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**The Goal Attainment and Future Direction of Business among SME  
Entrepreneurs**

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**Abstract:** Future directions, explained as entrepreneurs' intention to collaborate may play an important role in endurance, sustainability and growth of entrepreneurial businesses. Based on the theoretical foundation of entrepreneur's goals attainment theory, this research aimed to empirically investigate the influence of entrepreneurs' personal goals attainment on their intentions to collaborate with other businesses. Self-administered survey questionnaires were used to collect quantitative data from 285 conveniently-selected Malaysian SME entrepreneurs. The Multiple Regression Analyses of the collected data revealed that there is a positive and significant relationship between entrepreneurs' intrinsic reward goals attainment and their intention to collaborate. On the other hand, it is found that attainment of economic gains, perceived autonomy and family concern goals have no relationship with entrepreneurs' intention to collaborate. The concluding part of this paper presents the study implications along with limitations of this study and some future recommendations.

**Keywords:** Entrepreneur; Personal goals; Intentions; Entrepreneur's Goal Attainment Theory

**JEL Classification:** D23; L21; M13

## **1. Introduction**

Intentions are the cognitive states which are the best predictors of an individual's consequent behavior (Ajzen, 1991). Hence, it could be said that the intentions of entrepreneurs (e.g. intention to collaborate) forms the future nature and performance of their businesses (Bird, 1988; Delmar & Wiklund, 2008). Hence, the future intentions of entrepreneurs, i.e. their intentions to collaborate with other businesses could explicate their future business directions. Nevertheless, in entrepreneurial

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literature, the studies of future intention are very rare. On business outcome, many studies emphasized on financial indicators like Return on Investment and sales growth, marketing indicators like market share and customer satisfaction or other indicators like employee loyalty. However, past studies ignored the entrepreneurs' future intentions to collaborate as an important indicator of business outcome.

Further, fundamentally, entrepreneurs are goals directed and they undertake entrepreneurial activities for the attainment of several personal goals like income, independence, approval, personal development and helping family (Birley & Westhead, 1994; Hizam-Hanafiah et al., 2015). The attainment of these personal goals motivates entrepreneurs to continue behaving entrepreneurially and pursue further goals and targets (Naffziger et al., 1994). Thus, it can be argued that entrepreneurs' personal goals attainment (i.e. economic gains, independent goals, intrinsic reward goals, and family goals) may motivates entrepreneurs to pursue more ambitious targets in the form of future intentions. Entrepreneur's goals attainment theory (Hizam-Hanafiah, 2012) provides theoretical support to this relationship between entrepreneurs' personal goals attainment and their future intentions. Only a small number of previous empirical studies tested the relationship of entrepreneurs' personal goals attainment with entrepreneurs' intention to remain (Hizam-Hanafiah et al., 2015) and perceived entrepreneurial success (Hizam-Hanafiah, 2014). However, the impact of attainment of personal goals on entrepreneurs' future directions (i.e. intention to collaborate) is a neglected research topic; which motivates this study to combine these factors together and study them.

## **2. Literature Review**

### **2.1. Intentions of Entrepreneurs**

Intention is defined as a "state of mind directing a person's attention (and therefore experience and action) towards a specific object (goal) or a path in order to achieve something (means)" (Bird, 1988: p. 442). According to Shane et al. (2003), intention is an essential indicator of successive entrepreneurial behavior. Bird (1988) also argued that intention steers the entrepreneurs in their goal establishment, commitments, and work. Hence, future intentions of entrepreneurs (e.g. intention to collaborate) are crucial attributes of entrepreneurial behaviors which play critical role in upcoming actual direction of ventures (Delmar & Wiklund, 2008; Sadler-Smith et al., 2003). Yet, modest research has been carried out on intentions in entrepreneurial literature. In line with these contentions, this study is motivated to enrich entrepreneurial literature by testing the relationship of entrepreneurs' personal goals attainment and their intention to collaborate with other businesses in the future.

## **2.2. Personal Goals of Entrepreneurs**

Goals are targets which people tried to achieve (Emmons, 1989). These goals provide motivation and direction to individuals to put their attention and efforts towards the fulfillment of particular outcomes (Locke & Latham, 2006). Similarly, entrepreneurs also engage in entrepreneurial activities for the achievement of different goals or reasons. Importantly, it is contended that the business goals of entrepreneurs correspond to their personal goals which they strived to accomplish from their involvement in entrepreneurial activities (Bhide, 1996). Thus, the goals of entrepreneurs' represent personal goals or targets of entrepreneurs which they aim to attain through their business endeavors (Bhide, 1996).

Entrepreneurs initiate and operate their venture for the accomplishment of various personal goals. It is asserted that many goals like attainment of self-esteem, high achievement, growth, independence, monetary rewards and support to family etc. (Benzing and Chu, 2009; Dunkelberg et al., 2013; Moore et al., 2010) motivate people to engage in and carry out entrepreneurial activities.

These personal motivations or goals can be categorized into few main groups. For example, through exploratory factor analysis, Kuratko et al. (1997) categorized four goals of entrepreneurs which include autonomy, extrinsic rewards, intrinsic rewards and security of family. Robichaud et al. (2001) also derived these four goals as the main goals of entrepreneurs. Further, Wang et al. (2006) identified financial goals, flexible lifestyle, push motivations and personal development as important goals of entrepreneurs. Subsequently, Benzing et al. (2009) categorized entrepreneurial goals into income, security, intrinsic factors and independence.

Above discussed literature suggests that economic, independence, intrinsic reward and family goals are the most dominant goals of entrepreneurs; whereas, role, push motivations and community goals are not central goals of entrepreneurs. Thus, this study adopted only economic goals, perceived autonomy, intrinsic rewards and family goals as main entrepreneurial goals in influencing future direction of the business.

## **2.3. Relationship between Goals Attainment and Future Intentions**

Naffziger et al. (1994) stated that entrepreneurs become motivated by the attainment of their personal goals, and the intrinsic/extrinsic rewards of their efforts. They also stated that entrepreneurs examine their expected outcomes with their goals attainment; and if they perceive that their goals attainment equals or surpasses their expected results, then their entrepreneurial behavior will positively be reinforced and they will be motivated to pursue further goals or targets (i.e. future directions/intentions). Hence, goals attainment is an important source of motivation for entrepreneurs which further leads to positive attitudes and behaviors.

Empirical studies also highlighted the relationship of motivation with future attitudes, behaviors and direction of individuals. Jayawarna et al. (2011) identified the relationship of motivation with business performance and behaviors. Similarly, in a U.S.A., DeTienne et al. (2008) identified the relationship of extrinsic motivation of entrepreneurs with their decision to stay in underperforming ventures. Hizam-Hanafiah (2012) also found positive relationship between personal goals attainment and the intention to remain with the franchise. It is also found that entrepreneurs' personal goals attainment is positively related with their business outcome in the form of perceived entrepreneurial success (Hizam-Hanafiah, 2014). Further, Hizam-Hanafiah et al. (2015) also found significant relationship between attainment of small business owners' economic, intrinsic reward and family goals, and their intention to remain in their businesses. These theoretical and empirical studies revealed that goal attainment causes motivation and influences future entrepreneurial attitudes and behaviors, such as their intentions. Furthermore, entrepreneur's goal attainment theory (Hizam-Hanafiah, 2012) also explains the relationship between personal goals attainment and future intentions of entrepreneurs. Following is the discussion of this theory and its relevance to this study.

#### **2.4. Entrepreneur's Goals Attainment Theory (EGAT)**

This theory employs economic goals, independence goals and family goals as the personal goals of entrepreneurs and contended that entrepreneurs wish to achieve these goals through their business activities. Further, this theory posits that business outcomes are the actions or behaviors required for business sustainability and competitiveness. Finally, this theory suggests that the attainment of personal goals influences the business outcomes of entrepreneurs. Hence, personal goals attainment influences the future intentions of entrepreneurs. Empirical studies also support these premises. Hizam-Hanafiah (2012) employed EGAT and found positive relationship between personal goals attainment and intention to remain with the franchise. Hizam-Hanafiah (2014) also found that entrepreneurs' personal goals attainment is positively related with their business outcome in the form of perceived entrepreneurial success. Therefore, in line of above mentioned conceptual and empirical discussion and on the basis of EGAT premises, the following main hypothesis is suggested:

**Hypothesis 1:** Entrepreneur's personal goals attainment is positively associated with their intention to collaborate.

However, as discussed earlier, entrepreneurs have four main personal goals in which they desire to attain through their entrepreneurial activities. These four goals are economic goals, perceived autonomy goals, intrinsic reward goals and family goals. Therefore, following sub-hypotheses are developed:

**2.5. Research Hypotheses**

H1: Entrepreneur’s attainment of Economic goals is positively associated with their intention to collaborate with other businesses.

