among retailers with 3.8889 as they are the big party in business status. While in product category, craft with two respondents and scarf with only one respondent show the highest mean score with 4.5000. Job position in this demographics has no difference in terms of their attitude whether the owners or the workers both have 3.8750 and 3.8158. The gender and the marital status have a small gap as well. According to the gender, the female respondents have a higher mean score compared to the male with 3.9737. Marital status shows the married respondents have the highest mean score with 3.8947 compared to single and other groups. The age and the number of working years have an important impact on respondent's attitude. The age 20-35 with 20 respondents shows the highest mean score with 3.9125. The number of working years mentions that 1-2 duration has 4.000 mean score. The fact shows that the respondent with higher education level has more positive attitude with 4.5000.

c) Practicing their knowledge of semiotic

Respondent’s willingness to practise any semiotic value in the heritage product has the highest mean score among distributor with 3.8889 and there are only three of them. While in product category, craft group with two respondents has the highest mean score of 4.333. Job position in this demographics has no difference whether the owners or the workers both have 3.4722 and 3.6316. The gender and the marital status have a small gap as well. According to the gender, the female respondents have a higher mean score compared to the male with 3.5965. Marital status shows the married respondents have the highest mean score with 3.6845 compared to single and other groups. The age and the number of working years have an important impact on respondent’s practice. The age 36-65 with 10 respondents shows the highest mean score with 3.9333. The number of working years mentions that 3 - 5 duration has 3.7333 mean score. The fact shows that the respondent with higher education level has more positive practise with 4.6667.

Table 6: The correlations between Knowledge, Attitude and practise toward semiotic

	Knowledge	Attitude	Practise
Knowledge	1		
Attitude	0.264	1	
Practise	0.720**	0.379*	1

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

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

The relationship between knowledge and attitudes of respondents was investigated using the Pearson correlation analysis. From the results, there was a statistically significant association between knowledge and attitude towards semiotic with $r=0.720$ and $p=0.000$ at probability level of 0.01. Those with adequate knowledge generally showed favourable attitudes with regard to semiotic. The attitude and practise have a relationship with $r=0.379$, $p=0.035$ at probability level of 0.05 towards semiotic knowledge.

CONCLUSION

Most retailers are lack of adequate knowledge about the general semiotic knowledge of heritage product. Knowledge to describe the symbolic/motif for the product was low (3.8%) and only (35.5%) retailer had knowledge on the story behind the symbol for the product. So this study has positively identified that the use of a certain strategy in the level of semiotic knowledge, particularly in knowledge, attitude and practise does contribute towards an improved of sale performance among the retailers. We hope that our study will provide a baseline data to assist policy makers in developing appropriate evidence-based strategies to promote the use of semiotics knowledge in Malaysia heritage industries. We strongly recommend that strategies to promote semiotic knowledge among retailer be focused on spreading accurate information through information, education and communication by producer or designer of heritage product through developing better training to retailer, which have been found to be reliable and associated with good knowledge on semiotics.

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TR(02)

A COMPETITIVE STUDY OF MALAYSIAN TOURISM DESTINATIONS

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ABSTRACT

Realizing that tourism is a fragile sector, many destinations have planned various strategies in order to remain competitive at global tourism market. One of the strategies that were considered is to provide an overall attractiveness and quality experience that are better than those of the alternative destinations for the specific markets. Thus, this paper reports on the methods and approaches in measuring the competitiveness of selected Malaysian tourism destinations such as Cameron Highland, Kota Kinabalu, Kuala Lumpur and etc. This study received 757 valid responses from foreign and domestic tourists, tourism stakeholders, tourism academics and tourism postgraduate students from online and group administered survey. Respondents were required to assess 40 attributes of destination competitiveness that were grouped under five main themes namely tourist attraction, facilities and services, infrastructure, cost and hospitality. This study also attempts to evaluate the satisfaction level of tourists towards the destinations they visited on 10-point scale. Data obtained were further analyzed using reliability test, factor analysis and multidimensional scaling techniques. It is hoped that the results generated from this study will represent a useful contribution in assisting tourism managers, marketers and travel agencies to promote and market the competing Malaysian destinations accordingly.

Keywords: *tourism destination, competitiveness, positioning*

INTRODUCTION

Malaysia is experiencing a tremendous pace of tourism development. The 'Visit Malaysia Year 2007' program was one of the major successes for country's tourism sector. As reported in Travel Weekly (February 28, 2008), the tourist arrival to Malaysia in 2007 were 20.97 million tourists; which at a total of 11.3% of tourist arrivals in Asia Pacific and 2.2% of worldwide tourist arrivals. This figure was an increased of 19.5% from previous year (2006) with only 17.55 million visitors. In term of receipts, tourism sector has generated around RM46.1 billion or US\$14.373 billion revenues into the country. This achievement indicates that Malaysia is remained competitive at global tourism market.

At the same time, Malaysia is also faced with the competing of new tourism market in Southeast Asia region such as Laos, Vietnam and Cambodia. The competition that occurs is a sign of the broader phenomenon of the new economic competition (Asch and Wolfe, 2001) and human competition in the social, technological, cultural and political spheres (Ritchie and Crouch, 2003). Because of this reason, it is important that tourism destinations particularly Malaysia, must be able to measure their competitiveness in order to identify their strengths and weaknesses and thereby develop their future marketing and positioning strategies to meet the tourists' expectation.

TOURIST EXPECTATION VS. DESTINATION EXPERIENCE

Tourists travel to destinations for many reasons. Tourists will not visit destinations that have nothing to offer. Thus, it is important for destination to provide highly diversified and value added tourism products for tourist to experience. A successful site attraction or destination required a critical mass of compatible products which have market viability and appeals (Pearlman, 1989). Therefore, every destination must compete to each other to attract travelers by emphasizing the experience they have to offer. The experience, however, is difficult to produce and manage compared to other products because it involves many different elements and because the participation or role of the tourist in the experience is so critical (Ritchie and Crouch, 2003).

Apart from that, Laws (1995) revealed that consumers are likely to make comparisons between facilities, attractions and service standards of other destinations. In general, 'the choice of a particular good or service is the result of a comparison of its perceived attributes with the person's set of preferences' (Fishbein and Ahjen, 1975 in Laws, 1995, p. 113). Pritchard and Havitz (2006) later claimed that tourists were more likely to give positive ratings to destinations they visited when their expectations were met. Mayo and Jarvis (1981) argued that a consumer selects a destination amongst alternatives and evaluates each alternative considering its potential to serve the benefits he looks for. However, Laws (1991) has stressed that each tourist has the opportunity and freedom to choose amongst a set of destinations.

Different factors may have an influence on destination choice. Telisman-Kosuta (1989) insisted that tourist's decision was determined by two factors that were the destination's potential for performance and the perception of its personality or image. Therefore, to sustain good image and hamper more tourists, a destination must be able to provide an overall attractiveness and quality experience that are better than those of the alternative destinations for the specific markets.

Thus, it is the intent of this paper to analyze the competitiveness of 15 selected Malaysian tourism destinations among tourists and tourism stakeholders. This paper will discuss the methods and approaches utilized in identifying the destinations' position relative to each other. The paper also attempt to measure tourists' overall satisfaction level towards the quality and image of tourism products offered at the destinations.

TOURISM DESTINATION COMPETITIVENESS

Literature has highlighted several concepts and definitions related to destination competitiveness. The definitions offered in the literature provide both a micro and macro connotation of destination competitiveness. According to Dwyer and Kim (2003), destination competitiveness would appear to be linked to the ability of a destination to deliver goods and services that perform better than other destinations on those aspects of tourism experience considered to be important by tourists. d'Hauterres (2000) argued that competitiveness as the ability of a destination to maintain its market position and share and/or to improve upon them through time. Hassan (2000) who agreed with d'Hauterres has further defined competitiveness as the destination's ability to create and integrate

value-added products that sustain its resources while maintaining market position relative to competitors.

In macro perspective, Scott and Lodge (1985) presented competitiveness as a country ability to create, produce, distribute and/or service products in international economy, while earning rising returns on its sources. Porter (1990) later defined competitiveness as the ability of entrepreneurs (of a country) to design, produce and market goods and services, the price and non-price characteristics of which form a more attractive package than that of competitors. Destination competitiveness is also associated with the economic prosperity of residents of a country (Buhalis, 2000; Crouch and Ritchie, 1999).

The concept of competitiveness can be observed from six different dimensions of strength and performance that are economic, social, cultural, political, technological and environmental strengths. Tourism sector cannot be reviewed with a single dimension because of its unique nature and multi-sector. However, as to become a competitive destination, Poon (1993) has suggested four principles to be followed namely; (1) put the environment first, (2) make tourism a leading sector, (3) strengthen the distribution channels in the market place, and (4) build a dynamic private sector. Ritchie and Crouch (2003, p. 2) asserted that the true ability of a tourism destination to become competitive is 'its ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences and to do so on a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations'.

FACTORS AFFECTING DESTINATION COMPETITIVENESS

According to Pearce (1997), a competitive analysis refers to comparative studies. Therefore, destination competitiveness can be evaluated both quantitatively and qualitatively (Kozak, 1999). Kozak (1999) suggested that the quantitative performance of a destination can be measured by looking at numbers such as annual numbers of tourist arrivals, amount of annual tourism receipts, level of expenditure per tourist and length of overnight stays. He, however, attempted to include the qualitative patterns of destination competitiveness, as these ultimately drive quantitative performance. There were 12 factors that Kozak (1999) considered can affect the success of the organization or the destination and its competitiveness in the marketplace; namely, (1) socio-economic profile of tourism demand and changes in market, (2) access to tourist markets (distance), (3) mature tourist destinations and consumer psychology, (4) influences of tourist satisfaction, (5) marketing by tour operators and their perceptions of destinations, (6) prices and costs, (7) exchange rates, (8) use of information technologies, (9) safety, security and risk, (10) product differentiation (positioning), (11) adequacy and quality of tourist facilities and services, and (12) quality of environmental resources.

DESTINATION POSITIONING

In every industry and business, many tourist destinations are in competition with each other (Heath and Wall 1992). This phenomenon makes tourism experts believe that tourism sector has become

highly competitive market since these recent years. Keller and Smeral (1997) have listed some of the reasons for measuring and assessing the factors which influence destination competitiveness.

1. New destinations have emerged in the market (e.g. Caribbean and eastern Mediterranean).
2. Tour operators and media are having an increasing impact on the market.
3. Tourists are more experienced and knowledgeable, e.g. language, use of transportation, booking travel and having experiences with the same destination than once.
4. Tourists and tour operators are now becoming more concerned about the environmental quality of facilities and destinations.

The above reasons has appeared to be pressures on tourist destination and also increasing the competition. Consequently, many researches have been conducted around the globe dealing with the topic of competitiveness of tourism destinations either at the regional/national or international level. There are number of studies that have been published in major tourism journals explored positioning by comparing competitive destinations (Goodrich 1978; Haahti 1986; Calantone, Bendetto, Hakam and Bojanic 1989; Gartner 1989; Crompton, Fakeye and Lue 1992; Kim 1998; Botha, Crompton and Kim 1999; Kozak and Rimmington 1999; Andreu, Bigne and Cooper 2000; Uysal, Chen and Williams 2000; Chen and Uysal 2002; Kim and Agrusa 2005; Gomezelj, 2006).

Uysal et al. (2000) evaluated the competitiveness of Virginia as tourism destination in compared to 10 other states by creating a perceptual map revealing the similarities and differences. The respondents were required to rate these destinations based on 48 geographical and cultural characteristics. The result revealed that Virginia was perceived to be most competitive with Pennsylvania, North Carolina, and West Virginia in natural features and with Pennsylvania, Maryland, South Carolina, and Georgia in historic and cultural heritage. The researchers suggested that destination promotional activities should be established based on the results of their positioning analysis.

Further, Chen and Uysal (2002) have conducted a similar study to identify the competitive market position of Virginia in compared to eight other states and Washington DC. The main analytical technique used was correspondence analysis. The outcomes indicated that Pennsylvania and Virginia were found to be the best states for mountains, quaint towns, and beautiful countryside. The researchers also employed logit analysis to identify cognitive differences in images of 14 activities within Virginia and Pennsylvania. The result revealed Virginia to have stronger images for 12 activities while Pennsylvania scored higher on the other two activities.

Kim and Agrusa (2005) investigated the competitiveness of seven overseas honeymoon destinations among potential Korean tourists and their position related to each other using multidimensional scaling and correspondence analysis. The honeymoon destinations involved Guam, Thailand, Australia, China, Hawaii, Japan and Europe. The sample included 393 potential overseas honeymooners who were attending wedding exhibitions and planning their honeymoon trip in the fall

of 2004. The respondents were required to rank the destinations based on their preferences of eight attributes namely good scenery, comfortable place, safety, romantic place, appropriate tourism cost, good weather, good place for shopping and historical and cultural resources. The result revealed that Australia was found to be the ideal place for honeymoon with regards to good scenery, comfortable place, romantic place, and good weather. Guam and Hawaii were perceived as active tourism activity-oriented location whereas Japan and China were perceived as experiencing passive tourism activities, such as visiting cultural or historical sites.

Gomezelj (2006) has conducted a study to determine the competitiveness of Slovenia as a tourist destination using descriptive analysis. He surveyed 118 tourism stakeholders of the supply side that were among tourism industry stakeholders, government officials, tourism school academics and postgraduate students on tourism courses. In order to identify the weak points in Slovenia's tourism industry, the survey required respondents to give a rating (on 5 point Likert scale, for each of the 85 competitiveness indicators) for Slovenia compared to its major competitor destinations. The indicators were grouped into six categories namely inherited resources, created resources, supporting factors, situational conditions, management, and demand. The findings indicated that a majority of 85 factors were evaluated below 4 and only a few of them were rated well above average. The destination management factors have been evaluated the worst. Gomezelj concluded that Slovenia should make many improvements in the area of created resources, management and demand.

In summary, there are many criteria/characteristics that can be employed to assess for the performance of tourist destinations. These criteria may be found similar to or different from other locations. As stated by Dwyer et al. (2003), there are no single or unique indicators that apply to all destinations at all times. The previous research studies have utilized a variety of tangible and intangible features to determining destination position and competitiveness, potential and actual demand, levels of satisfaction and intentions to revisit, and positive word-of-mouth advertising.

METHODOLOGY

Destination competitiveness attributes

Since previous studies pertaining to competitiveness and positioning of Malaysian tourism destinations are found limited, a set of destination competitiveness attributes was developed. The identification of the attributes were based on a review of tourism literature on competitiveness model by Hassan (2000), Ritchie and Crouch (1993), Evans and Johnson (1995), Kozak (2001), De Keyser and Vanhove (1994) and Dwyer et al. (2003). As a result of the review, a group of 40 attributes was identified and be categorized in five themes namely attractions, facilities and services, infrastructure, cost and hospitality. These attributes were included in the survey instruments and being presented on 5 point Likert scale where 1 was offers very little, 4 offers neither little nor much and 5 offers very much.

The instrument

Questions and variables used in the questionnaire are derived from past research especially Dwyer et al. (2003), Go and Govers (1999), Kozak and Rimmington (1998), Mill and Morrison (1992), Laws

(1995), Goodall and Bergsma (1990), McLellan and Fousher (1983), Pyo et al. (1989), Selby and Morgan (1996) and Sirakaya et al. (1996). The questionnaire consists of three sections. The first section discovered the respondent's demographic background such as age, gender, employment and main transportation. The second section measured respondents' perceptions of competitiveness attributes of destination visited. The third section required respondents to state their level of agreement on destination image on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), with a neutral position in the middle. Respondents were asked to rank their visit on a scale of 10 (from poor to excellent). The questionnaire was prepared in both Malay and English, and each questionnaire took about 8 to 10 minutes to be completed.

Study areas

As time and financial are become major constraints, the selection of study areas are being limited to only 15 destinations. The destinations of choice were determined by the popularity of the places as top and potential tourist spots among domestic and international travelers. These destinations are well represents all region in peninsular Malaysia and east Malaysia (Table 1).

Table 1. The selection of study areas

Region		Towns and cities
West Malaysia	North	Kuala Kangsar, Taiping, Lumut, Penang, Ipoh, Kangar
	West/Center	Port Dickson, Kuala Lumpur and Seremban
	South	Malacca
	East	Cameron Highland, Kota Bahru, Kuala Terengganu
East Malaysia		Kota Kinabalu, Kuching

Sample and data collection

The survey was conducted between October 2007 to April 2008 (seven months duration) and the sample involved respondents aged above 18 years old from the groups of tourists (both local and international), visitors and tourism stakeholders. The group of stakeholders consists of tourism industry stakeholders, government officials, tourism school academics, and postgraduate students on tourism courses. The researchers undertook two methods in distributing the questionnaire forms. First, the researchers delivered hundreds of questionnaire forms to selected tourism schools in Malaysia and requested the assigned lecturers to distribute the forms among their students. The completed forms were mailed back to researchers once the task completed. The second method was by using online questionnaire. As to ensure high response rates, the researchers employed snowball techniques. Email message was first sent to all possible contact of researchers. Respondents were required to answer the online questionnaire that can be accessed at <http://www.hbp.usm.my/tourism/mtc>. Then, they were requested to forward the URL to all their contacts. Most returned questionnaires were usable, only 5.3% were incomplete and therefore were discarded.

Data analysis

The data were entered and coded onto SPSS program. Data cleaning and crosschecks were performed during the data entry process. Responses from open-ended questions were recoded to allowed meaningful descriptive analysis to be performed. As the first step of analysis, the reliability test was performed on 40-item destination competitiveness scale using Cronbach Alpha. The reliability value found was 0.943, which is an indication of strong item homogeneity. All items appeared to be worthy of retention: the greatest increase in alpha would come from deleting item 1 (scenery/natural resources), item 2 (weather) and item 29 (streets/highways), but removal of these items would increase alpha only by 0.001. On the next stage, the 40 attributes were factor-analyzed using principal component method and Varimax rotation, to determine the underlying dimension or destination competitiveness factors. The researchers also aimed to employ multidimensional scaling analysis to produce perceptual maps indicating the study areas and respondents' perception of their destination competitiveness attributes.

INITIAL FINDINGS

Profile of respondents

As presented in Table 2, the respondents consist of 42.14% male and 57.86% female, with an average age of 32 years old. The biggest age group was respondents with age below 25 years old (34.58%), followed by group at the age between 26-35 years old (32.5%). Majority of them are Malaysian (94.6%). They mainly worked in public sector (69.48%), 23.97% worked in the private sector, while another 6.55% were self-employed. Sixty three percents of the respondents were Malays, followed by Chinese (23.21%), Indian (1.93%), Bumiputera (4.97%) and others (6.48%). The majority of the respondents were single (52.97%).

Table 2. Demographic profile of the respondents

Demographic variable	N	Value	Percentage (%)		
			Malaysian	Non-Malaysian	Total
Nationality	757		94.60	5.40	100.00
Age (years)	757	18 – 25	33.06	1.52	34.58
		26 – 35	31.12	1.38	32.50
		36 – 45	17.15	1.52	18.67
		46 – 55	11.62	0.83	12.45
		56 and older	1.52	0.28	1.80
Gender	757	Male	38.97	3.17	42.14
		Female	55.61	2.25	57.86
Race	757	Malay	62.85	0.55	63.40
		Chinese	23.07	0.14	23.21
		Indian	1.93	0.00	1.93
		Bumiputera	4.97	0.00	4.97
		Others	1.93	4.55	6.48
Marital status	757	Single	50.33	2.64	52.97
		Married	43.33	2.64	45.97
		Divorcee/ Widowed	0.93	0.13	1.06
Employment sector	757	Government	66.55	2.93	69.48
		Private	21.38	2.59	23.97
		Self-employed	5.34	1.21	6.55

Identification of close competitors

Respondents perceived the destinations to be competitive on accommodation (mean = 3.87), scenery/natural resources (mean = 3.84), food and beverage facilities (mean = 3.75), food/cuisine (mean = 3.74) and variety of tourist attractions (mean = 3.72). The responses were measured on the 5-point Likert-type scale.