H2: Entrepreneur’s attainment of Perceived Autonomy goals is positively associated with their intention to collaborate with other businesses.

H3: Entrepreneur’s attainment of Intrinsic Reward goals is positively associated with their intention to collaborate with other businesses.

H4: Entrepreneur’s attainment of Family goals is positively associated with their intention to collaborate with other businesses.

**3. Methodology**

**3.1. Sampling and Unit of Analysis**

To achieve the objectives, this study took individual SME entrepreneurs as unit of analysis. To collect data from Malaysian SME entrepreneurs, this study employed convenient sampling technique due to the lack of sufficient and structured data (Cooper and Schindler, 2008) of entrepreneurs in Malaysia. Further, only those entrepreneurs who were active owners/partner of their businesses and operating their businesses for at-least past one year were selected as respondents.

**3.2. Measurement and Operationalization of Variables**

Future direction of entrepreneurs is operationally defined as their motivation with respect to their future intentions (based on Dutta and Thornhill, 2008). Hence, entrepreneurs’ intention to collaborate is their motivation to work together with other stakeholders in future. Fishbein and Ajzen (1975) argued that people’s intentions can be determined through simply asking whether they will undertake a particular behavior in the future or not. Hence, to measure the intentions of entrepreneurs’ to collaborate, this study adapted (from Hizam-Hanafiah 2012, 2014; Hizam-Hanafiah et al., 2015) the questions which simply ask the respondents about their willingness to collaborate with other businesses in future.

**Table 1. Questions Constructed for Entrepreneurs Goals**

<b>Entrepreneur Goals</b>	<b>Questions Constructed</b>
Intention to Collaborate	I intend to collaborate with other businesses in the future; I intend to establish close ties with other ventures.
Economic Goal	Received a salary based on merit, Increase my personal income, Want profit from my endeavours, Improve my financial status, Acquire personal wealth, Achieve long-term financial security

Perceived Autonomy	Control my own time, Schedule my own work activities, Making my own decisions Personal control of business, Freedom of being my own boss, Maintain my personal freedom, To control my own employment destiny, Greater control over my life
Intrinsic Rewards	Excitement of running one's own business, To pursue a challenge in my life, To prove that I can do it, Satisfy my desire for hands-on experience, The feeling of pride as a result of my work, Gain more respect, Personal growth
Family Goals	Flexibility to accommodate both business and family responsibilities, Help family members, More money for family, Increased family status, Secure future for family members, To build a business to pass on

*Adapted from Hizam-Hanafiah, (2012).*

Further, economic goals of entrepreneurs are operationally defined as their desire to gain monetary, financial or economic benefits through businesses (based on Hizam-Hanafiah, 2012). Operational definition of entrepreneurs' perceived autonomy is the desire of entrepreneurs for independence and freedom within their work environment (based on Hizam-Hanafiah, 2012). Similarly, family goals are operationally defined as the personal goals of entrepreneurs with respect to their concerns with their families (based on Hizam-Hanafiah, 2012). Lastly, intrinsic reward goals of entrepreneurs are operationally defined as the desire for internally experienced outcome and satisfaction which the entrepreneurs wish to attain from their businesses (based on Hizam-Hanafiah, 2012). This study adapted the questions from Hizam-Hanafiah (2012) and Hizam-Hanafiah et al. (2015) to measure economic goals, perceived autonomy, intrinsic rewards and family goals (Table 1). Further, to measure the independent constructs respondents were asked to rate their satisfaction or dissatisfaction on a seven point Likert-Scale (1= Strongly Dissatisfied, 3=Undecided, 7= Strongly Satisfied). On the other hand, to measure the intention to collaborate, respondents were asked to rate their agreement or disagreement on a Likert-Scale where 1= Strongly Disagree, 3=Undecided and 7= Strongly Agree.

### 3.3. Controlled Variables

Past researchers took different personal and business background variables like gender (Terjesen et al., 2011), age, number of employees (Chaganti & Greene, 2002; Hizam-Hanafiah, 2012), ethnicity, marital status and education (Hizam-Hanafiah, 2014) as controlled variables of their studies. Hence, following the lines of previous scholarly work, this study also took age, gender, ethnicity, marital status, education and numbers of full time employees as controlled variables.

### 3.4. Data Collection

To collect the data from desired sample, researchers seek the help from field workers. The eleven field workers took two months to collect the data from SME entrepreneurs. They were given appropriate training before the start of data

collection and during every stage of data collection processes, they were duly monitored and guided by the researchers. The field workers distributed 500 questionnaires and were able to obtain 307 responses. The response rate of 61.4% shows the validity of this technique and results (Gillham, 2000). Further, 22 responses were disregarded as the respondents were either not the active owners/partners or in the business less than one year. Hence, usable responses from 285 SME entrepreneurs were considered for the analysis.

## **4. Results**

### **4.2. Personal and Business Background**

Analysis of personal and business background information of respondents revealed that majority respondents were male (61.8%), younger than 46 years of age (76.5%) and belong to Malay ethnicity (76.8%). Further, it is also revealed that entrepreneurship is a popular choice among educated people as 48.9% respondents have Malaysian Certificate Education, while 41.4% respondents have attained diploma or higher education. In addition, most of the respondents (89.4%) were small scale ventures. Finally, most of the respondent entrepreneurs were married (78.6%), while only 18.9% were single.

### **4.3. Validity and Reliability Analysis**

The Kaiser-Meyer-Olkin's value (KMO) shows that all the independent variables have values greater than 0.8; which means that these variables are meritorious. The values of Kaiser-Meyer-Olkin for the dependent variables (intention to collaborate) showed 0.50, which can also be considered reasonable (Kaiser, 1974 in Norusis, 2008). In addition, the Barlett's Test showed that the variables are significant; hence, validity of variables is not an issue for this study. Further, data analysis verified the reliability of independent and dependent variables as these variables have Cronbach's alpha values greater than the suggested value of 0.80 (Hair et al. 2006; Norusis 2008).

### **4.4. Data Analysis**

Hierarchical multiple regression was applied to test the relationship of entrepreneurs' personal goals attainment and intention to collaborate. Controlled variables were entered in Block 1, while independent variables were entered in Block 2. Table 2 displays the ANOVA results which demonstrate significance of less than 99 percent.

**Table 2. ANOVA Table**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	44.890	1	44.890	44.694	.000 <sup>b</sup>
	Residual	284.238	283	1.004		
	Total	329.128	284			

a. Dependent Variable: I2collaborate

b. Predictors: (Constant), Intrinsic

Furthermore, to confirm whether multicollinearity is an issue, statistical results in Table 4 depict some indications. The cut-off threshold for tolerance values should be more than 0.10, while the VIF should be less than 10 (Hair et al. 2006; Norusis, 2008). Analysis of the data (Table 4) shows that all tolerance values are greater than 0.10, and all VIF values are less than 10. Hence, there is no multicollinearity issue for this study.

**Table 3. Model Summary**

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	.369 <sup>a</sup>	.136	.133	1.00219	.136	44.694	1	283	.000

a. Predictors: (Constant), Intrinsic

Similarly, model summary (Table 3) shows the multiple R values of 0.369 and R<sup>2</sup> value of 0.136 for dependent variable intention to collaborate. Hence, the percentage of total variation of intention to collaborate explained by the model is 13.6 percent, which is considered medium (Kinnear and Gray, 2009). Finally, the coefficient results (Table 4) revealed t-value of 5.369 and significance level of more than 99 percent. It can be identified from this table that only intrinsic rewards are positively related with entrepreneurs' intention to collaborate (Beta=0.523, t-value=6.685, sig<0.01); while other propositions related to economic gains, perceived autonomy and family concerns are not supported. Further, none of controlled variables are found to have relationships with entrepreneurs' intention to gain bargaining power.

**Table 4. Coefficients Table**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.495	.465		5.369	.000		
	Intrinsic	.523	.078	.369	6.685	.000	1.000	1.000

a. Dependent Variable: I2collaborate

## 5. Discussion



Results of this study found that attainment of economic goals has weak relationship with entrepreneurs' intention to collaborate (Beta value = 0.127; t-value=1.893; p=0.059). Past research regarded economic goals as one of the most important reasons for people to start and operate their own business ventures (Benzing and Chu, 2009). However, the empirical findings of this research shows that, although, entrepreneurs were satisfied with their monetary gains (mean=5.394, S.D=0.899) the attainment of economic gains has no significant influence on entrepreneurs' intention to collaborate. One probable reason for the insignificant relationship of attainment of economic gains with intention to collaborate might be that the economic gains are important reason for people to start their own businesses, but this is not an influential reason to motivate people to collaborate with other businesses once the business is already in operation.

Similarly, perceived autonomy (Beta value = 0.054; t-value=0.723; p=0.47) and family concern goals (Beta value= 0.091; t-value = 1.179; p=0.240) have also been found to have no significant relationships with the intention to collaborate. Past research acknowledged the importance of these goals as the reason/goal of people to become entrepreneurs (Benzing and Chu, 2009; Robichaud et al. 2001; Shane et al. 1991; Stokes & Wilson, 2010; Wang et al. 2006). However, it is identified that attainment of these goals does not influence the intention of entrepreneurs' to collaborate with other businesses. Perhaps, these goals might serve as significant reasons for starting own business venture, but may not or less influence once the business has been established. Further, collaboration might lead to complex business operations and partnering with other businesses. This in-turn may lead to the perception of losing control or autonomy, reduced chances of involving family members into the business and/or reduced chances of pursuing other family centered goals. Such perceptions might serve as logical explanations of the insignificant relationships of perceived autonomy and family concern goals with intention to collaborate with other businesses.

Conversely, attainment of intrinsic reward goals is found to have significant and positive relationship with entrepreneurs' intention to collaborate (Beta value = 0.523; t-value=6.685; p<0.01). This result supports the general belief that monetary gains/financial rewards are not the only goals of business owners and non-monetary goals like intrinsic rewards also serve as motivators to entrepreneurs (Benzing & Chu, 2009; Shane et al. 1991). As self-satisfaction, proving oneself in front of others, pursuing challenge in life, feeling proud and gaining respect are the components of intrinsic rewards; hence, it can be contended that satisfaction of these goals motivates the entrepreneurs to collaborate with other businesses to face more challenging work, prove oneself and gain more respect from others, e.g. prospective collaborators.

Finally, the results of this research provide empirical support to parts of Entrepreneurs' Goals Attainment Theory (EGAT). This research found the evidence that entrepreneurs have multiple personal goals and try to satisfy their set of personal

goals through their venturing activities. It also endorsed that attainment of personal goals influences the future intentions of entrepreneurs. However, it is also found that not all personal goals are related with entrepreneurs' attitudes, behaviors and specifically behavioral intentions. Hence, it extends the boundaries of EGAT.

## **6. Conclusion**

The significance of personal goals and their satisfaction has been acknowledged by past entrepreneurial literature. However, past researchers seldom studied the effects of these goals and their attainment on entrepreneurs' attitudes and behaviors, especially behavioral intentions. By empirically investigating the relationship of entrepreneurs' personal goals attainment with their intention to collaborate, this study attempts to fill this literature gap. To answer the research question of whether personal goals attainments of entrepreneurs have any relationship with their intention to collaborate, this study identified that entrepreneurs' attainments of monetary gains, perceived autonomy and family goals have no relationship with entrepreneurs' intention to collaborate. Analysis shows that entrepreneurs were satisfied with their monetary gains, perceived autonomy goals and family concern goals, but this satisfaction has no influence toward their intention to collaborate.

Additionally, the entrepreneurs probably perceived that collaboration with other businesses will require extra time, energy and monetary investments and/or may also lead to lesser autonomy/control over business operations. Hence, their satisfaction regarding the attainment of economic gains and perceived autonomy do not lead to their intention of collaboration in future. In addition, entrepreneurs might have the perception that collaborating with other businesses may reduce the chances of involving their family members into the business and/or reduce the chances of pursuing other family centered goals; and thus, the satisfaction of their family related goals does not lead to their intention to collaborate in future.

Further, entrepreneurs' attainment of intrinsic reward goals has positive and significant relationship with their intention to collaborate with other ventures. In past literature, intrinsic reward goals were not considered as most important goal of entrepreneurs. However, this study found it to be as the most and only important predictor of entrepreneurs' intention to collaborate. Perhaps, the collaboration with other businesses might serve as an opportunity for entrepreneurs to prove themselves in front of others, pursue more challenges in life, feeling of pride, gain more self-satisfaction, and gain more respect from others; hence, their satisfaction of intrinsic reward goals motivate entrepreneurs to collaborate with other businesses in future.

## **7. Limitations and Future Recommendations**

This study used cross sectional design, and hence did not investigate the variations of personal goals attainment and intentions of entrepreneurs over the period of time. Future studies may employ longitudinal study designs to account for the variations in this study's constructs. Further, this study was confined to Malaysian SME entrepreneurs only and used convenient sampling technique to draw the sample. Therefore, generalization of findings especially over the different populations of entrepreneurs is not possible. Investigation of same constructs on other study settings and context may produce similar or varying findings. Hence, this study recommends the utilization of other population of entrepreneurs and probability sampling technique in future studies on same or similar constructs. In addition, this study only empirically investigated the relationship between entrepreneurs' personal goals attainment and their intention to collaborate. Testing other types of intentions and/or other mediating variables was out of this study scope. Therefore, it is recommended that future studies to incorporate other variables as mediators in the relationship between personal goals attainment and entrepreneurs' intention to collaborate.

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## Relationship between Performance Based Reward and Organizational Commitment in Banking Industry

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**Abstract:** This study aims at examining the relationship between performance based reward (communication, participation, performance appraisal) and organizational commitment. This study used a survey method to collect data of 101 bank employees in Peninsular Malaysia. This study employed the Pearson's correlation and linear regression methods to examine the relationships between communication, participation and performance appraisal, and organizational commitment. The finding of this study revealed that there is a positive relationship between communication and organizational commitment. Similarly, this study also discovered the same finding on the relationship between performance appraisal and organizational commitment. However, the impact is greater for the relationship between communication and organizational commitment.

**Keywords:** Communication; Participation; Performance Appraisal; Organizational Commitment

**JEL Classification:** M1

### 1. Introduction

Reward system of which its main purpose is to increase staff performance and productivity is one of organizational key policies nationwide (Ajila, 1997). Rewards play the role of developing employees' motivation in job performance. Firms should formulate their strategies together with reward as a motivator to enhance the work effort of employees. A good reward system is highly important at attracting good people and retaining skillful and knowledgeable employees. Importantly, decision making of rewards should involve administrators and top managers who are open minded and fair. The reward system must have the elements of transparency, good communication to all levels in the organization as well as fairness.

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Bretz, Milkovich and Read (1992) mentioned that an organization is able to enhance its employees' performance and productivity through a well-developed performance appraisal, reward and bonus system. Importantly, the reward system itself should be able to inspire the employees to perform well in line with the organizational strategic mission (Milkovich & Newman, 2014).

The main purpose of this study is to examine employee perception toward performance based reward system using communication, participation and performance appraisal as independent variables, while the dependent variable is organizational commitment in banking industry.

The remainder of this paper is organized in the following manner. Section 2 outlines the objective of this study. Section 3 reviews past literature on the topic under study. Section 4 discusses the data and methodology employed in this study. Section 5 presents the findings; and lastly section 6 provides conclusion of this study.

## **2. Objective of the Study**

This study has three objectives. First, is to examine the relationship between communication and organizational commitment. Second, is to examine the relationship between employee participation and organizational commitment. Third, is to examine the relationship between performance appraisal and organizational commitment.

## **3. Literature Review**

Many theories have been proposed to explain of what involved in enhancing the performance based reward system. Although the literature covers a wide variety of such theories, the review will focus on three major independent variables and a dependent variable. Those are communication, participation and performance appraisal for independent variables, and organizational commitment for dependent variable.

### **3.1. Definition of Terms**

#### **3.1.1. Communication**

Communication is the exchange transaction in which the participants send and receive messages by creating meaning through the exchange of messages (Barnlund, 2008; Fielding, 2006). Communication in performance based reward is generally defined as transforming information and involving the delivery of reward messages from one person or group (the sender) to another (the receiver) through verbal, non-verbal and written communication (Fitzgerald, 2000; Nielson, 2002). Specifically, a communication process helps to achieve the desired outcomes of the employee,

increase employees' understanding, appreciation and credibility of performance based reward practices in the organization (Kretzmann & McKnight, 2005). In this research, communication is one of the important elements that influence employee's commitment in order to be rewarded.