The respondents were asked to rate their vacation destinations according to their preferences and satisfaction on the scale of 10-point. Table 3 shows the mean ranks for selected Malaysian towns and cities. Kuching was perceived to be the most attractive vacation destinations when compared to those of other 14 destinations listed in the study. Kota Bahru and Kota Kinabalu are positioned at second and third. Our renowned heritage cities; Melaka and Penang, are only ranked at fifth and sixth places. In addition, majority or respondents have high positive overall satisfaction levels with the destinations. They also show high tendency to revisit the destination in the near future and recommend the destination to family members and friends.

Table 3. Respondents' ranking of Malaysian vacation destinations

Ranking	Destination	Mean rank	Standard error	Willing to revisit the destination	Will recommend the destination to others
1	Kuching	7.16	1.719	90.0%	96.0%
2	Kota Bahru	7.08	2.181	87.2%	89.7%
3	Kota Kinabalu	7.00	1.550	96.0%	95.0%
4	Kuala Terengganu	6.94	1.453	90.0%	95.0%
5	Malacca	6.89	1.524	87.0%	93.5%
6	Penang	6.86	1.571	93.8%	95.0%
7	Kuala Lumpur	6.79	1.508	96.7%	91.2%
8	Cameron Highland	6.77	1.462	91.6%	91.9%
9	Lumut	6.63	1.962	87.5%	93.3%
10	Taiping	6.53	1.642	73.3%	78.6%
11	Port Dickson	5.63	1.500	68.8%	56.3%

Scores ranged from 1(poor) to 10 (excellent)

CONCLUDING REMARKS

As this research is in its data analysis stage, this paper only gives the overview of its methodology and a glimpse of its result. It is important to note that the data will be further analysed using multidimensional scaling method, to position the destinations onto two-dimension perceptual maps based on competitiveness attributes. It is hoped that the outcomes of this study will help tourism planners and authority to be able to plan the physical development as well as to allocate appropriate budget and to direct policies pertaining the development.

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ASSESSING TOURIST EXPECTATION LEVEL TOWARDS TOURISM DELIVERY SYSTEM IN EAST COAST MALAYSIA

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ABSTRACT

Tourists travel to destinations for many reasons. One of the main reasons is to receive destination experience (services). The experience, however, is likely to be affected by the expectation and preconceived ideas that the tourist may possess prior to a visit. Moreover, experience and expectation will determine tourist satisfaction/dissatisfaction level towards destination products and services. Thus, it is important for destination to measure the expectation level of their potential and repeat tourists in order to identify their strengths and weaknesses in developing and maintaining their products and services. The purpose of this paper is to explain the approach and methodology used to assess the tourist expectation level towards tourism delivery system particularly in East Coast Malaysia namely Pahang, Terengganu and Kelantan. This paper reviews some models of tourist expectation to derive attributes for developing the survey instruments. The attributes were tested in pilot study and factor analysis revealed five common underlying dimensions: services, attractions, promotion, information, accommodation and transportation. This paper also aims to address issues and limitations that need to be considered by researchers while designing the survey instruments.

Keywords: *tourist expectation, tourism delivery system, east coast Malaysia*

INTRODUCTION

The overall tourism industry has captured a high quality of Malaysian image which generates income and receives tourist from all over the world. According to Tourism Malaysia (2008), statistically Malaysia has received 20.9 million of domestic and international tourist with the total income amounting to RM46, 070 million for the year 2007. The Visit Malaysia Year 2007 programme initiated by the government has influenced the increase of tourist arrivals to Malaysia. However, the tourist arrivals are due to various external factors such as decrease of tourist's confidence by outbreaks, political instability and war in other parts of the world. According to research by Transit Visitors in Kuala Lumpur International Airport (2004), 32.1 transit visitors from Europe and Oceania are not interested in choosing Malaysia as their holiday's destination and it proves that 21.7 respondents has refused to visit Malaysia as return tourist because they have visited Malaysia before. This refusal shows that there are serious flaws that need to be concentrated on especially the weaknesses of tourism product and hospitality service delivery systems. These flaws of the system also will affect the level of the tourist's satisfaction and hospitality and in fact the experience and overall expectancy of Malaysia.

Kelantan, Terengganu and Pahang are famous with Malaysia's tourism cultures that appellation as the East Coast of Peninsular Malaysia. It is a common culture that the states were filled up with laid-back towns, fishing villages and resort islands and it characterizes the east coast states of Kelantan, Terengganu and Pahang. The cultural life stands still and many observe traditional customs are famous attractions to domestic and international tourists. Kelantan is famous for being relatively isolated; that

the state does not face a rapid industrialisation like the west coast of Malaysia. The capital city, Kota Bharu, is well known with a bustling wet market- Pasar Besar Siti Khadijah, Cultural Centre, Royal Museum, State Museum, State Mosque and Istana Jahar, featuring Kelantan's rich cultural legacy. Kelantanese are gifted craftsmen with many cottage industries around the state producing silverware, textiles, kites and brass work.

Terengganu is famous with the fishing villages located along the beach of East Coast with a pleasant image. Several idyllic islands in the South China Sea such as Perhentian Besar, Perhentian Kecil, Redang Marine Park, Merang & Tenggol are famous among domestic and international tourists. Pahang as the largest state in Peninsular Malaysia is naturally endowed with a variety of attractions from beautiful beaches, cool highlands retreats to lakes and caves. Tioman Island is one of the famous visitation islands whilst Cherating is a seaside destination long popular with budget travellers. Other attractions in Pahang including the Malaysia's premier national park, Taman Negara, the highland resorts of Genting Highlands, Cameron Highlands, Bukit Tinggi and Fraser's Hill, as well as the natural lakes of Bera and Chini.

Tourist Arrivals in the East Coast States

In terms of tourists' distribution, a survey by Planning and Research Division, Tourism Malaysia in 2007 revealed that Kuala Lumpur/Selangor led the list of most visited destination in Malaysia with 47.7 percent (with variance 0.9 percent for arrivals in 2006 and 2007). Whilst, comparing to Kelantan, Terengganu and Pahang have decreased about 0.9 percent (Kelantan), 1.9 percent (Terengganu) and 0.7 percent (Pahang) (Malaysia Profile 07 of Tourists by Selected Markets, Tourism Malaysia, 2008).

Existing Attractions of Tourism Product

The concept of a tourism product is, at first glance, deceptively simple. A tourism product presumably is whatever one buys while away from home (Kotler, 1984). Indeed, from a marketing perspective, one can define any product as 'anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a need or want which includes physical objects, services, persons, places, organizations, and ideas' (Kotler, 1984).

Kuala Terengganu, Terengganu

In terms of achievement, the development of tourism products in Terengganu is still at the intermediate level although it has various tourism resources. Major problems in developing tourism product in Terengganu include; low accessibility, less of interpretation, lack of maintenance as well as ineffective of marketing and promotion. In general, tourist attractions and resources in Terengganu can be classified into four elements:

- a. Nature elements (forests, wetlands, islands, beaches, lakes, rivers)
- b. Cultural heritage elements (cultural, lifestyle, festivals, foods, hand crafts, etc)
- c. Agriculture elements (orchards, plantations, fish ponds, etc)
- d. Village elements (fisherman village, village in town, etc)

Meanwhile the arrival of both international and domestic tourist are increasing thus it shows a good achievement in terms of tourist arrival. However, it has less than 10 % of the international tourist arrival. Since 1996, the total number of tourist arrival is more than 1 million, yet it never indicates more than 1.5 million of arrivals.

Kuantan, Pahang

Kuantan, as a major gateway for the east coast and the state and, as a destination in its own right that has high potential for tourism and its coastal resort attractions have provided it with an identifiable image. Although currently Kuantan is lacking with diversified “tourism product” as compared to Kuala Lumpur, Penang and Melaka, it also has successfully developed a leisure tourism largely based on characteristics that could be described as 3S (sun, sea and sand). Kuantan could be the hub for tourists interested in exploring the large tropical rainforest, rivers, other natural features of the state and even local rubber and oil palm plantations which have curiosity appeal to many international tourists. For example, Teluk Cempedak at present is a major base for international tourism in Kuantan district, which offers leisure tourism which includes sailing, water skiing and other recreational activities.

Kota Bharu, Kelantan

Tourism products in Kota Bharu consist of cultural, hand crafts, foods, nature and local people which are moderately similar with Kuala Terengganu. Moreover, Kota Bharu also is a well known place in Malaysia for Islamic education thus promoting a religious tourism in Kelantan.

LITERATURE REVIEW

Destination Experience

Nowadays, tourists have decided their preferred destination based on their travel purposes and past-experiences for travelling at the same destination. The planning process for the trip began, technically, during the previous trip and the trip is affected by the expectation and preconceived ideas that the tourist may possess prior to a visit, for second time. Some of the process is also related to the tourism delivery system, which could develop attractions and services for the traveler. Referring to Mill and Morrison (1992), (as said by Jost Krippendorf, in *The Holiday Makers*); travel is motivated by “going away from” rather than “going towards” something or somebody. To shake off the everyday situation is much more important than the interest in visiting new places and people....travellers’ motives and behaviors are remarkably self oriented (Mill and Morrison, 1992).

The definition of quality in tourism was in line with World Tourism Organization (WTO), emphasizing that quality is the perception by the tourist of the extent to which his (the tourist) expectations are met by his experience of the product. Smith (1994) has noted that quality is not to be equated to luxury, and must not be very exclusive, but must be available to all tourists, including those with special needs. Smith (1994) also discussed about the tourist product in which the product should be seen as the destination and process resulting in the tourist's overall experience. Despite the growth of literature on the tourist experience, most researchers focus on the experience from the tourist as it is derived from the attractions of the place. The quality services are mostly ignored or taken for granted whilst they are very important elements to increase the tourist's holiday satisfaction. According to tourism products that have been listed by Smith (1994), the model explicitly acknowledges the role of human experience in tourism product, but also identifies which elements can be empirically measured for an estimate of the economic magnitude of the industry. The detail revealed the overwhelming use of the model which is not practical to be used to satisfy the tourists based on their experiences. However, Quan and Wang (2003) have developed a structural model of tourist experience particularly on food tourism. They claimed that the relationship between components in the tourist experience to tourist satisfaction cannot be understood mechanically.

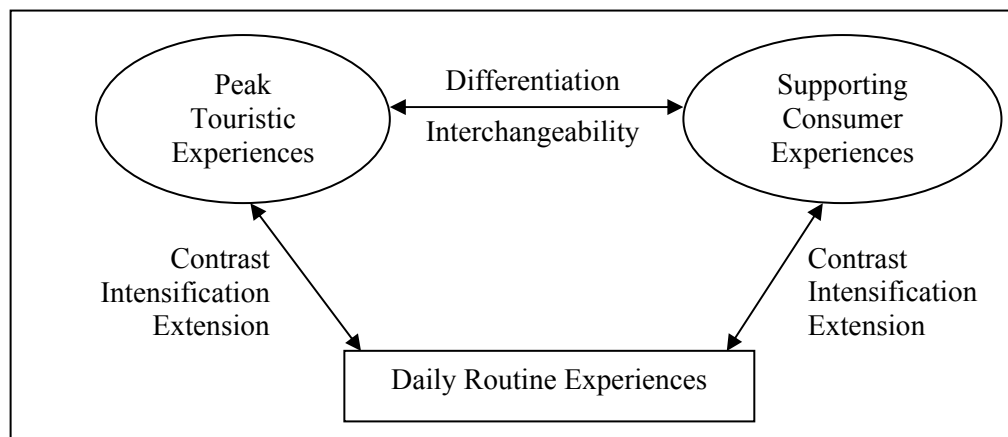


Figure 1: The conceptual model of tourist experience

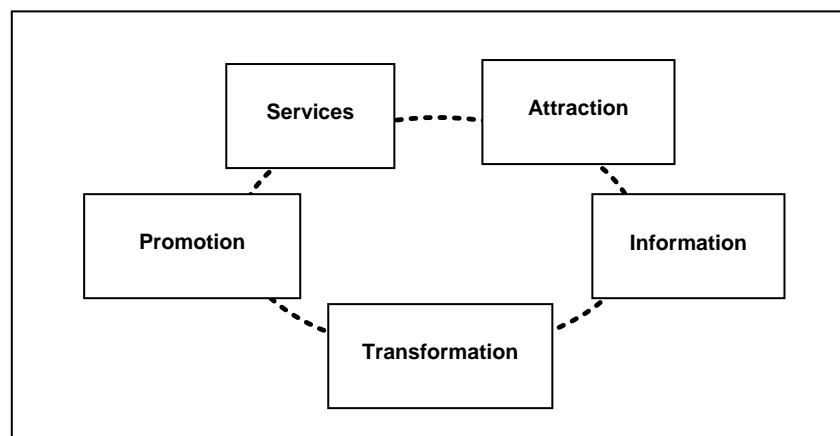
Based on Figure 1, the dimension of the peak touristic experience is conceptually differentiated from the dimension of the supporting consumer experience (Quan and Wang, 2003). Even the high quality of other consumer services such as accommodation cannot fully compensate for the deficiency and it is a regret if major motivation to pleasure travel is disappointing. The dimension of peak touristic experience and the supporting consumer experience can be interchangeable under certain conditions (Quan and Wang, 2003). Due to some components of supporting consumer experience, it could be changed into peak experience. For example, a tourist with the original motivation of sightseeing may find that local foods are so attractive that she or he goes to a food festival instead of a famous sightseeing (Quan and Wang, 2003). The vernacular foods came out as a peak, rather than the supporting experience which helped to enhance the level of overall satisfaction on the trip. The experience of attractions may be sometimes turned out in contrast, to be supporting the consumer experience. For example, a young man has a romantic affair with a female tourist on a beach holiday

(Quan and Wang, 2003). The peak experience of the attraction is the beach and it becomes a background for the romantic encounter and changed to be the supporting for consumer experience, secondary to the peak romantic experience in the beach resort (Quan and Wang, 2003).

Many approaches on tourism studies have been applied to tourist experiences. Kemperman, Joh and Timmermans (2004) have compared patterns of activity of first-time and repeat visitors according 2 hypotheses which used the sequence alignment methods as their main analysis. Kemperman, Joh and Timmermans (2004) have introduced the Importance-Performance Analysis; the study also identified Chinese visitors' expectations and perceptions towards the country. Thus, Kemperman, Joh and Timmermans (2004) were able to offer some suggestions based on Chinese travelers satisfaction with Canada as a destination.

Tourism Delivery System

Gunn (1994) has defined the elements of tourism delivery system namely services, attraction, information, transformation and promotion. In addition, the holiday industry system consists of destination elements in the form of natural or primary destination attractions, such as the area's climate, its scenery or an important castle, supported by secondary features such as hotels, guest houses and the range of attractions, shopping and catering in the city centre (Laws, 2004). The holiday system could be elaborated as the attractions that create an element which it recognizes the significance of external factors (tastes, legislation, demographics, technology and economic conditions) and interacted with transport, tour operating and travel retailing. Figure 2 shows five (5) elements of tourism delivery system contains services, attraction, promotion, transformation and information. The elements were related to the method from the tourism system by Laws (2004) and it focuses the outcomes of the system's functioning for particular stakeholder groups.

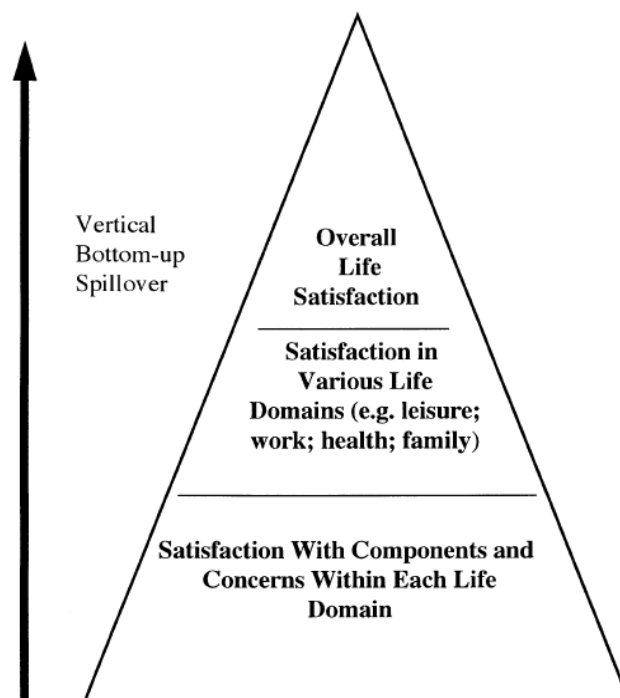


Source : Gunn (1994)

Figure 2: The Elements of Tourism Delivery System

Many aspects of travel and tourism services have referred to quality of life. J Busn Res (1999) has developed a measurement of satisfaction with its leisure in travelling or tourism services that connects to life satisfaction. Neal, Uysal, and Sirgy (1999) used the hypothesized model which is based on the

hierarchy of life satisfaction model. The model postulates that overall life satisfaction can be determined by satisfaction with major life domains (e.g., leisure life). Figure 2 shows the hierarchy model; explains the relationship that exists between leisure satisfaction and quality of life (Meadow, 1988). Neal, Uysal, and Sirgy (1995) have concluded that the hierarchy model was an assumption from Meadow (1988) which explains that the overall life satisfaction is determined by satisfaction with major life domains. The affect within a life domain spills over vertically to the most ordinate domain (life in general), thus determining life satisfaction.



Source: Meadow (1988)

Figure 3: The hierarchy model of life satisfaction

Meanwhile, model by Clawson and Knetsch (1971) shows the role of satisfaction with leisure travel and tourism services and experience in satisfaction with leisure life and overall life, as shown in **Figure 3**.

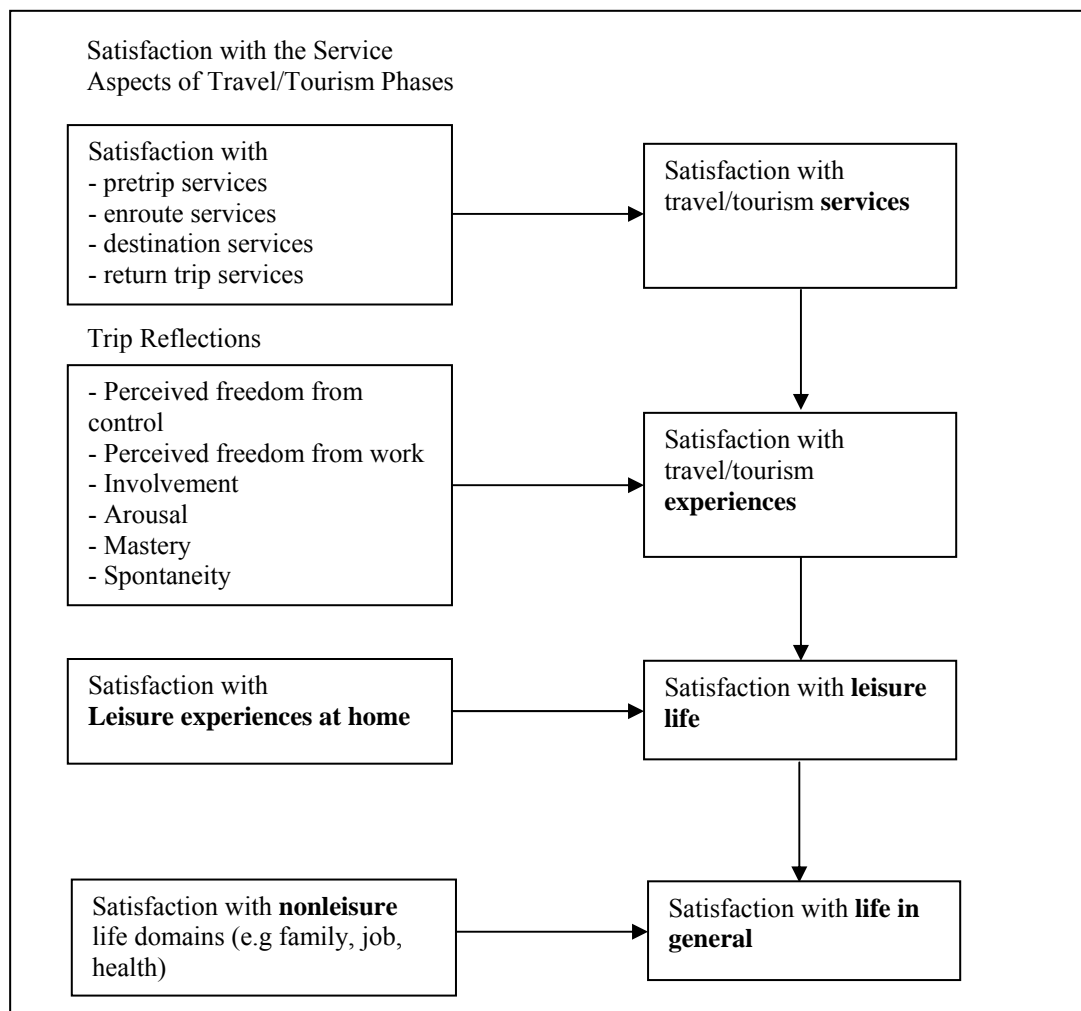
From the vantage point of the travel and tourism industry, the satisfaction with travel and tourism services and its determinants should be at the highest importance. The model as shown in Figure 4 also illustrates that satisfaction originates from four different sources:

- (1) Leisure satisfaction with **pre trip** travel/tourism services,
- (2) Leisure satisfaction with **trip en route** travel/tourism services,
- (3) Leisure satisfaction with **destination** travel/tourism services, and
- (4) Leisure satisfaction with **return trip** travel/ tourism services.