### **3.1.2. Participation**

Employees' participation is an important reward management feature that may be used to enhance the goals and strategy of the compensation system (Milkovich & Newman, 2014). Furthermore, participation plays an important role as a creative management technique to support human resource management and increase work ownership of employee (Appelbaum, Bailey, Berg & Kalleberg, 2000). An employee is able to understand his/her work better and thus helps to enhance his/her work performance, efficiency and productivity. In this study, participation is an important element that influences organizational commitment in order to be rewarded.

### **3.1.3. Performance Appraisal**

Performance appraisal can only be learned by training, practice and experience. Specifically, performance appraisal enables supervisor to identify, evaluate and develop employee performance (Scott & Einstein, 2001). Performance appraisal is an important element of performance management and as well as measurement tool to assess the employees' capability in carrying out their duties (Gerhart & Wright, 2014). The employees will ensure that they improve on their performance appraisals from time to time in order to get rewarded.

## **3.2. Relationship between Performance Based Rewards and Organizational Commitment**

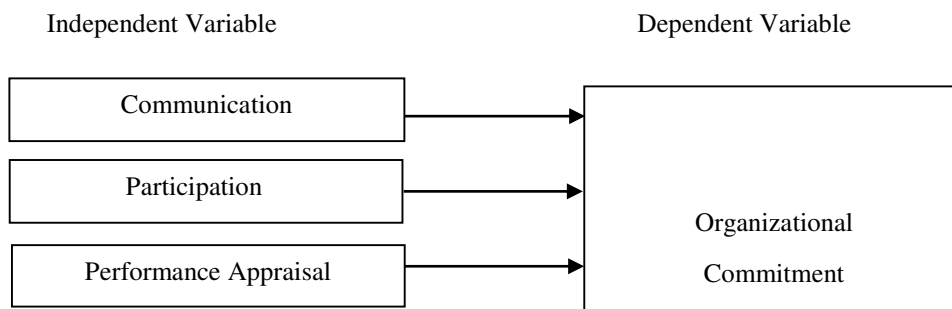
Communication creates the condition for commitment and permits a voice in the reward system. Hence, communication plays an important role in ensuring a successful and effective implementation of reward system (Foy, 1994; Katz & Kahn, 1972). Previous studies such as by Mathieu and Zajac (1990) documented a significant relationship between communication and organizational commitment. Past literature on the relationship between participation and organizational commitment also reported similar finding (Randall, 1990; Wallace, 1995). Similar to communication and participation, performance appraisal also plays an important role in shaping the employees' attitude and behaviors towards organizational commitment such as affective commitment (Morrow, 2011). Affective commitment is employees' views with regard to their emotional attachment to or identification with their organizations.

Past study such as by Tam (1996) showed that government employees were more committed to the federal government agencies that implement a fair and transparent assessment. Thus, it is expected that an employee will realize the value of outcome if the management is able to appropriately implement these 3 elements; i.e.



communication, participation and performance appraisals in the administration of reward system (Zeeshan et al., 2010; Sharon & Garib, 2009).

Figure 1 illustrates the conceptual framework of this study and it is in line with past literature on the relationships between communication, participation and performance appraisal, and organizational commitment.



**Figure 1. The Conceptual Framework**

Based on the framework, this study hypothesizes that:

H1- There is positive relationship between communication and organizational commitment.

H2- There is positive relationship between participation and organizational commitment.

H3- There is positive relationship between performances appraisal and organizational commitment.

#### **4. Methodology**

This study employed a cross-sectional research design technique which involves a combination of performance based reward literature, semi-structured interview, pilot study and actual survey as a main procedure to gather data. This technique has advantages, such as it helps the researchers to collect accurate data, reduce bias data and enhance the data collection quality (Sekaran & Bougie, 2013).

The sample of this study involves employees of several banking institutions in the Klang Valley, Federal Territory of Malaysia. The participants of this study were bank staff who held different positions. Based on Central Bank of Malaysia latest information, there are five types of Malaysia’s licensed banking institutions; and these are shown in Table 1. Meanwhile, the distribution of respondents is presented in Table 2.

**Table 1. Licensed Banking Institutions**

Licensed Banking Institutions	Foreign Ownership	Local Ownership
1. Commercial Banks	19	8
2. Islamic Banks	6	10
3. International Islamic Banks	-	-
4. Investment Banks	-	12
5. Other Financial Institution	-	2

**Table 2. Distribution of Respondents**

Name of the Bank	Quantity	Percentage
1. BNP Paribas	12	11.88
2. HSBC	15	14.85
3. Bank Simpanan Nasional	9	8.91
4. Bank Islam Malaysia Berhad	20	19.80
5. Bank Muamalat Malaysia Berhad	5	4.95
6. Malayan Banking Berhad	14	13.86
7. Bank Rakyat	12	11.88
8. CIMB	14	13.86
Total	101	100

The survey questionnaires of this study has four sections; namely personal data, perception on the administration of reward system, perception on the determination of reward in organization and level of satisfaction, commitment and performance. Section 1 has ten (10) items that capture demographic variables of the respondents. For this purpose, nominal scale and ordinal scale were used as measurement. Section 2 has eight (8) items, while sections 3 and 4 have twenty (20) and thirty-four (34) items, respectively. For these sections, all items are in the form of Likert 5-point scale ranging from “1=strongly disagree/dissatisfied” to “5= strongly agree/satisfied”.

This study used the Social Package for Social Sciences (SPSS) software to examine the data extracted from the questionnaires. The analyses carried out include: First, descriptive analysis which is to measure the collected data distribution across the

demographic. Second, validity and reliability analyses which are to measure the measurement scales consistency used in this study as to ensure that the instruments are reliable. Third, Pearson’s Correlation analysis is to examine the correlation between two variables. Finally, linear regression analysis is to investigate the relationships between the independent variables (communication, participation and performance appraisal), and dependent variable which is organizational commitment.

**5. Findings**

**5.1. Respondent Profile**

Table 3 presents the descriptive statistics of this study. Majority of the respondents were males (54.5 %), ages between 25 to 34 years old (41.6%), degree holders (34.7 %), clerical and support staff (45.5%), employees who have worked less than 5 years (38.6%), permanent staff (83.2%), monthly salary between RM2500 and RM3999 (43.6 %), monthly household expenses between RM1000 and RM2499 (50.5%), married (66.3%) and no dependent (39.6%).

**Table 3. Sample Profile**

<b>Participant Characteristics</b>	<b>Sub-Profile</b>	<b>Frequency</b>	<b>Percentage (100%)</b>
<b>Gender</b>	Male	55	54.5
	Female	46	45.4
<b>Age</b>	Less than 25 years old	18	17.8
	25 to 34 years old	42	41.6
	35 to 44 years old	28	27.7
	45 to 54 years old	13	12.9
	55 years old and above	-	0
<b>Highest Education</b>	SRP/LCE	1	1.0
	SPM/MCE	26	25.7
	STPM/HSC	11	10.9
	Diploma	26	25.7
	Degree	35	34.7
	Other	2	2.0
<b>Position</b>	Management	20	19.8
	Supervisory group	22	21.8
	Technical staff	3	3.0
	Clerical and support staff	46	45.5
	Others	10	9.9

<b>Length of Service</b>	Less than 5 years	39	38.6
	5 to 14 years	34	33.7
	15 to 24 years	12	11.9
	25 years and above	16	15.8
<b>Type of Service</b>	Permanent	84	83.2
	Contract basis	11	10.9
	Temporary basis	4	4.0
	Others	2	2.0
<b>Gross Monthly Salary</b>	Less than RM 1000	4	4
	RM 1000 to RM 2499	23	22.8
	RM 2500 to RM 3999	44	43.6
	RM 4000 to RM 5499	14	13.9
	RM 5500 to RM6999	9	8.9
	RM 7000 and above	7	6.9
<b>Monthly Household Expenses</b>	Less than RM 1000	18	17.8
	RM 1000 to RM 2499	51	50.5
	RM 2500 to RM 3999	18	17.8
	RM 4000 to RM 5499	7	6.9
	RM 5500 to RM6999	3	3.0
	RM 7000 and above	4	4.0
<b>Marital Status</b>	Single	34	33.7
	Married	67	66.3
<b>Gross Monthly Salary</b>	No children	40	39.6
	Less than 3 children	27	26.7
	3 to 6 children	31	30.7
	6 children and above	3	3.0

**Note**

**LCE/SRP** : Sijil Rendah Pelajaran/Lower Certificate Education

**MCE/SPM** : Sijil Pelajaran Malaysia/Malaysia Certificate of Education

**HSC/STPM** : Sijil Tinggi Pelajaran Malaysia/Higher School Certificate

**5.2. Reliability Results of the Measurement Scale**

This study employed the reliability (Cronbach's alpha) method to measure the questionnaires' reliability scales. Table 4 reports the results of reliability analysis for all instruments.

**Table 4. Composite Reliability & Cronbach's Alpha**

<b>Constructs</b>	<b>No. of Items</b>	<b>Composite Reliability</b>
Participation	6	0.888
Performance Appraisal	6	0.918
Communication	18	0.974
Organizational Commitment	11	0.922

The reported statistical results revealed that the measurement scales in this study have met the acceptable standard of reliability analysis requirement. The range of all values is between 0.888 and 0.934; in which all are greater than 0.7. The values of Cronbach’s Alpha are greater than 0.7, indicating that this study’s instruments have high internal consistency (Henseler et al. 2009; Nunally & Bernstein, 1994).

**5.3. Analysis of the Construct**

Pearson Correlation explains that the higher the degree of the correlation, the stronger the linear relationship between them would be; and this shows the correlation between the independent variables (participation, performance appraisal and communication) and dependent variable (organizational commitment). Table 5 reports the descriptive statistics and Pearson Correlation analysis results.

The results in Table 5 show that the means for the variables are from 4.9010 to 5.4229, signifying that level of participation, performance appraisal and communication and organizational commitment is ranging from neutral (4.0) agree to strongly agree (7.0). The Pearson’s correlation helps in ascertaining the relationships of the variables; and the results shown in Table 5 confirmed that there is positive relationship between participation, performance appraisal and communication, and organizational commitment. The relationships are significant which helped in confirming the alternate hypothesis.

**Table 5. Pearson Correlation Analysis and Descriptive Statistic**

Variables	Mean	Standard Deviation	Pearson Correlation Analysis (r)			
			1	2	3	4
Participation	4.9010	1.01062	1			
Performance Appraisal	5.0223	1.06601	.656**	1		
Communication	4.9505	1.05469	.684**	.575**	1	
Organizational Commitment	5.4229	0.85378	.435**	.480**	.622**	1

Note: Symbol \*\* denotes significant at 1 percent level.

#### 5.4. Analysis of Regression

Regression analysis is a powerful and flexible technique in examining the association between a metric-dependent variable and one or more independent variables (Malhotra et. al., 2006). This study utilized linear regression method to examine whether to accept or reject the null hypotheses. Besides, R square ( $R^2$ ) explains the percentage of independent variables (participation, communication and performance appraisal) that support dependent variable (organizational commitment)

**Table 6. Relationship between participation, performance appraisal, and communication, and organizational commitment**

Factors	B	T	Sig	Result
Constant		7.280	.000	
Participation	-.091	-.765	.446	Rejected
Performance Appraisal	.219	2.065	.042**	Approved
Communication	.559	5.100	.000*	Approved
F-value			22.771**	
$R^2$			0.413	
Adjusted $R^2$			0.395	

Note: Symbols \*\* and \* denote significant at 1 and 5 percent levels.

Results of Multiple Regressions:

$$Y = B + PRx + PAx + CMx$$

$$Y = 2.6801 - 0.91x + 2.19x + 0.559x$$

Y: Organizational commitment.

PR: Participation

PA: Performance Appraisal

CM: Communication

The results of regression analysis confirmed that there is a positive and significant relationship for performance appraisal at 1 percent level, and communication at 5 percent level with organizational commitment. The value of R square (0.413) signified that independent variables are responsible for 41.3 percent change in the dependent variable. The value of F statistic confirmed the model fitness for the said relationship.

In sum, the result demonstrates that communication does act as an important predictor of organizational commitment in the hypothesized model. This result is consistent with studies by Mathieu and Zajac, (1990); Foy, (1994); Katz & Kahn, (1972) which showed strong positive relationship between communication and commitment in organization.

## 6. Conclusion

This study examines the linkages between organizational commitment and 3 elements of performance based reward; i.e. communication, participation and performance appraisal. The finding of this study reveals that there is positive relationship between communication and organizational commitment. This study also reports similar finding for the relationship between performance appraisal and organizational commitment. However, communication has a bigger impact on organizational commitment compared to performance appraisal. Thus, the findings of this study suggest that organizational performance based reward program model needs to consider communication and performance appraisal as critical success factors of the performance based reward system.

## 7. Acknowledgement

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## A Study on Job Satisfaction as a Determinant of Job Motivation

Azman Ismail<sup>1</sup>, Mohd Ridwan Abd Razak<sup>2</sup>

**Abstract:** Despite significant increase of interest in job motivation among the global organizations, the role of an administrator is still unclear. The main objective of this study is to investigate the relationship between job satisfaction (i.e., intrinsic satisfaction and extrinsic satisfaction) and job motivation. A survey method was used to collect self-report survey of employees in Malaysian Fire and Rescue Department. The SmartPLS path model analysis revealed three key findings: first, job satisfaction is significantly correlated with job motivation. Second, intrinsic satisfaction is significantly correlated with job motivation. Third, extrinsic satisfaction is significantly correlated with job motivation. These findings demonstrate that the ability of administrators to provide adequate intrinsic satisfaction and extrinsic satisfaction may lead to greater employees' job motivation. In addition, discussion, implications and conclusion are also presented.

**Keywords:** job satisfaction; intrinsic satisfaction; extrinsic satisfaction; job motivation

**JEL Classification:** M1; L3

### 1. Introduction

Job satisfaction is a crucial issue in organizational behavior (Barakat et al., 2015; Tziner et al., 2014), human resource management (Ankli & Palliam, 2012; Fabi et al., 2015; Menezes, 2012) and organizational management (Amzat & Idris, 2012; Malik, 2013). In organizations, job satisfaction is broadly viewed as employees' attitudes toward their working conditions and working environments (Fiorilla & Nappo, 2014; Joung et al., 2015; Randeree & Chaudhry, 2012) and positive emotional response to their jobs and work performance (Bigliardi et al., 2012; Chatzoudes et al., 2015; Dierendonck, 2015).

Considerable organizational behaviour literature has highlighted that high level of job satisfaction will help organizations to keep their experienced, trained and competent employees, enhance the level of motivation among employees (Arif & Ilyas, 2013; Raddaha et al., 2012; Tziner et al., 2014), create loyalty, confidence and

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commitment to the organization (Randeree & Chaudhry, 2012; Zehrer et al., 2007), increase employee productivity and decrease their absenteeism and turnover (Duxbury & Halinski, 2014), as well as improve the employees' motivation toward their job roles (Foote & Tang, 2012; Furnham et al., 2009). Thus, this situation may lead to enhanced organizational effectiveness and efficiency (Bigliardi et al., 2012; Ling & Toh, 2014).

A review of current literature relating to job satisfaction reveals that it has two major dimensions: intrinsic satisfaction and extrinsic satisfaction (Bigliardi et al., 2012; George & Zakkariya, 2015; Randeree & Chaudhry, 2012; Raddaha et al., 2012). From the perspective of organizational behaviour, intrinsic satisfaction is usually defined as an employees' satisfaction with internal job factors such as recognition, achievement, opportunity to use and develop human capacities, advancement and responsibility (Chuang et al., 2009; Raddaha., 2012). For example, if employees are satisfied with the intrinsic job factors, this may motivate them to execute their jobs effectively and efficiently. Nevertheless, if employees are not satisfied with the intrinsic job factors, this may lead to decreased job performance (Mirkamali & Thani, 2011; Nanjundeswaraswamy, 2013).

Besides that, extrinsic satisfaction is often defined as employees' satisfaction with external job factors and working environment such as compensation, interpersonal relations, supervision, company policy, safe and healthy, career growth and security, social integration and status (Chuang et al., 2009; Mirkamali & Thani, 2011; Randeree & Chaudhry, 2012). For example, if an employee is satisfied with these job elements, it may lead to increased enthusiasm. However, if the employee is not satisfied, this may lead to lower motivation and work performance (Chuang et al., 2009; Mirkamali & Thani, 2011; Nanjundeswaraswamy, 2013; Randeree & Chaudhry, 2012).