The tourist satisfaction has therefore become the key operational goal for many tourism industries. Their investment in improving performance in areas has made a strong contribution to tourist satisfaction, such as quality and customer service. Therefore, loyalty of the tourist is important and it has connections with the satisfaction levels and services. Figure 4 shows the flow of satisfaction with the services by aspects of travel/tourism phases and trip reflections at destinations. It was determined by two major factors:

- (1) leisure satisfaction with travel/tourism services and;
- (2) leisure satisfaction derived from leisure trip reflections.

Figure 4 has been approached by Clawson and Knetsch (1971) and it explained the connections between services and satisfactions. The process of tourist satisfaction in Figure 4 cannot be relied on internally generated information as a guide to receive return tourist.



Source: Clawson and Knetsch (1971)

Figure 4: The role of satisfaction with leisure travel/tourism services and experience in satisfaction with leisure life and overall life.

During the first four phases of travel, the traveler is likely to experience a high level of interaction with travel/tourism service providers. Thus, satisfaction with the aspects of leisure travel/tourism services can be captured through pre-trip, en route, destination, and return trip dimensions. However, according to Clawson and Knetsch (1971), the trip reflections those have the potential of providing long term satisfaction for travelers during the leisure travel experience. After the travel experience is over and the travelers have returned to their homes, they are likely to reflect upon their trip experiences. This is often done by remembering the conditions of leisure that were present during the trip (i.e., freedom from control, freedom from work, involvement, arousal, mastery, and spontaneity). Therefore, Unger and Kernan (1983) conditions of leisure form the basis of analysis for this dimension (refer in Table 1).

Table 1: Conditions of Leisure Form the Basis of Analysis for This Dimension

No.	Conditions Of Leisure	The basis of analysis for this dimension
1	Freedom	<ul style="list-style-type: none"> ▪ Freedom in leisure and tourism studies is often categorized as either “freedom from control” or “freedom from work.” Freedom from control refers to “something one perceives as voluntary, without coercion or obligation” (Unger and Kernan, 1983, p. 383).
2	Involvement	<ul style="list-style-type: none"> ▪ Involvement may be defined as “the level of consumption or absorption in an activity” (Neal, Uysal, and Sirgy, 1995, p. 146)—the higher the level of consumption or absorption, the higher the level of involvement.
3	Arousal	<ul style="list-style-type: none"> ▪ Arousal refers to internal excitement, stimulation, exhilaration, or inspiration. Arousal may occur from the anticipation of planning a trip (Hammitt, 1980), from the excitement of drawing near to the destination site (Hammitt, 1980), or from meeting people and experiencing new things during the trip, for instance.
4	Mastery	<ul style="list-style-type: none"> ▪ Mastery is often experienced if one feels as though he/she has achieved great things by conquering circumstances the environment (Murphy et al., 1973). ▪ Experiencing the feelings of mastery could occur at any or all phases of the trip. For instance, travelers could feel mastery if they actually accomplished the purpose of the trip (e.g., to rest and relax). ▪ Furthermore, many individuals who engage in sports activities during leisure travel have experienced feelings of mastery (London, Crandall, and Fitzgibbons, 1977)
5	Spontaneity	<ul style="list-style-type: none"> ▪ Spontaneity is defined by Unger and Kernan as “not routine, planned, or anticipated” (1983, p. 383). Spontaneity could include changing travel plans on the spur of the moment, exploring along the way, or asking the opinion of “locals” and doing something based on the information received.

Source: Moderate from Unger and Kernan (1983); Neal, Uysal, and Sirgy, (1995); Hammitt, (1980); Murphy et al., (1973); London, Crandall, and Fitzgibbons, (1977)

APPROACHES AND METHODOLOGICAL FRAMEWORK

Table 2 shows on four phases of travel and corresponding interaction with various facets of the travel/ tourism industry may occur with each phase of travel. The justification on phase of travel has

been moderated from Neal, Sirgy and Uysal (1999), combined the sets of benefits provided by the tour agent to tourist. If tourists' value package meets the tourists' needs, the tourist will be satisfied and are much more likely to be committed (Hill and Alexander, 2000).

Table 2: Phase of the Travel

Phase of travel	Justification on phase of travel
1	During the first phase of travel, pre trip activities transpire that include forming the motivation for the trip, searching for trip-relevant information, making pre trip arrangements, and so forth.
2	Next, tourists use some form of transportation en route to the travel destination. Often, tourists turn to the travel/tourism service providers (e.g., airlines, bus lines) to help them reach their destination site.
3	Subsequently, tourists reach their destinations whereby they often rely on travel/tourism service providers to supply the accommodations, restaurants, entertainment, and encounters of the traveler at the final destination
4	Finally, tourists make the return trip home from the leisure trip. During this travel phase, tourists may interact with travel carriers and personnel.

Source: *Moderate from Neal, Sirgy and Uysal (1999)*

Measuring service quality or service delivery must be taken from what it is - not to measure the satisfaction but to commit the behaviour from the tourist. The relationship between satisfaction and commitment is not fixed and it differs across services and even between tour agents in the same destination (Hill and Alexander, 2000). The tourist value package is the combined set of benefits provided by the tourism product and it must therefore form the basis of the tourist satisfaction survey (Hill and Alexander, 2000).

Gaps between expectations and service experiences

Clow et al (1997) in Laws (2004) has predicted the level of service was based on advertisement, word of mouth and tourist previous experiences. Based on Laws (2004), the study for consumer satisfaction is based on identification and understanding the gaps from the tourist prediction and tourist experiences of the service which various approaches have existed to conceptualize the expectations. In addition, Tolman (1932) noted the expectancy theory customers predict what they expect to be the outcome of a service (in Laws, 2004). However, Laws (2004) found that the consumerist gap model has argued that customer expectations (that is prior to a service) can be influenced at their evaluation of the firm's performance and affect their satisfaction. Another approach was the basis from the SERVQUAL instrument which considers the expectations as the level of performance the customer wants from the firm (Laws, 2004).

From the consumerist gap model, it can be summarized that the customers' expectations of service standard were indicated by level which contains dissatisfaction to satisfaction rates. This model can be

used to exact unquantified nature and level of satisfaction anticipated. The advantages of the model is it accepts expectation as a fuzzy concept, rooted in individual experiences, moods and values, and it views experiences evaluated by individuals in terms of their perceptions of complex factors in the delivery of services (Laws, 2004).

Approaches in Designing Questionnaires

Customer satisfaction measurement is about measuring how customers perceive supplier performance as a supplier. Therefore, the measurement of customer can be applied in measuring tourist satisfaction, and both of them are human being and influenced by human behaviour. Before designing the questionnaires, we have to understand the value and importance of tourist satisfaction in creating tourist commitment and profitability. Several factors which combine to produce tourists' level of satisfaction were referred to as tourist value package. An exploratory research needs to define what these factors are and it must also clarify the relative importance of the various component elements. It is also to clarify whether the survey questionnaire will not consist long questions. However, to be of the maximum value, a tourist satisfaction must measure in identifying:

- 1) the tourists' priorities
- 2) tourists' tolerance band
- 3) the tourism product performance
- 4) the tourism product relative to the tourists' priorities
- 5) the tourism product relative to others' product and;
- 6) priorities for improvement

This element will be used as an approach to maximize the tourist satisfaction in giving tourists what they want and need while travel. However, the tourists' needs and expectations are not equal; some are far more important to the tourist than others. The degree of quality experienced in a service transaction can be considered to give rise to a level of satisfaction which may vary between customers. Lewis and Booms (1983) identified the following factors as significant in understanding this variability in the enjoyment of services:

- Service quality is more difficult for the consumer to evaluate than the quality of goods.
- Service quality perceptions result from a comparison of consumer expectations with actual service performance
- Quality evaluations are not made solely on the outcome of a service; they also involve evaluations of the process of service delivery.

Laws (2004) has identified that perception is the basis for personal interpretation of the world and it is also important in the judgements tourists make of the quality of a product or service. Zeithmal, Berry and Parasuraman (1988) in Laws (2004) have argued that the tourist reaches a judgement about the quality of service actually experienced when measured against the perceived service and similarly

that the consumerist gap model provides a way of investigating the quality of service experiences from the perspective of the client.

Latu and Everett (2000) have suggested the rating for interpretation guidelines, which assumed Expectation (E), Performance (P) and Importance (I) were scored using a 7-Point scale with 1 at the low end, as the following in Table 3.

Table 3: The rating for Interpretation Guidelines in Gap Analysis

GAP	IMPORTANCE	SATISFACTION RATING
+6 to +2 Extreme satisfaction	1 Very low	+42 to +15 Very high
+2 to +1 Major satisfaction	2 Low	+15 to +9 High
+1 to 0 Minor satisfaction	3 Moderately low	+9 to +3 Moderately high
0 No gap	4 Medium	+3 to -3 Medium/neutral
0 to -1 Minor dissatisfaction	5 Moderately high	-3 to -9 Moderately low
-1 to -2 Major dissatisfaction	6 High	-9 to -15 Low
-2 to -6 Extreme dissatisfaction	7 Very high	-15 to -42 Very low

Source: Latu and Everett (1999)

Models for tourist expectation and satisfaction

There two models can be proposed to assess the tourist expectation level towards tourism delivery system. These models also can be approached to derive attributes for developing the survey instruments.

Model 1: Model of Tourist Expectation and Satisfaction

Primarily de Rojas and Camarero (2007) determined the relationship between expectations, experiences, and satisfaction from the perspective of cultural tourism and the provision of services by cultural organization. The results illustrate that there is a significant relationship between quality and emotion. Subsequently, a model has been proposed to explain the formation of visitor satisfaction from the relationship between their evaluation or cognitive opinion (perceived quality or disconfirmation) and visitor evaluation or affective opinion (positive emotions).

To develop visitor satisfaction with cultural expositions, two complementary paths have been proposed as an effort to combine both theoretical approaches; the cognitive and the emotional.

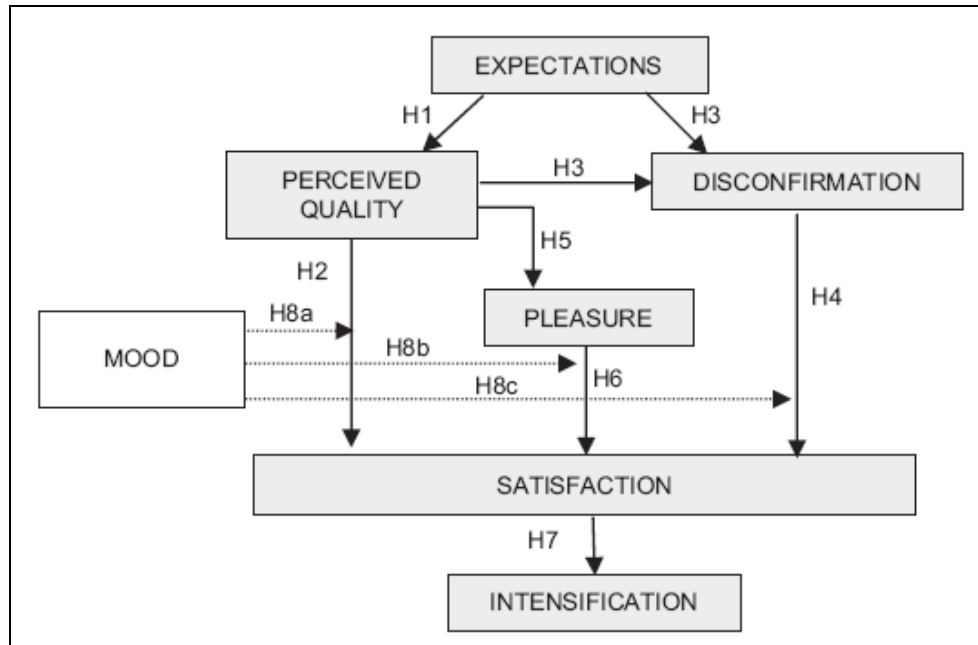
1. The cognitive path

This path consists of an evaluation of the exhibition quality, a comparison between perceived quality and expectations, and a confirmation or disconfirmation process that determines the degree of satisfaction achieved.

2. The affective or emotional path

This path begins when cultural exhibitions reach and even exceed expectations. This provokes pleasure which directly influences satisfaction.

Other than that, de Rojas and Camarero (2007) introduced the moderator ‘visitor’s mood’ in order to evaluate the effect of their experience on satisfaction. The completion of this model also includes the analysis on “post-purchase” of visitor behavior followed by a test on all proposed relationships by a structural equation model.



Source: de Rojas, C., & Camarero, C. (2007)

Figure 5: Proposed model of tourist expectation and satisfaction

Figure 5 shows the development of the paths which is based on the proposed hypotheses. The hypotheses are:

- H1: Visitors’ expectations positively influence perceived quality.
- H2: Perceived quality positively influences visitor satisfaction.
- H3: Visitor expectations and perceived quality determine the level of (dis)confirmation.
- H4: The level of (dis)confirmation determines the level of visitor satisfaction.
- H5: Perceived quality positively influences the pleasure dimension of emotions.
- H6: The pleasure dimension of emotions positively influences visitor satisfaction.
- H7: The higher the level of visitor satisfaction, the higher the level of visitor intensification.
- H8: Mood acts as a moderator in the process of formation of visitor satisfaction.
 - H8a: Favourable mood strengthens the effect of quality on satisfaction.
 - H8b: Favourable mood strengthens the effect of disconfirmation on satisfaction.

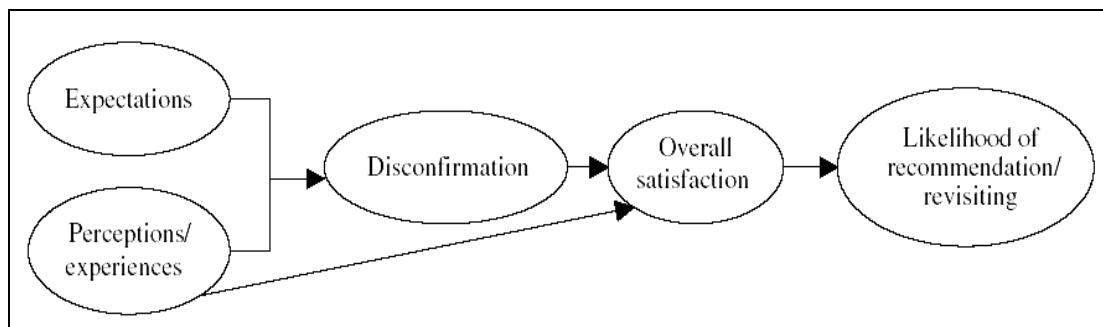
- H8c: Favourable mood strengthens the effect of pleasure on satisfaction.

Although this study is concerned on the analysis of the explanatory factors of visitor satisfaction in heritage and cultural expositions (as promoters of cultural and patrimonial goods) and the integration of disparate theoretical approaches, however, the analysis is significant to be applied to determine tourist expectation and satisfaction in other tourism fields.

Model 2: A conceptual model for the study of tourist satisfaction

In general, the second model is proposed to study the satisfaction of the tourists which combines the Expectancy Disconfirmation Model and the Service Quality Model. The development of this model was based on few elements;

- 1) the importance of customer satisfaction and service quality in the hospitality industry,
- 2) the issue of satisfaction formation, which is discussed using the Expectancy Disconfirmation framework and
- 3) perceived service (PS) quality which is explained by the Service Quality Model.



Source: Hui et al. (2007)

Figure 6: A conceptual model for the study of tourist satisfaction

Moreover, there are two different ways to observe the influential factors of overall satisfaction; (1) through the difference between expectations and perceptions/experiences; and (2) through perceptions/experiences alone. Besides, the relationship between destination satisfaction and revisiting is also reviewed.

However, this model does not incorporate factors that might affect a person's expectations such as personal needs, past experience and information from external sources (social environment, general media, and commercial sources) that affect consumer expectations besides the impact of expectations on perceptions of performance (Hui et al. 2007).

ISSUES AND RESEARCH LIMITATIONS

The frequency of survey for tourist satisfaction and tourist loyalty are likely to be more unpredictable and should be surveyed more often while the frequency of survey in areas where customer satisfaction is likely to remain more stable can be surveyed less often (Hill and Alexander (2000). Instability of tourist satisfaction is related with factors such as high levels of competition, short purchase cycles and times of change and these factors could also initiate change in relationship with the tourists, such as replacing a product range, changes in technology and prices (Hill and Alexander, 2000). However, the two major classifications of travel purpose are business travel and pleasure/personal travel (Mill and Morrison, 1992). As Mately (1976) noted in Mill and Morrison (1992), the study of traveler flows has been attributed to the following factors;

- The uneven distribution of tourism resources between destinations
- The wide variety of activities in which travelers participate
- Changes in season
- Weather
- International and domestic political situations
- Economic changes in countries of origin and destination
- Fluctuations in monetary exchange rates
- Increases or decreases in the prices of tourist services
- The staging of special, short duration attractions and events

This study should be reported and designed to examine the aspects of relationship between expectations, performance and satisfactions at the expressive (nonmaterial, psychological) and instrumental (physical) dimensions of a product. The frequency of survey varies between unstable tourism products needing to measure tourist satisfaction more often than stable tourism products. In addition, mystery shopping is one of the indicators that can be used to measure tourist's behaviour, doing of all the things that tourist do from making an enquiry to enjoy the tourism product or service and perhaps consuming the product. This indicator was founded by Hill and Alexander (2000) to help and increase the tourism organization's performance.

CONCLUDING REMARKS

Many tourist surveys carried out by researchers, hotels and other organizations cannot possibly enable them to judge if they are 'doing best what matters most to tourists'. Their surveys only asked about satisfaction with the tourism products' performance and not about what matters to the tourist. However, to be of any value a tourist satisfaction measurement exercise must provide information on tourists' priorities as well as the tourism products' performance. Satisfaction with leisure life became insignificant, suggesting that respondents may perceive the travel and tourism experience as "substitute" (synonymous) with leisure life. The outcome result from Neal, Sirgy and Uysal (1999) indicated that travel/tourism trip experiences have a direct impact on the overall life satisfaction of leisure travelers as well as nonleisure life domains (e.g., family, job, health) had a direct effect on

satisfaction with life in general. Satisfaction with leisure experiences at home influenced satisfaction with both leisure life and life in general. Although the field survey is not done yet, designing of study approach and methodology is required to identify tourist's expectation and perception towards tourism product in Kelantan, Terengganu and Pahang. The experience, however, is likely to be affected by the expectation and preconceived ideas that the tourist may possess prior to a visit. Moreover, experience and expectation will determine tourist satisfaction/dissatisfaction level towards destination products and services. The final findings of this study would be important in reporting tourist satisfaction as well as tourism delivery system towards tourism product.