Surprisingly, studies in workplace psychology revealed that the intrinsic and extrinsic satisfaction may have a major impact on employee performance, especially job motivation (Bigliardi et al., 2005; George & Zakkariya, 2015; Seebaluck & Seegum, 2013; Stringer et al., 2011). From the perspective of organizational behaviour, job motivation consists two major components: firstly, intrinsic motivation such as achievement, recognition and the task itself; and secondly, extrinsic motivation such as organizational administration, supervision and salary (Arquero et al., 2015; Stringer et al., 2011). If employees have high intrinsic and extrinsic motivation, they will put a greater effort at accomplishing personal and organizational goals (Conrad et al., 2015; Furnham et al., 2009; Mozes et al., 2011; Organ et al., 2013; Seebaluck & Seegum, 2013).

In the model of job satisfaction, numerous scholars consider intrinsic satisfaction, extrinsic satisfaction and job motivation to be of different constructs, but very much intertwined. For instance, the ability of administrators to adequately satisfy their

employees (intrinsic and extrinsic satisfaction) may lead to a high level of job motivation (Bigliardi et al., 2005; Furnham et al., 2009; Liu et al., 2008; Seebaluck & Seegum, 2013; Stringer et al., 2011). Thus, this encourages researchers to fill in the gap by measuring the effect of administration of job satisfaction on job motivation.

## **2. Purpose of Study**

This study has three main objectives: first, to examine the relationship between job satisfaction and job motivation. Second, is to investigate the relationship between intrinsic satisfaction and job motivation. Finally, is to examine the relationship between extrinsic satisfaction and job motivation.

## **3. Literature Review**

### **3.1. Job Satisfaction and Job Motivation**

The role of job satisfaction as an important determinant is in line with the conception of needs based on the theory of motivation. For example, Maslow's (1954) hierarchy of needs theory posits that satisfaction with physiological, safety, social, esteem and self-actualization needs may positively affect employee behavior. Meanwhile, Aldefer's (1969) ERG theory explains that satisfaction with existence needs (i.e., physiological and safety needs), relatedness needs (i.e., social) and growth needs (i.e., esteem and self-actualization) may positively influence employee actions. The ideas of these theories gained strong support from the job satisfaction researchers. For example, studies have been conducted using a direct effects model to investigate the effect of job satisfaction based on different samples, such as the perception of all the knowledge workers operating in the R&D business functions from five large pharmaceutical companies in the Emilia Romagna region, Italy (Bigliardi et al., 2012), 160 students from three universities in the United States (Hurst et al., 2012) and 250 primary school teachers in Mauritius (Seebaluck & Seegum, 2013). These studies had found that satisfaction together with intrinsic and extrinsic job factors have become an important determinants of job motivation in studied organization (Bigliardi et al., 2012; Hurst et al., 2012; Seebaluck & Seegum, 2013). Thus, it is hypothesized that:

H1: There is a positive relationship between job satisfaction and job motivation

### **3.2. Intrinsic Satisfaction and Job Motivation**

McClelland's (1961) theory of needs explains that satisfaction together with the needs for achievement, power and affiliation may drive employees' satisfaction with their jobs. This idea received strong support from job satisfaction literature. For

example, the few studies that used a direct effects model to study the effects of job satisfaction based on different samples include the studies on perceptions of 267 registered nurses and nurse executive working in the private healthcare sector in Lithuania (Vilma & Egle, 2007), 14,192 respondents who participated in the labor market in the United States of America, Great Britain, West Germany, Norway, Hungary, and Israel (Westover & Taylor, 2010), and 300 construction employees in South Africa (Chileshe & Haupt, 2010). Findings from these studies showed that employees who are satisfied with the intrinsic job factors (i.e., recognition, achievement, opportunity to use and develop human capacities, advancement and responsibility) had increased their job motivation in the respective organizations (Chileshe & Haupt, 2010; Vilma & Egle, 2007; Westover & Taylor, 2010). Thus, it is hypothesized that:

H1a: There is a positive relationship between intrinsic satisfaction and job motivation.

### **3.3. Extrinsic Satisfaction and Job Motivation**

Deci's (1975) cognitive evaluation theory posits that allocating extrinsic satisfaction may affect the level of employees' motivation. This theory indicates that the tangible extrinsic rewards such as money can decrease the intrinsic motivation; whereas extrinsic rewards such as praise and appreciation may increase intrinsic motivation. This idea received strong support from job satisfaction researchers; for example, some empirical studies had used direct effects model to evaluate extrinsic satisfaction based on different samples like perceptions of 12,587 employees in United Kingdom (Sutherland, 2013), and 535 retail bank employees in Ghana (Frimpong & Wilson, 2013). These studies found that the ability of administrators to deliver extrinsic satisfaction has become a critical determinant of job motivation in the organizations (Frimpong & Wilson, 2013; Sutherland, 2013). Thus, it is hypothesized that:

H1b: There is a positive relationship between extrinsic satisfaction and job motivation.

## **4. Methodology**

### **4.1. Research Design**

This study was performed at Malaysian fire and rescue department. Data were collected using a cross-sectional research design, which allows researchers to integrate literature and the actual survey. Using this data collection technique may assist the researchers to collect precise data, minimize bias and increase in quality of collected data (Cresswell, 1998; Ismail et al., 2013; Sekaran, 2003). Initially, a survey questionnaire was drafted based on the job satisfaction literature.

Subsequently, a back translation technique was used to translate the questionnaires survey in English and Malay versions to maximize the validity and reliability of research findings (Cresswell, 1998; Ismail et al., 2013; Sekaran, 2003).

#### **4.2. Measures**

The survey questionnaire of this study consists three major parts: first, intrinsic satisfaction has 3 items adapted from job satisfaction literature (Bigliardi et al., 2012; George & Zakkariya, 2015; Raddaha et al., 2012). Second, extrinsic satisfaction has 4 items adapted from job satisfaction literature (George & Zakkariya, 2015; O'Leary et al., 2009; Raddaha et al., 2012). Third, job motivation has 5 items adapted from job motivation literature (Furnham et al., 2009; Seebaluck & Seegum, 2013; Stringer et al., 2011). All constructs were measured using a 7-item scale ranging from "strongly disagree/dissatisfied" (1) to "strongly agree/satisfied" (7). Demographic variables used as controlled variables by this study emphasized on the attitude of the employees.

#### **4.3. Sample**

This study used a convenience sampling technique to collect 100 questionnaires which can be used from different job categories and levels in the organizations and employees. Sampling technique was used because the administrator did not provide a list of registered employees; thus, the researchers were unable to adopt a random method in selecting respondents for this study. The respondents gave their consents and this survey was on a voluntary basis.

#### **4.4. Data Analysis**

The SmartPLS 2.0 was used to determine the validity and reliability of the constructs and test the research hypotheses. The main advantages of this method are: it provides latent variable scores, avoids small sample size problems, evaluates multifaceted model with many latent and manifest variables, hassle rigorous assumptions about the distribution of variables and error terms, and handles both reflective and formative measurement models (Henseler & Chin, 2010; Ismail et al., 2013; Ringle et al., 2005). The SmartPLS path model was used to measure the path coefficients for the structural model using the standardized beta ( $\beta$ ) and t statistics. The value of  $R^2$  is used as an indicator of the overall predictive strength of the model. The value of  $R^2$  is considered as follows: weak (0.19), moderate (0.33) and substantial (0.67) (Chin, 2001; Henseler & Chin, 2010; Ismail et al., 2013). As an additional assessment in accordance with the model in PLS analysis, as suggested by Geisser (1975) and (Stone, 1974) a test of predictive relevant using blindfolding ( $Q^2$  statistic) was carried out. According to Chin (2001), the  $Q^2$  statistic is a jackknife version of the  $R^2$  statistic. It represents a measure of how well observed values are reconstructed by the model and its parameter estimates. Models with  $Q^2$  greater than zero are considered to have predictive relevance. The value of  $Q^2$  is considered as follows:

small predictive relevance for an endogenous construct (0.02), medium predictive relevance for an endogenous construct (0.15), and large predictive relevance for an endogenous construct (0.35) (Hair et al., 2014).

## 5. Findings

### 5.1. Respondent characteristic

Table 1 indicates that the majority of respondents were males (84%), ages from 25 to 34 years old (51%), Malaysia Certificate of Education holders (70%), clerical and support staff (65%), working experiences from 5 to 14 years (40%), permanent staff (99%), earning monthly salaries between Malaysian Ringgit 2500 and 3999 (49%), and married employees (75%).