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ISU KEPENDUDUKAN DALAM PERANCANGAN BANDAR: SATU TINJAUAN PELAN PEMBANGUNAN KOTA BHARU BANDAR RAYA ISLAM

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ABSTRAK

Kerja kerja ini akan menjelaskan bidang kajian demografi dalam perancangan bandar dan wilayah, serta membincangkan beberapa isu utama yang biasa dibangkitkan dalam kajian-kajian perancangan struktur dan bandar di Malaysia. Ruang kajian kependudukan dalam kajian perancangan struktur yang menumpukan analisis terhadap aspek kuantiti seperti saiz, komposisi, agihan penduduk serta unjuran penduduk pada masa hadapan adalah kurang memadai untuk mengenalpasti tentang pelbagai isu-isu kualiti kehidupan penduduk seperti tahap kemudahan pendidikan, kesihatan serta kualiti kehidupan umum yang sepatutnya ada dalam pembangunan bandar. Justeru itu, kertas kerja ini mencadangkan keperluan untuk mengkaji semula skop perancangan struktur dan penduduk supaya dapat menangani pelbagai isu-isu kependudukan yang sesuai ke arah meningkatkan kualiti perancangan bandar Kota Bharu.

Keywords: *kependudukan, rancangan struktur, pembangunan bandar*

PENDAHULUAN

Isu-isu yang berkaitan dengan kependudukan biasanya berbeza bergantung kepada jangkamasa. Persoalan kependudukan juga berkait rapat dengan sejarah, fizikal kawasan, sosio budaya, ekonomi dan politik. Justeru itu, perbincangan dan penelitian terhadap isu-isu kependudukan perlu dilihat dalam konteks struktur masyarakat yang dinamik dan perbezaannya.

Walau bagaimanapun, kajian terhadap kajian struktur dan perancangan perbandaran dalam kajian ini hanya akan mengchakupi jangkamasa yang kecil seperti kajian terhadap sempadan bandar, daerah dan kawasan berkuasa kerajaan tempatan dan ianya berbeza dalam kajian perancangan struktur. Walaupun isu-isu dalam persoalan perancangan struktur adalah berbeza, tetapi isu-isu yang berkaitan dengan saiz, pertumbuhan, komposisi penduduk dan agihan nya adalah perlu dianalisis secara mendalam dan dalam pelbagai aspek. Justeru itu, kertas kerja ini menghujah bahawa skop kajian kependudukan dalam perancangan struktur di Bandar Kota Bharu Bandaraya Islam perlu dikembangkan dan meliputi kualiti kependudukan.

Kertas kerja ini akan dibahagikan kepada beberapa bahagian untuk tujuan perbincangan dan ianya adalah seperti berikut; Pertama, cuba menjelaskan dan membincangkan secara konseptual terhadap perbezaan ciri-ciri dan permasalahan kependudukan daripada ruang masa yang berbeza; Kedua, membincangkan skop kajian penduduk dalam perancangan struktur, serta liputan kajian; Ketiga, membincangkan isu-isu kependudukan dalam perancangan struktur; dan manakala bahagian akhir kertas kerja ini ialah mengemukakan beberapa cadangan berkaitan kajian penduduk bagi meningkatkan

kajian perancangan struktur Bandar Kota Bharu dalam menentukan hala tuju perkembangan kependudukan masa kini.

STRUKTUR JARAK MASA DAN MASALAH KEPENDUDUKAN

Bagi memudahkan penjelasan berkaitan dengan isu kependudukan dalam konteks perbezaan jangka masa dan perubahan yang dinamik dalam pembangunan, melalui kertas kerja ini penulis akan membincangkannya dalam konteks perbezaan pembangunan bandar dan luar bandar. Struktur ruang wilayah adalah merujuk kepada Semenanjung Malaysia, boleh dibahagikan kepada empat kategori utama iaitu kawasan metropolitan, bandar, desa dan frontier. Pembahagian ini pada dasarnya adalah bergantung kepada saiz penduduk penempatan mengikut takrif jabatan perangkaan dan juga ciri-ciri penempatan yang terdapat ditempat berkenaan. Kawasan bandar dirujuk berdasarkan kawasan yang diwartakan dan merujuk kepada kawasan tepubina yang bersempadan dengannya dan mempunyai jumlah penduduk 10,000 orang atau lebih. Biasanya bandar-bandar besar yang mempunyai penduduk daripada 75,000 orang dan melebihi daripada itu dikategorikan sebagai kawasan metropolitan.

Kawasan desa merupakan kawasan perkampungan tradisional dan pekan-pekan kecil termasuk penempatan estet yang telah lama dibangunkan semenjak sebelum merdeka. Aktiviti penduduk sebahagian besarnya bergantung kepada aktiviti pertanian. Sedangkan kawasan frontier pula ialah kawasan yang sebahagian besar belum diterokai atau kawasan-kawasan yang baru diterokai seperti penempatan-penempatan Felda dan kawasan-kawasan dibawah Lembaga-Lembaga Kemajuan Wilayah, seperti Jenka diPahang, Kejora di Johor, Ketengah di Terengganu dan Kesedar di Kelantan.

POLA AGIHAN PENDUDUK

Sebelum Merdeka

Pola dan agihan penduduk dalam pembangunan wilayah sebelum merdeka banyak dipengaruhi oleh polisi-polisi dan corak pembangunan berasaskan penjajah. Sebahagian besar bandar di Malaysia adalah terdiri daripada masyarakat China yang terlibat dengan aktiviti kegiatan ekonomi utama seperti perniagaan, perkilangan dan perkhidmatan. Ini berlaku semenjak daripada zaman pemerintahan penjajah British bahkan sehingga masa kini seperti Bandara Raya Kuala Lumpur, Johor Bahru, Pulau Pinang, Kuching, Kota Kinabalu dan lain-lain. Justeru itu, hanya Kota Bharu Bandara Raya Islam sahaja yang jelasnya merupakan Bandara yang majoritinya penduduk Melayu dan mereka menguasai bidang perniagaan, perkilangan dan perkhidmatan di Malaysia. Taraf hidup masyarakat China ini pada umumnya lebih baik kerana mereka memperolehi pendapatan yang lebih tinggi di samping menikmati kemudahan-kemudahan sosial, sistem perhubungan dan infrastruktur yang lebih baik dan maju. Sedangkan diperkampungan tradisional menjadi tumpuan utama penduduk Melayu dan sebahagian besarnya juga berada dikawasan-kawasan estet. Manakala dikawasan hadapan (frontier) pula merupakan kawasan penempatan orang-orang asli. Oleh itu, pelbagai isu kependudukan adalah berkait rapat dengan persoalan kemunduran didesa yang berkaitan dengan kemiskinan, kadar kematian tinggi, kadar pengangguran yang tinggi, tahap pendidikan yang rendah. Justeru itu, lahirlah keadaan polarisasi kaum yang nyata diantara jangkamasa tersebut.

Selepas Merdeka

Setelah Malaysia mencapai kemerdekaan kerajaan telah mengadakan pelbagai strategi dan program pembangunan yang mana telah memberi kesan langsung kepada pertumbuhan bandar dari aspek struktur dan kependudukannya. Di sektor bandar tumpuan pembangunan adalah dari aspek perniagaan dan perindustrian, iaitu bermula dengan industri penggantian import pada peringkat pertama. Peringkat kedua berasaskan strategi berorientasikan eksprt yang berintensif buruh dan pada peringkat ketiga industri yang berasaskan intensif modal dan penggunaan teknologi tinggi.

Pertumbuhan pesat dalam perniagaan dan perindustrian ini berlaku di bandar-bandar utama seperti dikawasan Lembah Kelang, Pulau Pinang, dan Johor Bahru. Hasil daripada pertumbuhan yang pesat kawasan perniagaan dan perindustrian ini menyebabkan berlakunya penghijrahan penduduk dari setiap pelusok negara menyebabkan berlakunya pertumbuhan penduduk yang amat pesat. Walau pun pada dasarnya kerajaan ada perancangan untuk menyebarkan pertumbuhan penduduk ini kebandar-bandar lain tetapi kurang berjaya kerana kekurangan kemudahan asas untuk menyokong pertumbuhan perniagaan dan perindustrian dikawasan baru.

Kawasan desa lebih tertumpu kepada aspek pembangunan insitu secara bersepadu seperti pembangunan kemudahan sosial seperti sekolah, klinik desa dan kemudahan infrastruktur lain seperti jalan raya dan pelbagai pembangunan pertanian. Justeru itu, telah berjaya meningkatkan taraf hidup penduduk desa dari aspek kesihatan, pendidikan dan kemudahan sosial yang lain. Walaupun begitu, peluang-peluang pekerjaan yang ada didesa adalah tidak berketepatan dengan kebolehan dan kepakaran yang dimiliki oleh generasi muda. Ini menggalakkan generasi muda untuk berhijrah mencari peluang-peluang pekerjaan yang sesuai dengan mereka di wilayah pertumbuhan yang pesat dibandar-bandar utama di Malaysia seperti di Lembah Kelang, Pulau Pinang dan Johor Bahru.

Dikawasan luar bandar pembangunan yang wujud adalah terhad dan lebih kepada pembangunan tanah secara bersepadu. Ini dapat dilihat hasil daripada pembangunan tanah-tanah baru yang begitu pesat dalam tahun-tahun 70an dan 80an. Pembangunan tanah dan penempatan ini adalah seperti Felda, Felcra dan lain-lain. Program-program pembangunan tanah ini adalah seperti KEJORA, KETENGAH, KESEDAR dan lain-lain. Justeru itu, kawasan pembangunan tanah ini pertumbuhan penduduknya agak pesat terutama disebabkan oleh penghijrahan penduduk yang kebanyakannya sudah berkeluarga sebagai penghuni atau peneroka pembangunan tanah tersebut.

POLA PERTUMBUHAN PENDUDUK SELEPAS 1990-AN

Pembangunan yang pesat di beberapa kawasan metropolitan seperti di Lembah Kelang (Kuala Lumpur, Shah Alam, Petaling Jaya dan Bandar Klang), Bandar Ipoh, George Town dan lain-lain. Pembangunan yang pesat kawasan ini telah menyebabkan berlakunya proses imigrasi penduduk luar bandar dan bandar-bandar kecil sekitarnya. Proses imigrasi ini terutamanya berlaku terhadap mereka yang berpendidikan mengikut struktur umur berdasarkan pekerjaan, keupayaan tenaga dan lain-lain. Justeru itu akhirnya kawasan tersebut hanya tinggal golongan yang kurang berpendidikan, golongan tua dan golongan yang kurang berupaya didalam produktiviti. Justeru itu boleh menyebabkan kawasan

desa dan bandar kecil hanya tinggal mereka yang kurang upaya dalam hal pembangunan ekonomi dan keadaan tersebut menyebabkan mereka mempunyai pendapatan yang kurang berbanding dengan kawasan metropolitan utama. Ini didorong oleh sistem sosio-politik dan proses pendidikan yang tidak menghalakan kepada pembentukan masyarakat yang berakhlak tinggi, sedia berkorban untuk negara, jiran, masyarakat dan agama. Struktur masyarakat yang digambarkan sukar untuk membina ketahanan diri dan sekiranya krisis timbul mereka cepat menjadi kelam kabut, tidak tentu arah takut dan tiada keyakinan diri. Inilah isu yang seharusnya diatasi dan ditangani.

SKOP KAJIAN PENDUDUKAN DALAM RANCANGAN STRUKTUR

Dalam proses penyediaan rancangan struktur pihak berkuasa tempatan seharusnya mengendalikan siasatan atau kajian terhadap aspek-aspek yang ditentukan. Ini dinyatakan dalam seksyen 7(3) Akta Perancangan Bandar Dan Desa 1976, yang mengkehendaki kajian terhadap aspek-aspek berikut:

- a) Ciri-ciri fizikal, ekonomi, alam sekitar dan sosial, termasuk gunatanah utama kawasan pihak berkuasa tempatan dan kawasan berhampiran sekitarnya yang berkaitan;
- b) Saiz, komposisi, dan taburan penduduk di sesuatu kawasan samada menetap ataupun berpindah;
- c) Perhubungan, sistem pengangkutan dan jalan raya dikawasan itu dan bagaimana pengaruhnya atau kesannya terhadap kawasan sekitar yang berhampiran;
- d) Perkara-perkara yang lain yang ditentukan oleh Jawatankuasa Perancangan Negeri.

Perkara (b) adalah aspek demografi yang perlu dikaitkan dalam penyediaan rancangan struktur dan merupakan keperluan akta. Dalam kebanyakan Kajian Penduduk Rancangan Struktur di Malaysia yang telah dibuat aspek-aspek penduduk yang dikaji merangkumi perkara berikut:

1. Profil penduduk wilayah
2. Penduduk semasa
 - a. Saiz dan pertumbuhan (daerah dan pihak berkuasa tempatan)
 - b. Kepadatan penduduk
 - c. Ciri-ciri penduduk
 - i) Nisbah jantina
 - ii) Struktur umur
 - iii) Nisbah tanggungan
 - iv) Komposisi bangsa
 - v) Saiz isirumah
3. Migrasi
 - a. Migrasi antara negeri
 - b. Migrasi antara daerah
 - c. Migrasi kawasan pihak berkuasa tempatan
 - d. Struktur umur dan jantina migran
 - e. Komposisi bangsa migran
4. Penduduk masa hadapan
 - a. Saiz, kadar pertumbuhan dan taburan penduduk
 - b. Komposisi bangsa

- c. Struktur umur
 - d. Isirumah
5. Rumusan masalah, isu dan cadangan am

Kalau diperhatikan aspek kajian kependudukan tersebut, penekanannya lebih kepada analisis kuantiti penduduk. Aspek berkaitan dengan kualiti kependudukan seperti aspek kemahiran, pendidikan, kesihatan dan kesejahteraan hidup tidak diberikan perhatian. Oleh itu, penemuan kajian penduduk tidak dapat dihalakan kepada isu kualiti kependudukan yang sepatutnya ditekankan dalam perancangan Bandar.

SU KEPENDUDUKAN DALAM RANCANGAN STRUKTUR

Jadual 1 menunjukkan isu-isu kependudukan yang dikenalpasti oleh rancangan-rancangan struktur yang terpilih. Terdapat perbezaan isu-isu yang dikenalpasti mengikut perbezaan masa dan struktur ruang yang diliputi oleh Rancangan Struktur (RS). Bagi rancangan-rancangan struktur yang dirumuskan pada awal 1980an isu-isu berkaitan agihan penduduk antara kaum di kawasan bandar mendapat perhatian selaras dengan strategi Dasar Ekonomi Baru, seperti RS Klang, RS Seremban dan RS Johor Barat. Dari segi struktur ruang pula, RS kawasan-kawasan metropolitan banyak berkisar kepada pertumbuhan penduduk yang tinggi yang dipengaruhi oleh migrasi masuk penduduk yang memberi implikasi kepada penyediaan kemudahan awam dan infrastruktur oleh pihak berkaitan.

Jadual 1: Isu-isu kependudukan Dalam Rancangan Struktur Terpilih

Rancangan Struktur (Tempoh Rancangan)	Liputan Kawasan, Saiz dan Pertumbuhan Penduduk	Isu-isu Kependudukan
Rancangan Struktur Kuala Lumpur (1980-2000)	Wilayah Persekutuan Kuala Lumpur Luas = 243 km persegi Penduduk 1980 = 1.03 juta Kadar Pertumbuhan 1970-1980 = 4.3 %	Kemasukan berterusan daripada bandar dan luar bandar, terutamanya golongan belia dan beliawanis yang aktif (tidak berkemahiran, separa kemahiran dan berkemahiran). Dijangka kadar pertumbuhan semulajadi adalah tinggi. Justeru itu, permintaan terhadap tempat tinggal, rekreasi dan kemudahan infrastruktur dijangka meruncing.
Rancangan Struktur Seremban (1980-2000)	Majlis Perbandaran Seremban Keluasan = 106 km persegi) Penduduk 1980 = 138,000 Kadar Pertumbuhan 1970-1980 = 3.4 %	Nisbah penduduk Bumiputra rendah dan perlu menarik masuk penghijrahan Bumiputra. Pertambahan penduduk akan meningkatkan permintaan kepada peluang pekerjaan,perumahan,kemudahan awam dan perkhidmatan sosial.
Rancangan Struktur Klang (1985-2005)	Daerah klang dibahagikan kepada Majlis Perbandaran Klang (MPK) dan Luar MPK (625 km persegi). Penduduk pada tahun 1980= 279,349 Kadar pertumbuhan penduduk pada tahun 1970-1980 = 4.5%	Kadar penghijrahan masuk golongan Bumiputera yang tinggi dan keperluan membantu mereka menetap di kawasan kajian.
Rancangan Struktur (pengubahan) Klang (1997-2005)	Daerah Klang	Kekurangan golongan bumiputera berkurang dikawasan bandar (MPK). Keperluan untuk menyebarkan pembangunan dan kemudahan ke kawasan Bumiputera di luar MPK. Kadar Pertumbuhan Penduduk yang terendah ialah 92.8% dalam tempoh rancangan. Kadar pengganguran yang tinggi. Komposisi kaum melayu di MPK masih

<p>Rancangan Struktur Kuala Langat, Sepang dan Putra Jaya (1991-2010)</p>	<p>Daerah Sepang dan Kuala Langat (1405 km persegi) Penduduk tahun 1991: Kuala Langat= 129,696 Sepang= 54,653 Kadar Pertumbuhan penduduk Thn 1980-1991 Kuala Langat= 2.0% Sepang= 1.6%</p>	<p>rendah. Pertumbuhan Penduduk yang dianggap lebih pesat pada masa akan datang akan meningkatkan permintaan kepada kemudahan sosial dan infrastruktur. Pada masa yang sama tenaga buruh adalah tidak mahir.</p>
<p>Rancangan Struktur Daerah Petaling dan sebahagian Daerah Klang (1991-2010)</p>	<p>MPPJ,MPSA,MDP, dan MPK Penduduk thn 1991 = 687,620 Kadar Pertumbuhan Penduduk Tahun 1980-1991= 7%</p>	<p>Kadar Penghiraan masuk yang meningkat</p>
<p>Rancangan Struktur Daerah Pekan dan Rompin (1995-2020)</p>	<p>Daerah Pekan Dan Rompin dipecahkan kepada Kawasan Majlis Daerah Pekan Pihak Berkuasa Perancangan Tempatan Pekan Kawasan Majlis Daerah Rompin Pihak Berkuasa Perancangan Tempatan Rompin (9,052 km persegi) Penduduk= 79,179 Pekan= 85,120 Kadar Pertumbuhan Tahun 1980-1991 Rompin= 6.7% Pekan= 4.94</p>	<p>Ketidakseimbangan Pertumbuhan Penduduk antara kawasan Majlis Daerah dan kawasan Pihak Berkuasa Perancangan Tempatan. Migrasi keluar penduduk tempatan dari penempatan tradisional. Jangkaan migrasi keluar oleh penduduk generasi kedua Felda dan bandar-bandar baru pada masa depan. Integrasi penduduk orang asli dengan masyarakat yang lain.</p>
<p>Rancangan Struktur Kuala Selangor (1995-2020)</p>	<p>Daerah Kuala Selangor dibahagikan kepada Kawasan PBT dan luar PBT (1,178 km persegi) Penduduk 1991= 123,095 Kadar pertumbuhan tahun 1980-1991= 1.0%</p>	<p>Pertumbuhan penduduk yang rendah adalah disebabkan migrasi keluar penduduk tempatan. Migrasi keluar penduduk tempatan terutamanya kumpulan tenaga kerja mahir dijangka memberi kesan negatif kepada pembangunan ekonomi. Pengagihan penduduk bandar dan luar bandar yang tidak seimbang. Penuaan penduduk.</p>
<p>Rancangan Struktur Majlis Daerah Gombak dan PBPT Gombak (1995-2020)</p>	<p>Majlis Daerah Gombak dan PBPT Gombak Penduduk 1991= 254,477 Kadar Pertumbuhan Penduduk Tahun 1980-1991= 6.9%</p>	<p>Pertumbuhan penduduk adalah dipengaruhi oleh daerah sekitar yang utama seperti Bandaraya Kuala Lumpur. Kawasan kajian merupakan kawasan kediaman bagi menampung mereka yang bekerja di Kuala Lumpur. Pertumbuhan ekonomi yang pesat dan tumpuan migran. Penuaan penduduk pada masa akan datang.</p>
<p>Rancangan Struktur Majlis Perbandaran Kajang (1995-2020)</p>	<p>Kawasan Majlis Perbandaran Kajang Penduduk 1991 = 78,063</p>	<p>Perkembangan bandar dan pertumbuhan penduduk yang pesat, justeru itu memerlukan penyediaan kemudahan dan peluang pekerjaan yang lebih banyak.</p>
<p>Rancangan Struktur Majlis Perbandaran Selayang (1995-2020)</p>	<p>Kawasan Majlis Perbandaran Selayang Penduduk 1991 = 254,477</p>	<p>Perkembangan dan pertumbuhan penduduk bandar adalah pesat, justeru itu memerlukan penyediaan kemudahan dan peluang pekerjaan yang lebih banyak.</p>