**Table 1. Respondent characteristic (n = 100)**

Respondent	Sub Profile	Percentage
Gender	Male	84
	Female	16
Age (years)	< 25	3
	25 – 34	51
	35 – 44	25
	45 – 54	18
	> 55	3
Education Level	LCE / SRP	3
	MCE / SPM	70
	HSC / STPM	11
	Diploma	10
	Degree	6
Position	Management & professional group	26
	Supervisory group	7
	Technical staff	1
	Clerical & support staff	65
	Other	1
Tenure of service (years)	< 5	12
	5 – 14	40
	15 – 24	26
	> 25	22
Status of service	Permanent	99
	Contract basis	1
Gross monthly salary (MYR)	< 1,000	4
	1,000 – 2,499	37
	2,500 – 3,999	49
	4,000 – 5,499	7
	5,500 – 6,999	3

Marital status	Single	25
	Married	75

Note:

LCE / SRP	:	Lower School Certificate / Sijil Rendah Pelajaran
MCE / SPM	:	Malaysia Certificate of Education / Sijil Pelajaran Malaysia
HSC / STPM	:	Higher School Certificate / Sijil Tinggi Pelajaran Malaysia

## 5.2. Validity and Reliability of Instrument

Table 2 indicates the results of convergent and discriminant validity analyses. All constructs' AVE values are larger than 0.5; thus, it shows that they had met satisfactory standard of convergent validity (Barclays et al., 1995; Fornell & Larcker, 1981; Henseler & Chin, 2010). Additionally, all constructs had the values of heterotrait-monotrait ratio less than the critical values of 0.85; this indicates that the constructs had met the validity discriminant criterion (Barclays et al., 1995; Fornell & Larcker, 1981; Henseler & Chin, 2010; Ismail et al., 2013).

The validity and reliability of all constructs are presented by Table 3. The correlation between items and factors have higher loadings than items of the different constructs, and the loadings of variables are larger than 0.70 in their own constructs in the model; and these are considered acceptable (Henseler & Chin, 2010). Furthermore, the values of composite reliability for all constructs are greater than 0.80, indicating that the instrument used in this study has high internal consistency (Henseler & Chin, 2010; Nunally & Bernstein, 1994).

**Table 2. The Results of Convergent and Discriminant Validity Analyses**

Construct	AVE	Intrinsic Satisfaction	Extrinsic Satisfaction	Job Motivation
Intrinsic Satisfaction	0.613	<b>0.783</b>		
Extrinsic Satisfaction	0.519	0.650	<b>0.774</b>	
Organizational Commitment	0.592	0.533	0.598	<b>0.769</b>



**Table 3. The Results of Factor Loadings and Cross Loadings for Different Constructs, and Composite Reliability**

Constructs	Cross Factor Loading			Composite Reliability
	1	2	3	
Intrinsic Satisfaction 1) The amount of responsibility you are given. 2) The attention paid to suggestions you make. 3) The variety in your job.	0.800  0.730  0.815			0.826
Extrinsic Satisfaction 1) The physical working condition. 2) The recognition you get for good work. 3) The way your organization is managed. 4) Your job security.		0.797 0.717 0.819 0.797		0.852
Job Motivation 1) The physical working condition. 2) I enjoy discussing about my organization with people outside of it. 3) It would be very hard for me to leave my organization right now, even if I wanted to. 4) Right now, staying with my organization is a matter of necessity as much as desire. 5) My organization deserves my loyalty because of its treatment towards me.			0.829 0.754 0.786 0.749 0.761	0.883

**5.3. Analysis of the Constructs**

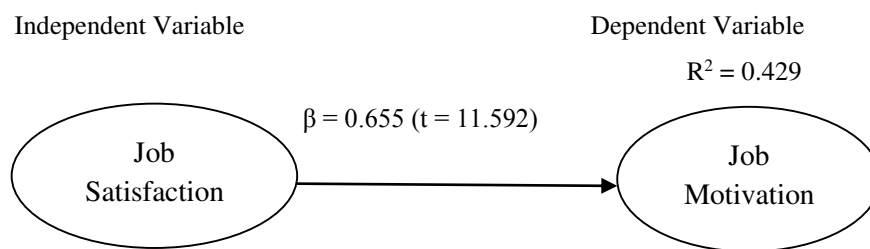
Table 4 shows the results of Collinearity and Descriptive Statistics. The value of means for all constructs are from 4.15 to 5.11, signifying that majority of the respondents perceived that the levels of intrinsic satisfaction, extrinsic satisfaction and job motivation ranged from high (4) to highest level (7) in the organizations. Whereas, the values of variance inflation factor for the correlation between the independent variable (i.e., intrinsic satisfaction and extrinsic satisfaction) and the dependent variable (i.e., job motivation) are less than 5.0, indicating that the data are not affected by serious collinearity problem (Hair et al., 2014). These results verify that the instrument employed in this study met the satisfactory standards of validity and reliability analysis.

**Table 4. The Results of Collinearity and Descriptive Statistics**

Construct	Mean	Standard Deviation	Variance Inflation Factor
Intrinsic Satisfaction	5.10	.58	1.746
Extrinsic Satisfaction	4.15	.46	1.746
Organizational Commitment	5.11	.64	

**5.4. Outcomes of Testing Hypotheses 1**

Figure 1 shows the results of the direct effect model using the SmartPLS path model. The value of R<sup>2</sup> was used to measure the strength of the overall predictive. The value of R<sup>2</sup> is considered as follows: weak (0.19), moderate (0.33), and substantial (0.67) (Chin, 2001; Henseler & Chin, 2010; Ismail et al., 2013). This model shows that the presence of job satisfaction in the analysis had described 42.9 percent of the variance in the dependent variable. Precisely, the results of testing the research hypothesis showed that job satisfaction is significantly correlated with job motivation ( $\beta = 0.655$ ;  $t = 11.592$ ), thus H1 is supported. Therefore, the result proves that job satisfaction is as an important determinant of job motivation.



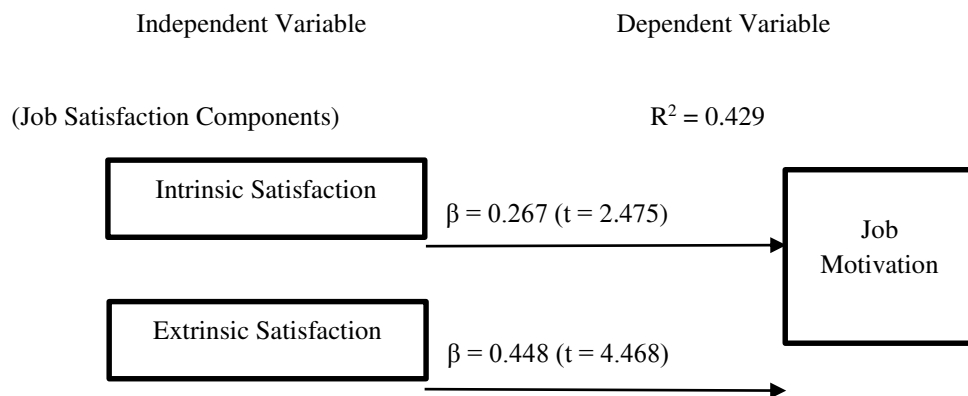
Note: Significant at \* $t > 1.96$

**Figure 1. The Outcome of testing Hypothesis 1**

As an extension, a test of predictive relevance for the reflective endogenous latent variable was further conducted based on Stone-Geisser's formula:  $q^2 = Q^2_{included} - Q^2_{excluded} / 1 - Q^2_{included} = 0.245$ , signifying that it was larger than zero for the reflective endogenous latent variable. Thus, it has predictive relevance.

**5.5. Outcomes of Testing Hypotheses 1a and 1b**

Figure 2 shows the results of testing a direct effect model using the SmartPLS path model. The value of  $R^2$  was used as an indicator to the overall predictive strength of the model. The value of  $R^2$  is deliberated as follows: 0.19 (weak), 0.33 (moderate), and 0.67 (substantial) (Chin, 2001; Henseler & Chin, 2010). This model indicates that the inclusion of intrinsic satisfaction and extrinsic satisfaction in the analysis had explained 42.9 percent of the variance in the dependent variable. Specifically, the results of testing the research hypothesis presented two major findings: first, intrinsic satisfaction is significantly correlated with job motivation ( $\beta = 0.267$ ;  $t = 2.475$ ), thus H1a is supported. Second, extrinsic satisfaction is significantly correlated with job motivation ( $\beta = 0.448$ ;  $t = 4.468$ ), thus H1b is supported. As such, the results confirmed that intrinsic satisfaction and extrinsic satisfaction as significant determinants of job motivation.