STRATEGI PEMBANGUNAN BANDAR KOTA BHARU BANDAR RAYA ISLAM

Berdasarkan kepada pemerhatian, kajian dan analisis penggunaan tanah, sasaran pertumbuhan, matlamat dan strategi pembangunan, wawasan dan misi pembangunan Kota Bharu, beberapa komponen utama pembangunan perlu diambil perhatian dan tindakan untuk tujuan pembangunan Kota Bharu yang lebih pesat dan seimbang pada masa hadapan. Di antaranya isu-isu utama yang perlu di ambil perhatian ialah persoalan mengenai:

- a) Konurbasi Kota Bharu
- b) Pusat Pertumbuhan Utama
- c) Infrastruktur Perhubungan
- d) Institusi Pengajian Tinggi
- e) Pusat Petroleum dan Gas

Konurbasi Kota Bharu

Pada pandangan penulis untuk mencetuskan satu pertumbuhan dan pembangunan yang pesat terhadap Kota Bharu Bandar Raya Islam perlulah konurbasi ini meliputi dan menggabungkan sama bandar-bandar stelit dan Pihak Berkuasa Tempatan (PBT) lain, seperti Tumpat, Pasir Mas, Kubang Kerian dan Pasir Mas. Bandar-bandar baru dan PBT ini mewakili lebih kurang 52 peratus daripada penduduk negeri Kelantan. Jumlah penduduk di konurbasi Kota Bharu adalah lebih kurang 672,830 orang. Justeru itu, kepesatan pembangunan dan pertumbuhan konurbasi Kota Bharu secara bersepadu dan komprehensif merupakan asas kepada sumber pembangunan utama di kawasan Kelantan Utara. Pada masa sama dapat melahirkan salah satu pusat pertumbuhan utama ekonomi Malaysia, terutama Kelantan bersempadan dan dekat dengan Thailand, Vietnam, Laos, Kemboja dan juga China.

Pusat Pertumbuhan Utama

Kota Bharu boleh di bangunkan sebagai pusat pertumbuhan, perniagaan dan perdagangan utama serta sebagai pusta strategi pengagihan peluang pekerjaan dan agihan kekayaan melalui aktiviti ekonomi dan penduduk mengikut fungsi dan berdasarkan kepada pusat pertumbuhan bandar stelit berikut: Pertama Bandar Kota Bharu sebagai Pusat Teras Konurbasi dan diikuti pembangunan bandar stelit lain seperti Tumpat, Pasir Mas, Kubang Kerian dan Bachok.

Infrastruktur Perhubungan

Infrastruktur, rangkaian jalan raya dan rel yang sedia ada pada masa kini dan yang telah komited akan menjadi pemangkin kepada pertumbuhan pusat-pusat dan kawasan pembangunan yang berkaitan. Beberapa rangkaian infrastruktur tambahan yang baru dicatedangkan bagi memantapkan lagi pembangunan Konurbasi Kota Bharu sebagai paksi pertumbuhan nasional khususnya di negeri Kelantan amnya :

- Segmen Lebu Raya Pantai Timur dari Jerneh ke Machang – Tanah Merah – Rantau Panjang. Ini dapat mempercepatkan lagi pergerakan pengangkutan manusia dan barang daripada kawasan laian dan dari Kelantan ke luar kawasan.

- Segmen Rel Kelajuan Tinggi Nasional Kuala Terengganu – Kota Bharu – Pulau Pinang. Dapat meningkatkan pergerakan manusia dan barang lebih efisien dan cekap.
- Naik taraf Lapangan Kapal Terbang Sultan Ismail Petra. Kalau tidak lapangan terbang antarabangsa pun sekurang-kurangnya regional bagi mempercepatkan dan mengurangkan kos pengangkutan dari dan keluar Kelantan. Mempercepatkan pembangunan Konurbasi Kota Bharu Bandar Raya Islam; dan
- Pembinaan Pelabuhan/ Pelabuhan Perikanan dan Maritim di Tok Bali. Memudahkan dan menjimatkan kos pengangkutan manusia dan barang keluar dan ke Kelantan dengan lebih efisien dan cekap. Pada pandangan saya, pelabuhan Kuantan dan Pelabuhan Kelang terlalu jauh bagi Kota Bharu dan melambatkan Konurbasi Kota Bharu untuk membangun pada skala yang lebih besar dan pantas. Ini adalah amat penting bagi menentukan Konurbasi Kota Bharu khasnya dan Kelantan amnya mencapai tahap wilayah maju dan seterusnya menentukan Malaysia dapat mencapai taraf negara maju pada tahun 2020. Perkaranya mudah sahaj sekiranya Kelantan tidak mencapai taraf wilayah maju pada tahun 2020, Malaysia juga tidak akan mencapai taraf negara maju. Untuk mencapai negara maju semua negeri dan wilayah di Malaysia mesti mencapai tahap maju.

Institusi Pengajian Tinggi

Dalam membentuk salah satu ciri misi pembangunan yang berkaitan pembangunan insan, negeri Kelantan memerlukan sekurang-kurangnya sebuah universiti awam yang bukan sahaja dapat menyediakan kemudahan pendidikan tinggi kepada penduduk negeri dan negara tetapi akan dapat menawarkan kemudahan tersebut kepada penduduk Wilayah Selatan Thailand yang layak. Kerjasama kedua negara iaitu Malaysia dan Thailand untuk membangunkan sebuah universiti awam yang bertaraf antarabangsa itu agar dapat mengeratkan lagi hubungan ekonomi, politik dan sosial kedua-dua negara. Kampus induk dan cawangan universiti di Kelantan telah dan akan dibangunkan di Bachok dan Jeli supaya dapat memangkinkan lagi pertumbuhan ekonomi dan keseimbangan pengagihan ekonomi antara wilayah.

Pusat Petroleum dan Gas

Kewujudan rizab petroleum dan gas di perairan negeri Kelantan perlu dimanfaatkan pelbagai pihak sebagai salah satu aktiviti ekonomi utama negeri pada masa akan datang. Jajahan Tumpat dan Bachok amat sesuai dibangunkan sebagai pusat petroleum dan gas yang baru terutama bagi Koridor Pantai Timur selepas kawasan Kerteh dan Paka di negeri Terengganu. Hubungan infrastruktur sokongan seperti pelabuhan perlu disediakan bagi memudahkan lagi aktiviti untuk menyediakan perkhidmatan pengangkutan air untuk membawa hasil petroleum dan gas. Pusat petroleum dan gas Tumpat dan pantai Senok juga perlu disediakan rangkaian paip gas untuk disambungkan dengan rangkaian paip gas nasional sedia ada dan seterusnya disambungkan ke Wilayah Selatan Thailand bagi memudahkan aktiviti petroleum ini dijalankan. Justeru itu, dapat merancakkan lagi pembangunan dan penempatan di Konurbasi Kota Bharu.

Sumber yang ada ini perlu dimanfaatkan sebaik mungkin dengan perancangan kewangan dan pembangunan yang teliti bagi mempercepatkan pembangunan dan kos sosial yang berpatutan, justeru itu pembaziran sumber tidak akan berlaku dengan pembiayaan yang tidak berfaedah seperti pembiayaan kos projek yang tinggi daripada nilai sebenar.

KESIMPULAN DAN RUMUSAN STRATEGI PEMBANGUNAN KOTA BHARU

Pembangunan pesat Konurbasi Kota Bharu diharapkan dapat mengimbangi pembangunan di negeri Kelantan berbanding dengan negeri-negeri lain yang bersempadan dengannya. Tumpuan terhadap pembangunan ke atas Konurbasi Kota Bharu ini mampu menjadi pemangkin kepada keseluruhan pembangunan di negeri Kelantan, terutamanya Kelantan utara. Dapat membentuk persaingan dalam usaha menarik pelabur ke kawasan pembangunan di Konurbasi Kota Bharu khasnya dan di Kelantan umumnya. Ini berdasarkan kepada kawasan yang dapat menawarkan suasana pelaburan yang sesuai untuk pembangunan yang akan berjaya. Justeru itu, perancangan dan pembangunan yang baik adalah penting untuk tujuan pelaburan dan ianya amat bergantung kepada sistem perhubungan yang baik.

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COMMUNITY-BASED TOURISM: BEHAVIORAL INTENTIONS IN HOMESTAY MALAYSIA

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ABSTRACT

This study proposed to focus on the homestay tourism in Malaysia as a tourism product that has privileged community-based approach to tourism. The main objective of the study is to investigate the role of perceived value and psychographic feature towards the tourist future behavioral intentions. Behavioral intention in hospitality and tourism studies are usually related to intention to visit, revisit and recommend the destination to others. This study will use intention to revisit and recommend as the construct for behavioral intentions. Tourists' perceived value, satisfaction and psychographic features will be used as the determinants of behavioral intentions in the study.

Keywords: *community-based tourism, homestay, perceived value, satisfaction, behavioral intention*

INTRODUCTION

Tourism was almost unknown in Malaysia in the 1960s since it is a latecomer to the tourism industry as compared to other countries in the region. Tourism was not considered as a key sector in the economy until the 1970s when the government began to put in substantial efforts towards attracting international tourist by participating in international trade fairs and exhibitions as well as advertising in various media. This is resulted from its inspiration of the tourism development as an economic activity in its neighbouring countries (Goh, 1989). The aggressive worldwide marketing campaigns that promote Malaysia as a tourist destination and the increased in allocation of funds for the tourism sector under the various development plans has presented a positive trends in the Malaysia's tourist arrivals. Consequently, from having less than half million tourists in the beginning of 1970s (Williams & Shaw, 1994), the number of tourists arrival strikes more than 19 million in 2007 (TourismMalaysia, 2008b).

The country offers a wide range of tourism products that include culture and heritage, hill resorts, parks, beautiful beaches and islands, international shopping, major events, eco-tourism and sports tourism (Othman, 2007). Promoting tourist activities has become a priority for Tourism Malaysia as to ensure that the country is recognisable in the marketplace. Among the tourism activities that is widely promoted are diving, spa, golfing, sail and cruise, food, shopping, national parks, theme parks, cave exploration, Islam in Malaysia, health tourism, education tourism, real-estate tourism, Malaysia My Second Home and homestay tourism (TourismMalaysia, 2008a). It has been identified long time ago in 1996, that one type of many tourism products that may grow in popularity is taking holidays that involve staying with an ordinary family in a private home (Swarbrooke & Horner, 2007). This is one of the tourism products that are community-based in nature and homestay in Malaysia falls into this category.

Despite reading and hearing about the increasing numbers of tourists visiting the homestay tourism in Malaysia, empirically, little is known about their psychographic features, satisfaction level and their behavioral intentions in revisiting and recommending the programme to others. There is a need to better understand the profile and behavior of these tourists in general, both in terms of those who stay in the accommodation and those who seek to experience the attractions (Hall, 2000). The focal aim is to assist the marketers in presenting an appropriate tour packages and to impart a better planning for future promotion of this programme. Thus, this study proposed to look into the community-based homestay tourism focusing on the psychographic and behavioral intentions of the homestay tourists.

LITERATURE REVIEW

Community-based homestay tourism

Homestay in Malaysia is a type of community-based tourism where the tourist will be residing, having meals and entertained by cultural performances and traditional activities by the host community or participating villagers (Aminudin & Jamal, 2006). It is a programme where the tourist stays with the host's family and experience the everyday way of life of the family in both a direct and indirect manner (MOCAT, 1995). The main idea of the programme is to accommodate tourists in a village with a local family, thus permit the tourist to discover the life, nature and culture of the locals (Kayat, 2003). The ultimate purpose of homestay programme is to create opportunities for tourists and visitors to get closer to the rural world, such as its culture and heritage, notion of the countryside, peacefulness and physical and spiritual rejuvenation. Thus, through this programme enable the providers to give the tourists and visitors a chance to see what it is the rural folks do with the opportunity to taste our real food with the company of the real people.

In Malaysia, the activities can be traced back to the early 1970's at the then 'drifter enclave' of Kampung Cherating Lama, Pahang, when a local lady took in long-staying drifters/hippies and provided them with food and place to sleep within her modest kampung house (Hamzah, 2004). The first homestay programme was started and launched in Desa Murni, Kerdu, Temerloh, Pahang in 1995 by the minister of Culture, Art and Tourism (Aminudin & Jamal, 2006). Today, with demands sprouting from Japanese youths and international tourists on shoestring budget, the homestay providers have got together to form the Homestay Association of Malaysia in the 80s. Since then, the homestay programme has taken momentum and moved on to all 13 states in Malaysia. Each state has its own cultural identity, different from one another; offering differences in landscape, local practices and variety of foods. The growth of this sector lies not in encouraging large numbers of visits, but rather in targeting an exclusive market searching for something unique or different.

Homestay operation recently has become popular in rural areas due to the development orthodoxy, which gives higher priority to villages (Liu, 2006). Past studies (Abdul-Hamid & Ramchandram, 2002; Aminudin & Jamal, 2006; Hamzah, 2004) have described many of the possible benefits derived from tourism in the rural areas in particular, the homestay programme that involves local community and the social benefits attached to it. This programme is often considered as an economic alternative that help to improve the living standards of rural folks. The direct economic benefits can be spread

widely within communities as even individuals with little capital or training can provide desired services or products. Since those who visit this program do not demand luxury (Scheyvens, 1999) they will therefore spend more on locally produced products and services. While in terms of non-economic development, local people would gain self-fulfilment through running their own tourism enterprises that give them power in upholding their interests and negotiating with outside bodies (Toh, Majid, & Aminudin, 2005).

Other benefits (Aminudin & Jamal, 2006) include the increase in the level of awareness among the villagers in the aspect of the cleanliness particularly in their homes as well as the surrounding areas where they live. The villagers at the same time remarkably improve their relationships among themselves as they have to work as a team in ensuring that all the cultural performances and traditional activities runs well. Studies have also found the positive environmental and developmental impacts of tourism that include improved community appearance (Perdue, et.al 1990) more recreational facilities and park opportunities (McCool & Martin, 1994; Perdue, Long, & Allen, 1990) and upgraded infrastructure. Community tourism could also enhance social development within the community whereby the tourism income could help the local authorities improve social welfare (Cater, 1994; Ross & Wall, 1999) through improved educational and health services, access to clean water and development of transport and communication infrastructure (Manyara & Jones, 2007) and increase in personal leisure activities (Bachleitner & Zins, 1999). As a result, the community will experience an improved standard of living.

Unlike regular tourism, community-based tourism is an active type of tourism where both the tourists and the host community learn from each other about differences between their cultures through the tourists' participation and experience in the daily life of the local people (Suansri, 2003). Community-based tourism permits tourists to have a sufficient interaction opportunity with the residents that would allow them to cherish local culture resources, which might in turn elevate their willingness to revisit or recommend the destination to others (Ross & Wall, 1999). Interestingly, while the communities are educated about the outside world and other cultures without them leaving their homes, the tourists significantly discover about a distinctive culture of the hosts. Environmentally, since community-based tourism improves community appearance (Perdue, Long, & Allen, 1990), tourists would benefits in terms of the availability of more recreations and parks for them to experience (McCool & Martin, 1994). Similarly, as this form of tourism encourages awareness and appreciation of natural assets, the environment and other resources by the community, the tourists would benefits in the sense of having to experience quality destinations (Simpson, 2008), get to enjoy unspoiled nature and landscapes, a quality clean air and water, a thriving and authentic local culture and traditions as well as a healthy community with low crime rate.

Tourist psychographic

Psychographic data have been used in many studies by various researchers. Psychographics have been recognized as being very meaningful and relevant and a very important means in providing additional information beyond the demographic characteristics (Shih, 1986). It analyzes consumers'

attitudes, perceptions, needs, interests, opinions, activities and daily lifestyle as to better understand the tourists, so that marketers can successfully market their destination (Gladwell, 1990).

Plog (1972) could be one of the pioneers to study psychographic system applicable to destinations at which he identified two extremes in his scale labeled as 'psychocentric' (the dependable) and 'allocentric' (the venturer). He cautioned that these are just theory with no one is actually a perfect example of either one. The personality of the dependable is less venturesome and less exploring, cautious and conservative in their daily lives, restrictive in spending discretionary income, prefer well-known because it is popular and safe choice, low self-confidence and low activity levels, non-varying lifestyles and prefer to be surrounded by family and friends. On the other hand, the venturer is continually seeking new experiences and enjoys activity, making decision quickly and easily, spending discretionary income more readily, prefer newly introduced products, full of self-confidence and energy, prefer non-routine tasks and may appear to be friendly and outgoing but often prefer to be alone and somewhat meditative.

Although the dominant use of psychographics has been in segmentation research, it has also been proven to be very effective in describing and predicting consumer behavior (Edris & Meidan, 1989). Among others are the used of numerous value scales to determine travel behavior (Pizam & Calantone, 1987), the use of personality concept to explain consumer product and media choice, risk taken and persuasibility (Kassarjian, 1971) and the use of values, attitudes and lifestyles (VALS) to assess holiday destination selection (Shih, 1986). Gountas & Gountas (2007) in their study have demonstrated that personality orientations have a direct relationship with emotional states and both have an influence on consumers; satisfaction and behavioral intentions. This study proposed to examine the relationship between satisfaction and behavioral intentions as well as to reveal as whether the psychographic features of the tourists moderate the relationship.

Perceived value

The concept of value is old and endemic to consumer behavior (Gallarza & Saura, 2006), however it has resurfaced and turn out to be a new concept after 1990 when many organizations were bombarded with directions to re-orient their strategic planning with superior consumer value delivery becoming the center of attention (Band, 1991; Day, 1990; Gale, 1994; Naumann, 1995). Since then consumer perceived value is considered as the most important consumer attractive management practice subsequent to quality, consumer satisfaction and loyalty. This is to a certain extent due to the globalize competition faced by the environments and the consumers who are increasingly demanding (Cengiz & Kirkbir, 2007). Indeed, it has been recognized that consumer behavior is better understood when analyzed through perceived value (Nilson, 1992; Ostrom & Iacobucci, 1995; Woodruff & Gardial, 1996; Jensen, 1996; Heskett et al., 2000).

Earlier, the familiar definition in marketing literature were mainly price-based where Thaler (1985) argued that perceived value is a result of comparison between various price structures such as advertised selling price, advertised reference price and internal reference price. Monroe (1990)

suggested that perceived overall value is a weighted sum of acquisition value and transaction value. Acquisition value, according to this researcher is the variation between the maximum price and actual price. On the other hand, transaction value is the variation between reference price and actual price. This is known as utilitarian approach to perceived value (Duman, 2002) where the modelling of perceived value was mainly based on price deals which is important and yet insufficient. This is because most of the times, besides the price of products and services, the consumers do consider other attributes as well.

Today the most common definition has moved to value-for-money-based that is behavioral approach to perceived value (Duman, 2002) with the most quoted definition by Zeithaml (1988, p.14), “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given”. Zeithaml (1988) proposed a perceived value model suggesting that formation of quality and value perceptions occur in a means-end way (refer to Figure 4.1). She further elaborated that perceived value is a comprehensive construct that involve not only price variations but also other psychological factors. Traditionally, perceived value has been simply defined as a trade-off between quality and price (Sinha & DeSarbo, 1998, Monroe, 1990; Cravens, Holland, Lamb & Moncrieff, 1988). It is noted that the ambiguous and variability in definitions of perceived value is understandable, since what constitutes value appears to be highly personal, idiosyncratic (Holbrook, 1994) and may vary widely depending on the types of products or services and the different characteristics of the consumers (Zeithaml, 1988).

Initially, it is understood that the construct of perceived value constitute of two parts: benefits received including economic, social and relationship and sacrifices made by the consumers involving price, time, effort, risk and convenient (Cronin, Brady, Brand, Hightower, & Shemwell, 1997; Cronin et al., 2000; Dodds, Monroe, & Grewal, 1991; Grewal, Monroe, & Krishnan, 1998; Oh, 2003). In recent years, there appears to be a general agreement in the literature on the conceptualization of perceived value using a multidimensional approach comprise of two main underlying dimensions: functional and affective (Anderson & Narus, 1990; Cengiz & Kirkbir, 2007; Gassenheimer, Huston, & Davis, 1998; Lapierre, 2000; Palmer & Ponsonby, 2002; Sa'nchez et al., 2006; Sweeney & Soutar, 2001). The existent of functional and affective dimensions of perceived value has been empirically evidenced by these researchers.

In this line, several works in tourism and hospitality have arisen in the last years to study the role of perceived value in different aspects of the consumer behavior. For example, Gallarza & Saura (2006) illustrate the complexity of value dimensions that have been shown to be highly sensitive to the tourism experience and confirm the existence of a quality-value-satisfaction-loyalty chain. Gill et al. (2007) study the mediating role of satisfaction in the cellar door setting and confirm that satisfaction does indeed mediate the relationship between perceived value and behavioral intentions. Moliner et al. (2007) study the influence of post purchase perceived value of a tourism package on the relationship quality with a travel agency. They found out that emotional value derived from the travel agency-tourist interactions is a key antecedent of relationship quality. Petrick (2004) in his study examines the

differences between first timers and repeat visitors of cruise vacation and discovered that perceived value is the best predictor for repeaters. Consistent with this view, Tam (2004) revealed that satisfaction and perceived value significantly influence post-purchase behavior. This important role of perceived value is recently confirmed by Ryu et al. (2008) who signified that restaurant image, perceived value and customer satisfaction are significant predictors of customers' behavioral intentions.

While a number of studies have examined perceived value in the tourism industry from various perspectives, there appears to have limited interest in extending the concept to the community-based homestay tourism. Perceived value discussed in this study is based on a broader definition since it is related to element of both benefit received and sacrifice made by the homestay tourists upon their visit and experience of the programme. It is believed that perceived value can be one of the factors that may affect the growth of demand at a micro level and is created by the service offered by the homestay programme and by the interaction between the tourist and the host community.

Perceived value, satisfaction and behavioral intentions

Achieving tourist satisfaction is one of the important objectives in most tourism businesses (Manyara & Jones, 2007). It is more likely that satisfied tourists will return and say positive things about a service (Tian-Cole, Crompton, & Willson, 2002). In other words, it is high likely that a dissatisfied tourist never returns. From the perspective of destination marketer, customer satisfaction assists in profit making initiatives through revisit intention. Most find out that repeat visits are essential for continuous stream of revenue (Tsaur, Lin, & Lin, 2006). As like any other tourism providers, an important outcome for a homestay tourism provider is a satisfied tourist who intends to revisit the destination and willing to recommend the experience to others in their social circle. This is true since tourist retention is an answer to organization's profitability (Besculides, Lee, & McCormick, 2002). It is five or six times more effective to attract repeat customers than to gain new one (Oppermann, 1996). Behavioral intention is often used to evaluate visitors' likely future behavior since it is considered to be relatively accurate predictor of real behavior (Ajzen & Fishbein, 1980).

The literature indicated that a common trend has been revealed throughout the studies, which have considered the simultaneous impact of perceived value and satisfaction on behavioral intentions. Results have shown a direct and positive relationship between satisfaction and behavioral intention, as well as between perceived value and behavioral intention (Gill, Byslma, & Ouschan, 2007; Patterson & Spreng, 1997; Petrick, 2004, Eggert and Ulaga, 2002, Cronin et al., 2000). Otherwise several researchers argued that, unlike some studies that have found perceived value to influence intention directly; perceived value should be a direct antecedent of satisfaction (Patterson & Spreng, 1997; Liljander & Strandvik, 1995).

Meanwhile, many studies on tourist satisfaction discussed satisfaction as a determinant of other behavioral constructs namely behavioral intention and customer loyalty (Heung et al., 2002; Petrick et al., 2001; Yoon & Uysal, 2005). Behavioral intention is defined as a subjective probability that an individual will perform a certain behavior (Fishbein & Ajzen, 1975). It is a measure of likelihood that

an individual will engage in a given behavior (Fishbein & Ajzen, 1980). Previously, the majority of the researchers reported that tourist satisfaction positively affects revisit intentions (D. A. Baker & Crompton, 2000; Cronin et al., 2000; Kozak, 2001; Tian-Cole, Crompton, & Willson, 2002b). On the other hand, several studies have also suggested that satisfied tourist tend to recommend a destination to other people (Bendall-Lyon & Powers, 2004; Castro et al., 2007; Chen, 2008; Park et al., 2006; Tian-Cole et al., 2002b). Obviously, this indicates that people are more likely to revisit the destination and recommend it to others if they are satisfied with their visit.

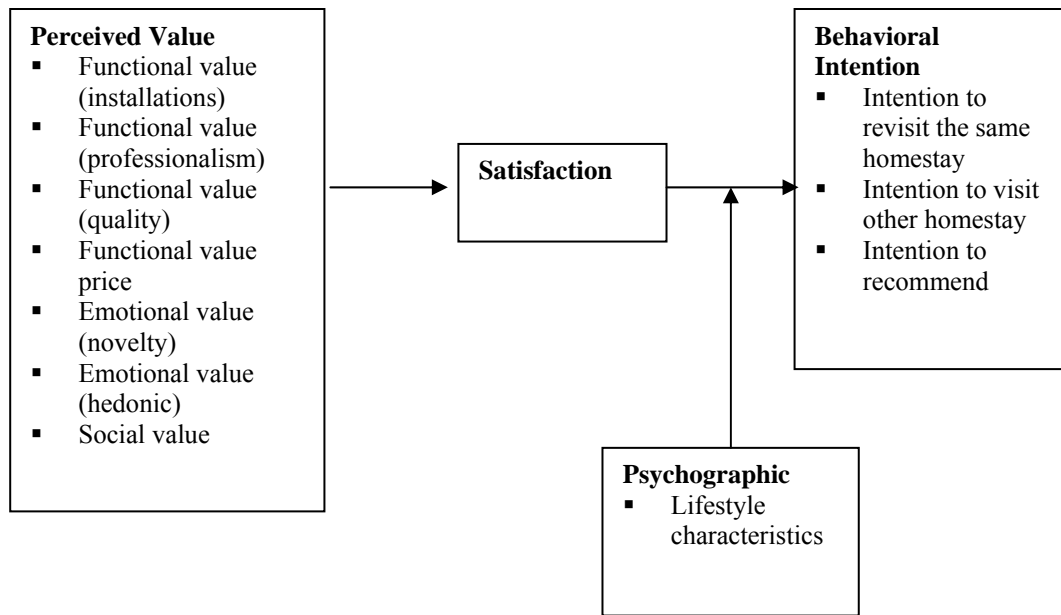


Figure 1: Theoretical framework for the proposed relationship model of the visiting behavioral intention of homestay tourists

PURPOSE AND OBJECTIVES

In essence, the primary objective of this study is two-fold looking at both demand and supply aspect of homestay tourism. At the empirical level, first, it aims to help create a better understanding of the community-based homestay tourism market in a Malaysian setting using the perceived value-satisfaction-behavioral intention paradigm. Second, it seeks to understand the motivation elements that could possibly continuously inspire the host community to participate meaningfully and benefit from the programme. The emphasis therefore is on the financial and social aspect in motivating community participation. At the theoretical level, this study aims to demonstrate that the conventional perceived value – satisfaction - behavioral intention paradigm is inadequate in explaining the tourist behavioral intention in the context of special interest tourism. A more realistic explanation that incorporates the psychographic variable is required. Thus, specific objectives of this study are:

1. To establish the underlying dimensions of perceived value in homestay tourism.
2. To investigate the interaction effect between host motivation and perceived value variables that might influence the tourist satisfaction level.

3. To determine the relationship between tourists' satisfaction level and future behavioral intention towards homestay programme.
4. To examine the contingent effect of psychographic orientations that drives the tourists to experience the homestay programme.

The hypotheses proposed for this study are as follows:

- *H1: Perceived value positively influences the tourist satisfaction towards homestay.*
- *H2a: Satisfaction positively influences the tourist intention to revisit the same homestay*
- *H2b: Satisfaction positively influences the tourist intention to visit other homestay in different state in Malaysia.*
- *H2c: Satisfaction positively influences the tourist intention to recommend the homestay to others.*
- *H3a: The more extreme the tourist attitude towards special interest tourism, the more likely they will revisit the same homestay.*
- *H3b: The more extreme the tourist attitude towards special interest tourism, the more likely they will visit other homestay in different state in Malaysia.*
- *H3a: The more extreme the tourist attitude towards special interest tourism, the more likely they will recommend homestay to others.*

METHODOLOGY

This study will take up both qualitative and quantitative research methods in assessing the tourists' psychographic make up and their behavior towards the homestay tourism. The adoption of both qualitative and quantitative approach in this study will further enhance the understanding of the subject matter and accomplish the objectives of this research. The first phase of the study is to carry out a qualitative method. The battery of perceived value attributes for this study was obtained from a review of literature and to ensure the completeness and the relevance of the list to the current study, interviews with tourism experts and a few selected tourists will be carried out. At this phase, a judgment sampling method will be used where respondents are going to be selected on the basis of their experience in the subject investigated. A judgmental sample is used to guarantee that the study tapped a broad range of experiences and perceptions (Jankowicz, 2000). Next, the second phase is to undertake survey questionnaires that will include questions on psychographic as well as demographic, perceived value, satisfaction and intention to return or to recommend. Primarily, the survey will consist of items from the existing scales within the literature. The questions will be further modified according to tourists' perceived associations of homestay concept and attributes.

The target population for this study is those local and international tourists visiting the homestay programme in Malaysia. The arrival of domestic and international visitors to the homestay programme has reached 45,000 in 2004 (NST, 2004). Referring to the statistic produced by the ministry of tourism, there were a total of 68,072 local and international tourists visited the programme in 2007. In terms of sampling size estimation, Krejcie and Morgan (1970) in Sekaran (2005) suggested that the appropriate sample size for population of 75,000 is 382. This is supported by Roscoe (1975) in Sekaran (2005) rule

of thumb who proposed that sample sizes larger than 30 and less than 500 are appropriate for most research. The sample will be selected based on convenience sampling approach. As the research target were the tourists visiting the homestay programme, data collection was performed at a number of selected homestay villages.

Since there are 135 villages participating in the programme involving more than 2,000 host providers (Bernama, 2008) throughout all the 13 states in Malaysia, a number of homestay will be selected for the purpose of this study. The selection will be based on the stratified sampling method using the geographical region as the stratification basis. This is to ensure that the findings is not skewed to only certain homestay at certain region or skewed to only popular or unpopular homestay.

CONCLUSION

This study is proposed with the view to provide additional data and information on community-based homestay tourism that has the potential of becoming a major source of income for the rural population (Hamzah, 2004). Theoretically, this research will contribute to the extant body of literature through unveil of facts describing the relationship between future behavioral intentions and its relevant determinants in the context of the homestay tourism. The information on tourists' perceived value and satisfaction is important in order to enhance tourists' favourable experience that will hopefully lead to their likelihood to revisit and recommend to others. Moreover, the results of this study will enrich the literature about hospitality and tourism in Malaysia.

The theoretical and conceptual basis for understanding the tourist visiting the homestay tourism is still relatively immature. Since nowadays there is a rise of niche tourism that go after small segments, this study seeks to provide a first step in discovering the insight of this unique type of consumer. We really want to get inside the skin of the tourists to understand their value perception of the programme and their psychographic feature and how providers and marketers can fulfil their needs. This in turn would benefit those concerned with the development and care of the programme. As Malaysia has many other potential villages to develop, this study could certainly be applicable and useful to the rural tourism authorities.

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GOLD DINAR: THE CAPABILITY OF STABILIZING PRICES

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ABSTRACT

The word “Dinar” refers to gold coins used as a medium of exchange by Muslims throughout the Islamic history until the fall of the Ottoman caliphate. Islamic Dinar coinage was first issued in Damascus by Caliph Abdul Malik ibn Marwan in the year 77H. It is reported that the prophet Muhammad (saw) had said that “A time is certainly coming over mankind in which there will be nothing (left) which will be use save a Dinar and Dirham” (Musnad of Imam Ahmad Ibn Hambal). The Muslim scholars Ibn Khaldun (1332-1395 C.E.) claimed that God created the two precious metals, gold and silver to serve as the measure of all commodities. The value of the Islamic bimetallic currency has remained surprisingly stable in relation to basic consumable goods for decades. Unlike paper money, the gold dinar cannot be inflated due to the special characteristic that it has. In addition, the Gold Dinar can be an ideal currency to facilitate; increase international trade and minimize speculation in paper currency that lead to the Asian crisis in 1997. By using Gold Dinar, it can regulate naturally the market in stabilizing the price fluctuation due to the demand and supply activities. This paper concentrated on the imports of major and selected commodities issued from 1996 until 2005. Gold Dinar and USD are used as independent variables while oil, utility, transportation and commodity prices are used as dependent variables. The analysis for the year 1996 to 2005 is based on Pearson-Product-Moment Correlation and Descriptive Analysis. This study found that Gold Dinar has strong correlation with oil and consumer products while USD has strong correlation with consumer products and construction products.

Keywords: gold dinar, stabilize, price fluctuation

INTRODUCTION

The word “Dinar” refers to gold coins used as a medium of exchange by Muslims throughout the Islamic history until the fall of the Ottoman caliphate. Islamic Dinar coinage was first issued in Damascus by Caliph Abdul Malik ibn Marwan in the year 77H. It is reported that the prophet Muhammad (saw) had said that “A time is certainly coming over mankind in which there will be nothing (left) which will be use save a Dinar and Dirham” (Musnad of Imam Ahmad Ibn Hambal). The Muslim scholars Ibn Khaldun (1332-1395 C.E.) claimed that God created the two precious metals, gold and silver to serve as the measure of all commodities.

With the spread of Islam, the Dinar was minted in large quantities and gradually displaced the bezant gold as the major international currency, circulating throughout the Muslim world and the Christian Europe as well. After the two world wars that caused serious trade disruptions, the gold standard collapsed and was replaced with the Bretton Woods system. In modern history, as a consequence of currency crisis in [Asia](#), the first in [1997](#), the former [Prime Minister of Malaysia, Mahathir bin Mohamad](#) proposed introduction of Islamic gold dinar as a currency for international trade in the [Muslim world](#).

It was supposed to suppress the too overly traded [American dollar](#) and ensure that dollar's instability does not affect international trade because Islamic gold dinar was to be tied to the price of gold and thus provide stable value of the currency. Mahathir announced that Malaysia was to start using the dinar in mid-2003, but when [Abdullah Ahmad Badawi](#) replaced him as the [Prime Minister of Malaysia](#) in 2003, this idea was halted. On [20 September 2006](#), [Kelantan](#) became the first state to launch gold dinar coins. It features the Kelantanese state crest, the date of production, as well as the weight and purity of the gold used on its face. The coins can be bought and sold at the Kelantan Corporation Bhd (Perbadanan Kelantan Bhd) and all eight Ar-Rahn Islamic pawnshops in the state.

THEORETICAL FRAMEWORK

Independent variables: Gold Dinar, US Dollar

Dependent variables: Oil Price, Price of Consumer Product and Price of Construction Product.

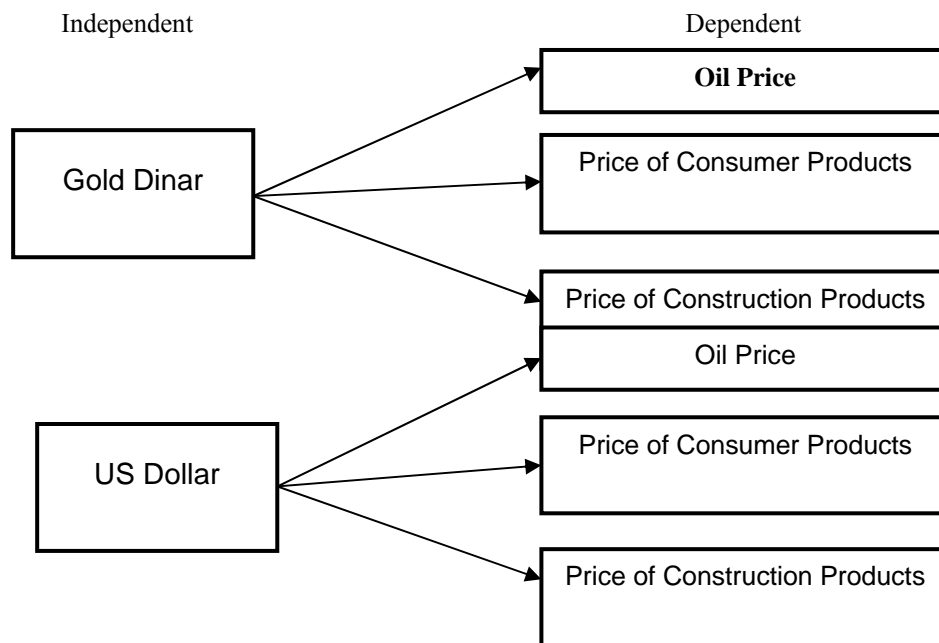


Figure 1: Schematic Diagram (Relationship Diagram)

DATA ANALYSIS AND TREATMENT

The statistical tool used in this study is Pearson Correlation Coefficient. In this subsection, this paper would develop the empirical method to detect the possible correlation of oil price, price of consumer products and price of construction products between Gold Dinar and USD. Due to extent regression correlation, the analysis will show on how to determine the nature capability of the relationship. In order to determine the strongest relation, the author would construct correlation analysis.

It is followed by Pearson-product Moment Correlation by implementing the data output into computer. The methodology is useful in this context as it is recognized to correlate dichotomous and continuous variables and is the most common measure in linear relationship. This coefficient has a rage

of possible values from -1 or +1. The values indicate the strength of the relation, where the sign (+1 or -1) indicates the direction. This method could be analyzed by using the Statistical Package for Social Science (SPSS).

The Pearson- Product Moment Correlation can be evaluated by:-

- $H_0: p = 0$
- $H_1: p \neq 0$

where p is the correlation coefficient between Gold Dinar and USD.

The second method that has been used is descriptive analysis. This method was used to find the mean for the price of oil, consumer products and construction products for Gold Dinar and USD. From this analysis, it also can give a view about the differences on the fluctuation price oil, consumer products and construction products in Gold Dinar and USD.

FINDINGS AND ANALYSIS

Overall the correlation analysis was analyzed by using the Statistical Package for Social Science (SPSS). The correlation analysis is the most versatile and popular statistical procedure. At the same time, it is a method that tries to look at the relationship between two variables in linear fashion. A person product-moment correlation describes the relationship between two continuous variables.

A person product-moment correlation is used to correlate a dichotomous and continuous variable. This study addresses bivariate correlation using Pearson Product Moment Correlation. Simple bivariate is also referred to as zero-order correlation, referring to the correlation between continuous variables and is the most common measure of linear relationship. This coefficient has a range of possible value from -1 to +1. The value indicates the strength of the relationship, while the sign (+ or -) indicates the direction. Significance values of this study are 1% and 5% depending on the factors or independent variables involved. Significant means there is a significant correlation, in order to determine whether to reject or failed to reject the null hypotheses.

Pearson Correlation Test

This research examined the correlation price of oil, consumer products and construction products between the Gold Dinar and USD for the overall period of 1996 to 2005. Pearson Correlation test is used for this research to test the correlation price of oil, consumer products between Gold Dinar and USD to analyze the data for 10 years and by using the price of imports of major and selected commodities. This method is evaluated by

- $H_0: p = 0$
- $H_1: p \neq 0$

where p is the correlation between oil, consumer products and construction products over period.

Table 1: Dinar, Oil, Consumer and Construction Correlation

	Dinar	Oil	Consumer Products	Construction Products
Oil	.706(*) .022	-	-	-
Consumer Products	-.853(**) .002	-	-	-
Construction Products	.309 .384	-	-	-

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

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

Table 1 shows the results of Pearson Correlation test between Gold Dinar, oil, consumer products and construction products. This study begins analysis by estimating the correlation of the yearly change in prices. The samples begin from 1996 until 2005.

From table 1, it shows a positive correlation for two from all pairs with the correlation of 0.25 or higher. As a result, Dinar's cross correlation with oil being 0.706 reveals a strong correlation and the result is significant and clarified at 0.022 which is below 0.05 level. It shows that there is no sufficient evidence to support the null hypothesis for Hypothesis 1 and the alternate hypothesis of Hypothesis 1 is accepted.

Moreover, the results of correlation of Gold Dinar's with Consumer products is explained with a positive correlation at -0.853 and significant at 0.002 which is below 0.01 level. For the result, the alternate hypothesis of Hypothesis 2 is accepted and there is no sufficient evidence to support the null hypothesis of Hypothesis 2.

The result on Gold Dinar's cross correlation with Construction products shows a weak correlation which is 0.309 and not significant at 0.384 which is above 0.01 or 0.05 level. As a result, the null hypothesis of Hypothesis 3 is accepted and there is no sufficient evidence to support the alternate hypothesis of Hypothesis 3.

From the result of correlation between Gold Dinar and prices of oil, consumer products and construction products show that Gold Dinar and price of oil and consumer products have strong correlations. It also shows that Gold Dinar can influence the price of oil and consumer products.

Looking at the current situation, oil price is the most important factor to influence other prices of goods. This is because when the price of oil increases, the other prices of goods also increase. When there is a strong relationship between oil and Gold Dinar, it can help to hedge our price to remain stable since the value of Gold Dinar is stable and has intrinsic value.

Besides that, the same goes with the relationship between Gold Dinar and price of consumer products. When there is a strong correlation between Gold Dinar and the price of consumer products, it

can help to hedge the fluctuation of consumer products since the value of Gold Dinar is stable and has intrinsic value for a long time.

Table 2: USD, Oil, Consumer Products and Construction Products Correlation

	USD	Oil	Consumer Products	Construction Products
Oil	.507 .135			
Consumer Products	-.770(**) .009			
Construction Products	-.657(*) .039			

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

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

Table 2 gives an idea on the results of Pearson Correlation test between USD, Oil, Consumer Products and Construction Products. This study estimates the correlation of the yearly changes in price. As a result, it shows a positive correlation of 0.25 or higher. The USD's cross correlation with oil is 0.507 that shows the correlation and the outcome is not significant as 0.135 is above 0.01 or 0.05 level. Because of that, the null hypothesis of Hypothesis 4 is accepted and there is no sufficient evidence to support the alternate hypothesis of Hypothesis 4.

Besides that, the additional cases of correlation are USD with consumer products which explain a correlation of -0.770 and significant at 0.009 that is below 0.01 level. Thus, there is no sufficient evidence to support the null hypothesis of Hypothesis 5 and as a result, the alternate hypothesis of Hypothesis 5 is accepted. Moreover, USD and Construction Products consists a strong correlation of -0.657 and significant at 0.39 that is below 0.05 level. From the result, the alternate hypothesis of Hypothesis 6 is accepted for this study and there is no sufficient evidence to support the null hypothesis of Hypothesis 6.

From the correlation between the price of Gold Dinar and the price of oil, consumer products and constructions products, it can be seen that USD has a strong correlation between price of consumer products and construction products. But, USD does not have strong correlation with oil price which mostly influence the price of the other goods or products. As for the first result (see table 1) it shows that Gold Dinar with Oil and Gold Dinar with consumer products have significant positive relationships. For the second result (see table 2) it shows that USD with consumer products and USD with construction products have significant positive relationships. Because of that, this study has no sufficient evidence to support the null hypothesis for the hypotheses 1, 2, 5 and 6.

From the result of this study, it can also be found that Gold Dinar has a strong relationship with oil price. It also shows that oil price will be influenced by the Gold Dinar. Compared to USD, it shows that there is no relationship between oil price and USD. Because of that, we can say that Gold Dinar is more

efficient as a medium of exchange to import crude oil from the foreign country. In the real life, the increase in oil price will influence the increase in all other prices of goods and commodities. This means that despite the increase in the price of oil, we are actually earning less due to the devaluation of the dollar (Mahathir, 2007).

The same goes with the strong relationship between Gold Dinar and consumer products. Because of that, the Gold Dinar can also influence the price of consumer products and help to hedge the fluctuation of prices in order to reduce risk. As said by Mohd Dali (2003), the OIC countries are also encouraging the use of Gold Dinar as an alternative international payment settlement through the Bilateral Payment Arrangement Mechanism (BPA) with the cooperation from central banks to avoid the currency crisis from recurring.

Descriptive Analysis

The second method that has been used is descriptive analysis. This method was used to find the mean for the price of oil, consumer products and construction products for Gold Dinar and USD. From this analysis, it can also give a view about the differences on the fluctuation of oil price, consumer products and construction products in Gold Dinar and USD.

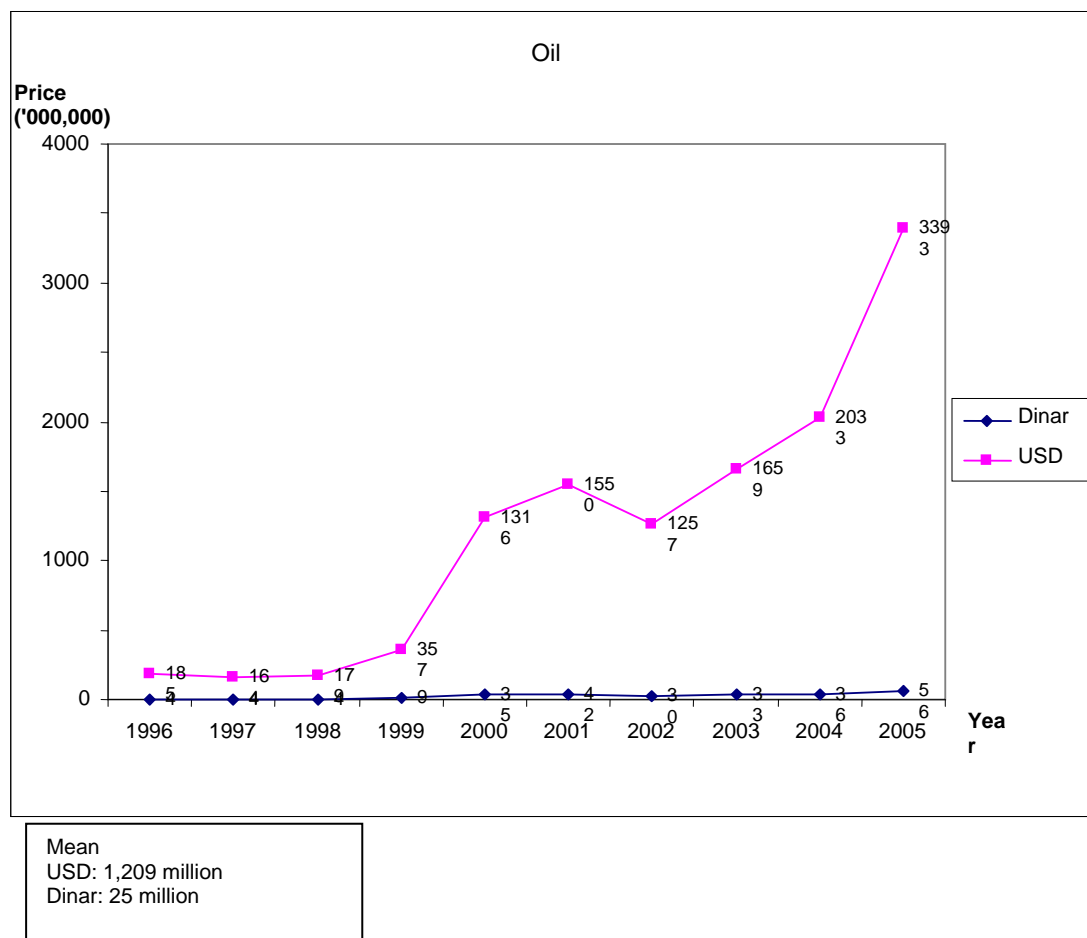


Figure 2: Fluctuation of oil price in Gold Dinar and USD

From the above graph, the mean for oil price in USD is 1,209,000,000 while the mean for Gold Dinar is 25,000,000. The graph also shows the fluctuation of oil price in Gold Dinar and USD. From 1996 until 2005, we can see the price of oil in USD is still increasing from year to year. It also shows that the price of oil in USD is not stable and always fluctuate with the current situation.

Compared to the price of oil in Gold Dinar, it shows that the price of oil in Gold Dinar remains stable from 1996 until 2005. The fluctuation of Gold Dinar is minimal if compared to the price of oil in USD. In addition, it also shows that Gold Dinar can hedge the fluctuation of oil prices.

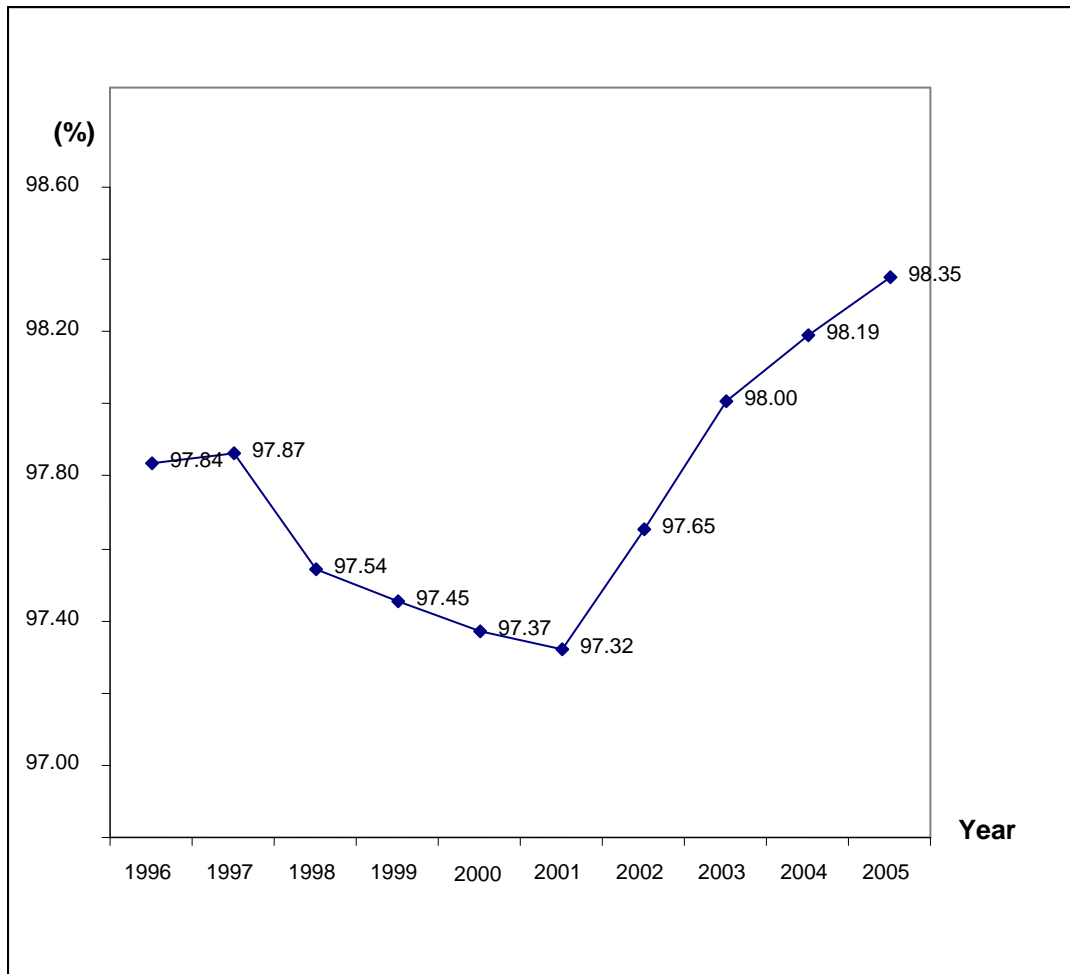
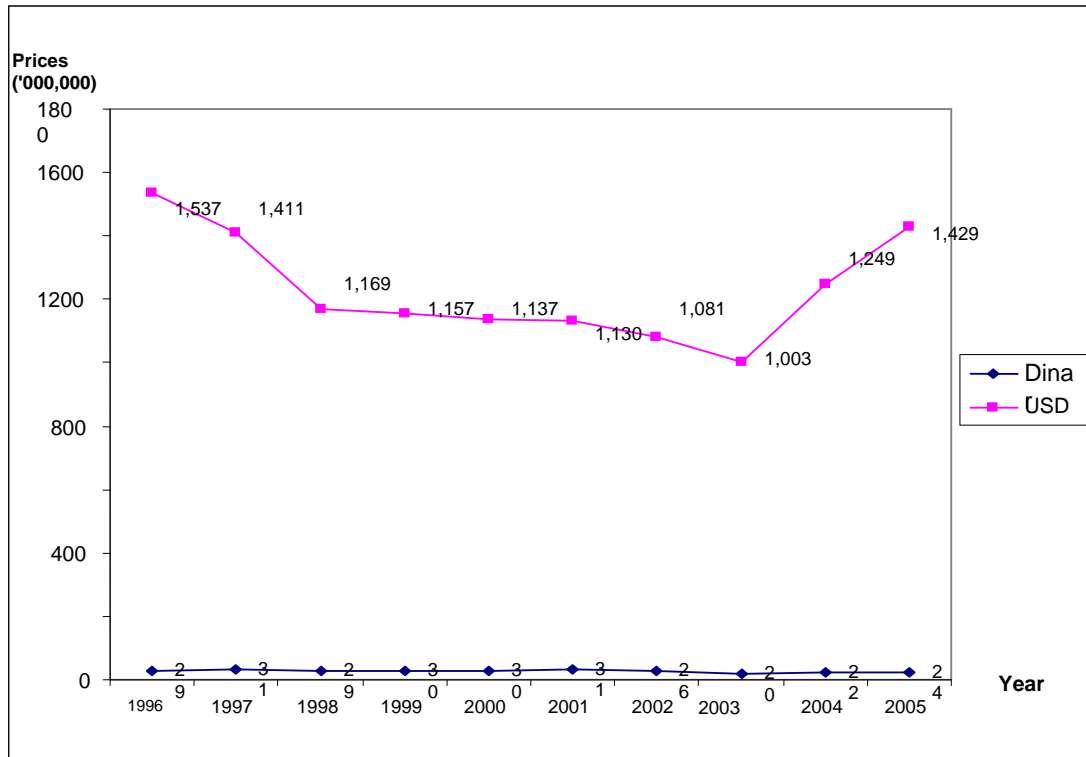


Figure 3: Percentage Differences between Price of Oil in USD and Gold Dinar

This graph shows the percentage differences between the price of oil in Gold Dinar and USD which is continued from graph 1. From the graph, we can also find that there are big differences of percentage between the prices in Gold Dinar and USD. The percentage differences of Gold Dinar with USD are strong which is above 97% from the year 1996 until 2005. When the difference between Gold Dinar with USD is bigger, it shows that Gold Dinar is strong and it can hedge the fluctuation of price compared to USD.



Mean
 USD=1230 million
 Dinar= 27 million

Figure 4: Price of Consumer Products in USD and Gold Dinar

From the above graph, the mean for price of consumer products in USD is 1,230,000,000 while the mean for price of consumer products in Gold Dinar is 27,000,000. From 1996 until 2005, we can see the price of consumer products in USD is still increasing and continue to fluctuate from year to year. It also shows that the price of consumer products in USD is not stable since there is a big fluctuation of it with the current situation.

Compared to the price of consumer products in Gold Dinar, it shows that the price of consumer products in Gold Dinar remains stable from 1996 until 2005. The fluctuation of Gold Dinar is minimal if compared to the price of consumer products in USD. In addition, it also shows that Gold Dinar can hedge the fluctuation of consumer product's prices.

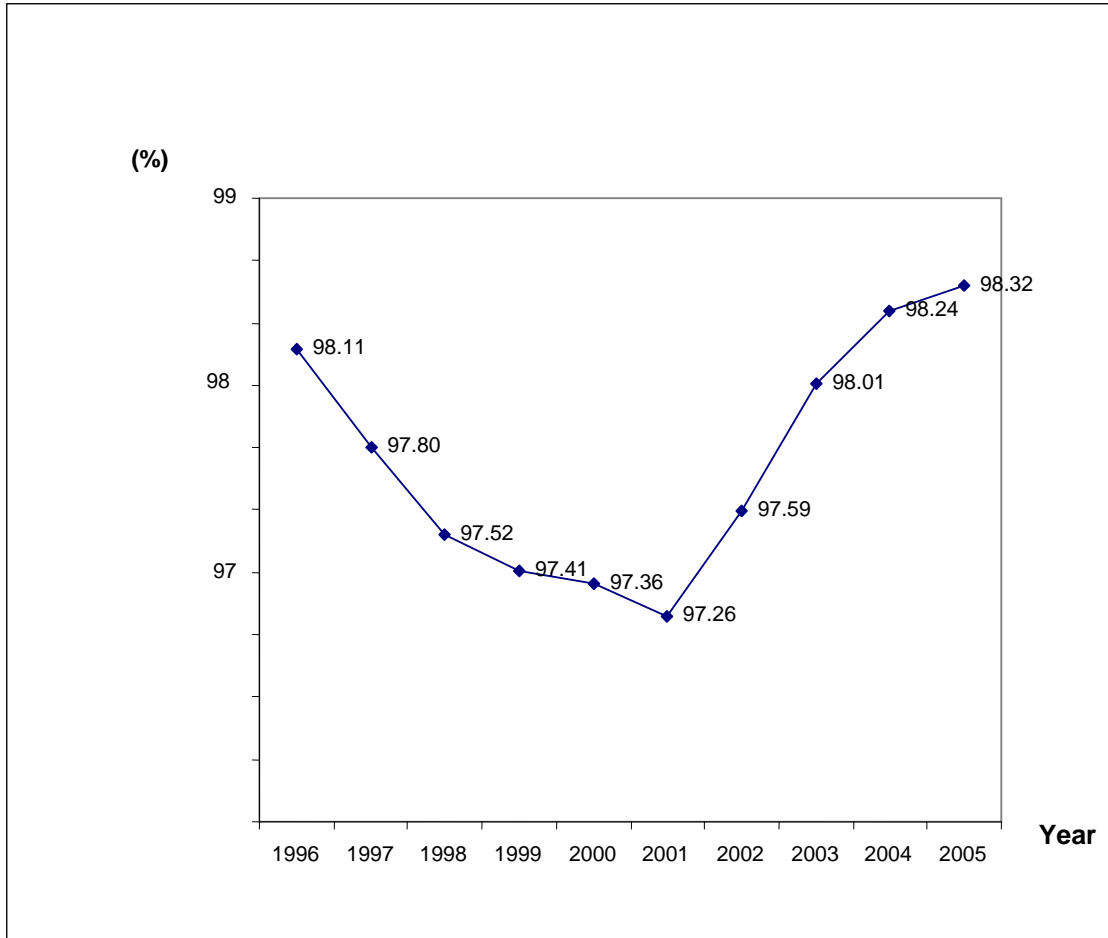


Figure 5: Percentage Differences between Price of Consumer Products in USD and Gold Dinar

This graph shows the percentage differences between the price of construction products in Gold Dinar and USD which is continued from graph 4.2.3. From the graph, we can also find that there are big differences of percentage between prices in Gold Dinar and USD. It shows that Gold Dinar can hedge the fluctuation of consumer products price since the percentage differences of Gold Dinar is strong which is above 97% from the year 1996 until 2005.

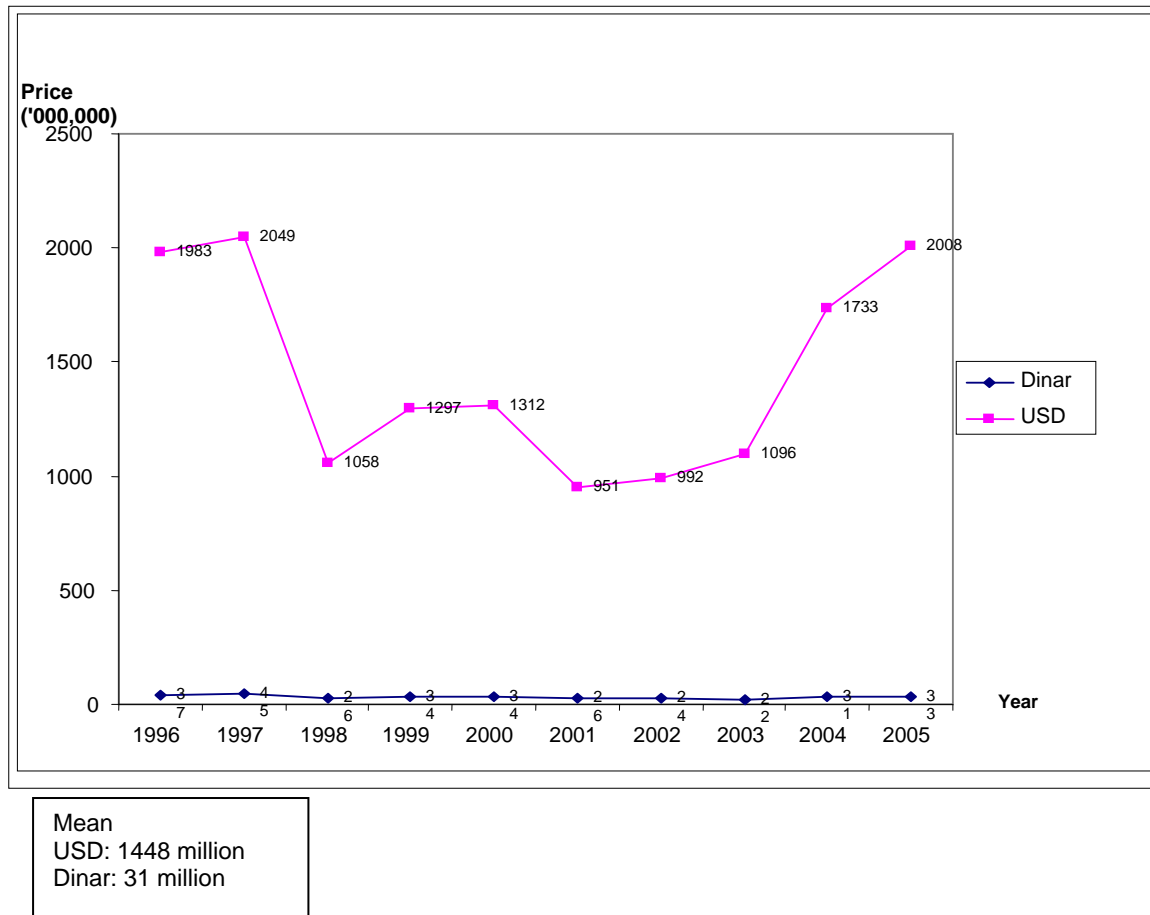


Figure 6: Price of Construction Products in USD and Gold Dinar

From the above graph, the mean for price of construction products in USD is 1,448,000,000 while the mean for price of construction products in Gold Dinar is 31,000,000. From 1996 until 2005, we can see that the price of construction products in USD is still increasing and continue to fluctuate from year to year. It also shows that the price of oil in USD is not stable since there is a big fluctuation of it with the current situation.

Compared to the price of construction products in Gold Dinar, it shows that the price of construction products in Gold Dinar remains stable from 1996 until 2005. The fluctuation of Gold Dinar is minimal if compared to the price of construction products in USD. In addition, it also shows that Gold Dinar can hedge the fluctuation of construction product's prices.

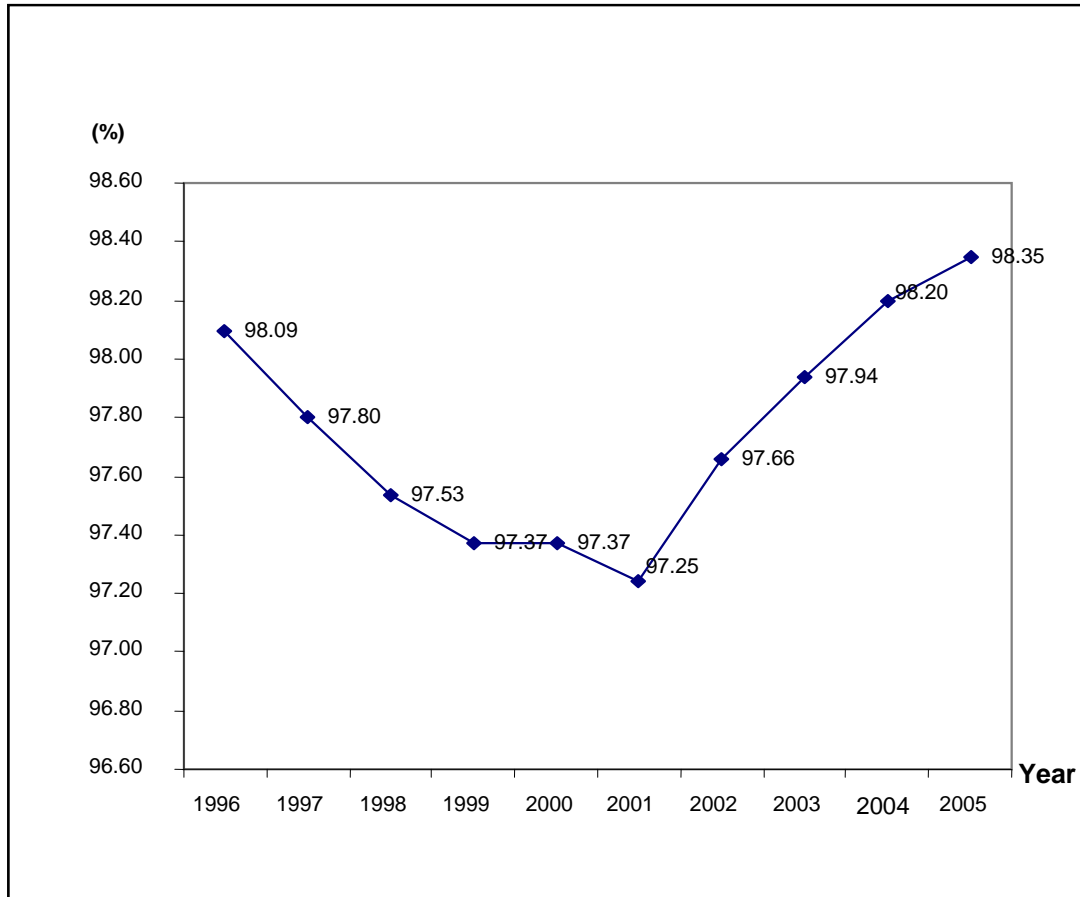


Figure 7: Percentage Differences between Price of Construction Products in USD and Gold Dinar

This graph shows the percentage differences between the price of construction products in Gold Dinar and USD which is continued from graph 4.2.5. From the graph, it also found that there are big differences of percentage between prices in Gold Dinar and USD. The percentage differences of Gold Dinar with USD are strong which is above 97% from the year 1996 until 2005. It shows that Gold Dinar is strong and can hedge the fluctuation of price.

CONCLUSION

Several conclusions can be made after conducting a thorough analysis of the output and the result from tests. As for the first result (see table 4.1.1) it shows that Gold Dinar with oil and Gold Dinar with consumer products have significant positive relationships. For the second result (see table 4.1.2) it shows that USD with consumer products and USD with construction products have significant positive relationships. Because of that, this study has no sufficient evidence to support the null hypothesis for the hypotheses 1, 2, 5 and 6.

From the descriptive analysis, the mean for oil price for USD is 1,209,000,000 while the mean for Gold Dinar is 25,000,000. Besides that, the mean for price of construction products in USD is 1,448,000,000 while the mean for price of construction products in Gold Dinar is 31,000,000. Furthermore, the mean for price of construction products in USD is 1,448,000,000 while the mean for price of construction products in Gold Dinar is 31,000,000.

From the graph also, we can find that the fluctuation of price in Gold Dinar for oil, consumer products and construction products is minimal if compared to the price in USD. The differences between Gold Dinar with USD are also big because it went above 97% from the year 1996 until 2005. This shows that Gold Dinar can hedge the fluctuation of oil price, consumer products and construction products. This study tried to simplify the issues of fluctuation in prices that will affect our economics stability. This research concentrates on the issues of Gold Dinar and USD as the medium of exchange that will influence the price of oil, consumer products and construction products.

The objective of this research was to examine the relationship between price of oil, consumer products and construction products with Gold Dinar and USD. This lesson also gives valuable information, education and experiences to student, as it would be useful for researchers as a guideline and reference in order to make or conduct similar research in the future. The data set includes observations in the period of 1996-2005 which is the time series basis analyzed by yearly on the price of oil, consumer products and construction products.

All the data used in this research are collected from Statistics Department. The variables being collected are price of oil, consumer products, construction products, value of one USD and Gold Dinar that concentrates by yearly data on the period of 1996 until 2005. This research begins with the analysis by estimating the correlation coefficient of Gold Dinar and USD with price of oil, consumer products and construction products. For the result of Gold Dinar with oil and Gold Dinar with consumer products, they have significant correlation effect. But, for the result of Gold Dinar with construction products, it does not have significant correlation effect. Consequently, there is no sufficient evidence to support the null hypothesis of Hypotheses 1 and 2 but the null hypothesis of Hypothesis 3 is accepted.

For the result of USD with oil, it does not have significant correlation effect and the null hypothesis of Hypothesis 4 is accepted. Besides that, for the result of USD with consumer products and USD with construction products, they have significant correlation effect and thus there is no sufficient evidence to support the null hypothesis of Hypotheses 5 and 6.

Oil, consumer products and construction products are being chosen for this research since it will give a major implication in our life. For example oil price. As we know the world market price of oil in this world is still increasing especially after the war in Iraq. But, even though there is an increase in oil price, we still can hedge it so that it will not fluctuate very much.

This situation can be resolved by using gold as our medium of exchange. When we use Gold Dinar, we only deal in small amount and standard values in transactions. This situation will bring the benefits to all countries regardless of currencies in poor or rich countries. Unlike USD as a single currency in international trading, the poor countries are forced to pay more due to the value of currency that they have which are much cheaper than others.

RECOMMENDATION

The analysis of oil, consumer products and construction products reaction towards Gold Dinar and USD provides opportunity to test possible theories. The process of analyzing the reaction of correlation is based on the use of yearly data in this study. Therefore the researchers can use different data to be performed such as monthly data for ten years. Besides that, more previous literature review should be added to have more understanding and information.

Moreover, the number of selected commodities to become the subject of research should be extended such as copper, machinery and equipment that have been used for particular industries and parts, etc. Further research on the issues of Gold Dinar in other areas is still crucial to be explored especially in banking industry. This is because, more research on this topic will result new inventions and systems to be founded. It also could encourage more information about the benefits of using Gold Dinar compared to the paper currency especially in the international trading.

Finally, people should know the importance of using Gold Dinar since it is more stable compared to USD. It has the ability to hedge the fluctuation of price and gradually being capable to avoid the economic crisis such as inflation or recession. Moreover, it also provides the platform to ensure the economic stability in a longer duration.

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APPENDIX 1(a)

Year	RM/USD	Gold (RM/oz)	Gold (RM/g)	1 Dinar (4.25g)
1996	2.52	976.31	31.39	133.40
1997	2.88	954.73	30.69	130.45
1998	3.80	1118.11	35.95	152.77
1999	3.80	1060.12	34.08	144.85
2000	3.80	1060.62	34.10	144.92
2001	3.80	1029.95	33.11	140.73
2002	3.80	1176.97	37.84	160.81
2003	3.80	1380.84	44.39	188.67
2004	3.80	1556.94	50.05	212.73
2005	3.78	1681.12	54.05	229.70

1) Milk& Cream, Powder

Year	RM	USD	Dinar
1996	741,500,000	294,538,232.37	5,558,581.12
1997	738,400,000	256,015,532.90	5,660,481.26
1998	760,000,000	200,000,000.00	4,974,730.51
1999	772,400,000	203,263,157.89	5,332,451.01
2000	868,800,000	228,631,578.95	5,995,178.17
2001	938,200,000	246,894,736.84	6,666,835.19
2002	765,200,000	201,368,421.05	4,758,273.13
2003	732,100,000	192,657,894.74	3,880,315.74
2004	1,008,100,000	265,289,473.68	4,738,862.74
2005	1,102,100,000	291,560,846.56	4,798,044.66

2) Wheat

Year	RM	USD	Dinar
1996	679,300,000	269,831,181.73	5,092,305.00
1997	607,200,000	210,526,315.79	4,654,718.61
1998	734,300,000	193,236,842.11	4,806,506.07
1999	818,200,000	215,315,789.47	5,648,642.43
2000	710,900,000	187,078,947.37	4,905,584.90
2001	783,300,000	206,131,578.95	5,566,118.10
2002	766,400,000	201,684,210.53	4,765,735.14
2003	653,000,000	171,842,105.26	3,461,065.67
2004	1,090,300,000	286,921,052.63	5,125,267.38
2005	1,121,700,000	296,746,031.75	4,883,374.19

3) Rice

Year	RM	USD	Dinar
1996	537,500,000	213,505,461.77	4,029,315.38
1997	701,300,000	243,152,347.27	5,376,077.34
1998	910,500,000	239,605,263.16	5,959,858.07
1999	718,900,000	189,184,210.53	4,963,100.76
2000	689,300,000	181,394,736.84	4,756,533.51
2001	529,700,000	139,394,736.84	3,764,040.29
2002	510,100,000	134,236,842.11	3,171,974.81
2003	398,700,000	104,921,052.63	2,113,211.15
2004	548,100,000	144,236,842.11	2,576,501.01
2005	688,700,000	182,195,767.20	2,998,288.14

APPENDIX 1 (b)

4) Maize

Year	RM	USD	Dinar
1996	1,130,100,000	448,897,715.99	8,471,682.44
1997	1,144,300,000	396,747,798.35	8,772,059.46
1998	987,500,000	259,868,421.05	6,463,876.82
1999	1,114,300,000	293,236,842.11	7,692,840.70
2000	1,088,400,000	286,421,052.63	7,510,533.98
2001	956,300,000	251,657,894.74	6,795,453.52
2002	1,088,600,000	286,473,684.21	6,769,284.02
2003	1,131,800,000	297,842,105.26	5,998,827.15
2004	1,148,200,000	302,157,894.74	5,397,442.91
2005	1,368,200,000	361,957,671.96	5,956,523.65

5) Raw Beet & Cane Sugar

Year	RM	USD	Dinar
1996	781,100,000	310,268,123.14	5,855,438.59
1997	878,600,000	304,625,199.36	6,735,236.77
1998	1,051,100,000	276,605,263.16	6,880,183.21
1999	972,300,000	255,868,421.05	6,712,509.21
2000	963,800,000	253,631,578.95	6,650,728.27
2001	1,087,200,000	286,105,263.16	7,725,626.96
2002	976,900,000	257,078,947.37	6,074,695.54
2003	898,100,000	236,342,105.26	4,760,157.85
2004	949,600,000	249,894,736.84	4,463,866.74
2005	1,119,100,000	296,058,201.06	4,872,054.97

6) Crude Petroleum

Year	RM	USD	Dinar
1996	464,600,000	184,548,162.86	3,482,827.77
1997	473,500,000	164,170,307.19	3,629,791.27
1998	680,200,000	179,000,000.00	4,452,383.81
1999	1,357,400,000	357,210,526.32	9,371,140.60
2000	5,000,300,000	1,315,868,421.05	34,504,706.97
2001	5,891,400,000	1,550,368,421.05	41,864,200.41
2002	4,777,500,000	1,257,236,842.11	29,708,115.40
2003	6,305,300,000	1,659,289,473.68	33,419,689.70
2004	7,723,600,000	2,032,526,315.79	36,306,993.62
2005	12,825,500,000	3,392,989,417.99	55,836,423.05

7) Steel

Year	RM	USD	Dinar
1996	4,991,100,000	1,982,562,065.54	37,415,285.56
1997	5,910,500,000	2,049,268,427.99	45,309,147.45
1998	4,021,000,000	1,058,157,894.74	26,320,251.83
1999	4,928,200,000	1,296,894,736.84	34,023,025.72
2000	4,985,200,000	1,311,894,736.84	34,400,509.00
2001	3,611,800,000	950,473,684.21	25,665,396.86
2002	3,770,800,000	992,315,789.47	23,448,113.35
2003	4,162,900,000	1,095,500,000.00	22,064,426.16
2004	6,584,200,000	1,732,684,210.53	30,950,917.62
2005	7,589,600,000	2,007,830,687.83	33,041,683.86

APPENDIX 2

Correlations

		Oil	Consumer Products	Construction Producte	USD
Oil	Pearson Correlation	1	-.052	.106	.507
	Sig. (2-tailed)	.	.887	.770	.135
	N	10	10	10	10
Consumer Products	Pearson Correlation	-.052	1	.910(**)	-.770(**)
	Sig. (2-tailed)	.887	.	.000	.009
	N	10	10	10	10
Construction Producte	Pearson Correlation	.106	.910(**)	1	-.657(*)
	Sig. (2-tailed)	.770	.000	.	.039
	N	10	10	10	10
USD	Pearson Correlation	.507	-.770(**)	-.657(*)	1
	Sig. (2-tailed)	.135	.009	.039	.
	N	10	10	10	10

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

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

Correlations

		Oil Prices	Prices of consumer Products	Construction	Dinar
Oil Prices	Pearson Correlation	1	-.555	-.419	.706(*)
	Sig. (2-tailed)	.	.096	.228	.022
	N	10	10	10	10
Prices of consumer Products	Pearson Correlation	-.555	1	.508	-.853(**)
	Sig. (2-tailed)	.096	.	.134	.002
	N	10	10	10	10
Construction	Pearson Correlation	-.419	.508	1	-.309
	Sig. (2-tailed)	.228	.134	.	.384
	N	10	10	10	10
Dinar	Pearson Correlation	.706(*)	-.853(**)	-.309	1
	Sig. (2-tailed)	.022	.002	.384	.
	N	10	10	10	10

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

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