Note: Significant at  $*t > 1.96$

**Figure 2. The Outcome of testing Hypothesis 1a and 1b**

In addition, a test of predictive relevance for the reflective endogenous latent variable was further conducted based on Stone-Geisser's formula:  $q^2 = Q^2_{included} - Q^2_{excluded} / 1 - Q^2_{included} = 0.243$ , indicating that it is greater than zero for the reflective endogenous latent variable. This shows that it has predictive relevance.

## 6. Discussion and Implications

The results of this study confirmed that job satisfaction is a significant determinant of job motivation in the studied organizations. In this study, administrator of organization focused on issues relating to employees' job satisfaction. Majority of respondents felt that the levels of intrinsic satisfaction, extrinsic satisfaction and job motivation are high. This situation posits that the ability of administrators to provide sufficient intrinsic satisfaction and extrinsic satisfaction may lead to greater employees' job motivation.

This study provides three major implications: contribution to theory, research methodology, and practical contribution. In respect of contribution to the theory, these findings have provided great potential in understanding the intrinsic satisfaction and extrinsic satisfaction in strengthening employees' motivation. The results also support the findings by Bigliardi et al. (2005), Seebaluck & Seegum (2013) and Stringer et al. (2011). In regard to the validity of the methodology of the study, a questionnaire survey employed by this study has met the standards of validity and reliability analysis. This situation may lead to precise and reliable research findings.

In regard to practical contributions, these findings can be used as guidelines by practitioners to improve the effectiveness of the administration of employees' job satisfactions. This objective may be realized if the management pays attention to the important aspects as follows: first, the factors influencing an employee's job satisfaction should identify with the current situation and employees' expectations. Enhancement in this aspect may help the employee to acquire prodigious satisfaction in their jobs and motivate them to continuously support the organizations' agendas. Second, training content and methods should be improved by concentrating on the strengthening of administrators' creativity and problem solving skills. These skills may encourage administrators to use their intellectuals in executing daily job, prioritizing employees' needs, improving employees' potentials, learning new problem-solving strategies and sharing the organization's interests with employees. Consequently, it may enhance the capacity of administrators in satisfying the employees' needs. Finally, job satisfaction should be used as an important tool to develop employees' potentials and talents. For instance, administrators need to identify employees' needs, provide sufficient support at enhancing employee's capabilities, and suggest alternative ways to improve employees' wellbeing in the workplace. If these suggestions are greatly considered, it may motivate employees to improve their efficiency and effectiveness in achieving organizational goals.

## 7. Conclusion

This study shows that the ability of administrators to provide sufficient intrinsic satisfaction and extrinsic satisfaction will motivate employees to strengthen employees' commitments towards the organizations studied. These findings also supported job satisfaction research literature, mostly published overseas. Thus, current research and practice in job satisfaction model should consider the intrinsic satisfaction and extrinsic satisfaction as the primary driving forces in the domain of job satisfaction. This study also showed that the ability of administrators to satisfy employees' job satisfaction may lead to positive results (e.g., productivity, performance and commitment). Additionally, these positive outcomes may support organizational competitiveness in the global economy era.

The findings of this study are subjected to some limitations. First, the sample of this study is limited to employees of Malaysia Fire and Rescue Department. Thus, the generalization of these findings to other organizations is very restricted. Second, this study utilizes cross-sectional research design to collect data at one point of time within one period study. Thus, this study may not capture causal relations between variables. Third, this study uses a direct effect model to show the relationship between the independent variables and the dependent variable without examining the effects of moderate or mediating variable. The findings may differ if mediating or moderating variables are adopted. Fourth, this study employs a small number of samples and is exposed to the bias issues. If these limitations are strongly considered, it may provide a better finding for future research.

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## **Foreign Shocks, Monetary Policy, and Macroeconomic Fluctuations in a Small Open Economy: A SVAR Study of Malaysia**

**Zulkefly Abdul Karim<sup>1</sup>, Bakri Abdul Karim<sup>2</sup>**

**Abstract:** This paper investigates the effect of foreign shocks upon domestic macroeconomic fluctuations and monetary policy, and examines the effectiveness of domestic monetary policy as a stabilization policy in Malaysia. Monetary policy variables (interest rate and money supply) have been measured through a non-recursive structural VAR (SVAR) identification scheme, which allows the monetary authority to set the interest rate and money supply after observing the current value of foreign variables, domestic output and inflation. The results show the important role of foreign shocks in influencing Malaysian monetary policy and macroeconomic variables. There is a real effect of monetary policy, that is, a positive shock in money supply increases domestic output. In contrast, a positive interest rates shock has a negative effect on domestic output growth and inflation. The effects of money supply and interest rate shocks on the exchange rate and stock prices are also consistent with standard economic theory. In addition, domestic monetary policy is able to mitigate the negative effect of external shocks upon domestic economy.

**Keywords:** Monetary policy; open-economy; SVAR

**JEL Classification:** E52; E58; F41

### **1. Introduction**

It is generally accepted that a small and highly trade-dependent economy like Malaysia is not insulated from shocks to a variety of external variables. In Malaysia, the degree of economic interdependence or economic openness, as measured by the share of exports and imports as a percentage of GDP, had increased significantly from 86.88 percent in 1970 to 112.59 percent in 1980, and 146.89 percent in 1990. In fact, since 1999 it has been greater than 200 percent. These statistics indicate that the Malaysian economy is highly dependent, and thus vulnerable to external shocks; for example foreign income shocks from large countries. Therefore, the monetary authority has to be concerned on how the external shocks are transmitted to domestic

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macroeconomic and monetary policy variables. The policy maker should also consider the effectiveness of domestic monetary policy in mitigating the negative effects of external shocks (for example, an adverse supply shocks) on economic activity. It is pivotal for the monetary authority to evaluate on what would happen to the domestic economy if there is no action against the external shocks.

The aim of this study is to examine empirically the effects of external shocks, namely world oil price, foreign income and foreign monetary policy shocks upon Malaysian economy and monetary policy. In addition, this study also examines the effectiveness of Malaysian monetary policy in mitigating the negative effects of external shocks upon domestic macroeconomic variables.

The significant contributions of this study have three aspects. First, this study employs an open economy structural VAR model, which permits an identification strategy based on economic theory rather than the sometimes questionable assumptions which underlie a traditional recursive VAR. In Malaysian context, although Tang (2006) considered recursive VAR in open-economy, and Ibrahim (2005) used recursive VAR in closed-economy, their identification of structural shocks is inappropriate. Thus, this study provides a novel contribution to the monetary policy analysis of a small-open economy (i.e. Malaysia) by identifying the structural shocks according to economic theory. Second, this study considers the role of foreign factor in modelling an open-economy SVAR. The previous study of monetary policy effects in Malaysia, for example Azali and Matthews (1999) and Ibrahim (2005) used a small-scale VAR in a closed-economy, and did not consider the role of foreign variables in their analyses. Therefore, it is essential to examine the foreign shocks effects on macroeconomic fluctuations and monetary policy since the Malaysian economy is relatively small and highly trade-dependent. Third, this study uses a shutdown methodology in examining of what would happen to the domestic economy if the monetary authority (for example, BNM) does not respond to the external shocks. It is very important for monetary authority evaluates the effectiveness of monetary policy as a stabilization policy, in particular, to minimize the negative effect of foreign shocks on domestic macroeconomic variables.

The results of the study indicate that foreign shocks appeared to play a prominent role in influencing domestic macroeconomic and monetary policy variables. In general, monetary policy plays a pivotal role in minimizing the negative effect of external shocks to the domestic economy. Therefore, the monetary authority has to consider the external environment in formulating monetary policy; and hence, employs the monetary policy as a stabilization policy.

The rest of the paper is organized as follows. Section 2 presents a literature review relating to monetary policy identification scheme in the SVAR literature. Section 3 briefly discusses the research methodology, and Section 4 presents the empirical

results by focusing on structural impulse-response function (SIRF). Section 5 discusses some robustness checking, and Section 6 summarizes and concludes.

## 2. Literature Review

Most of the SVAR literature has focused on a closed economy, in particular the US economy, in investigating the effects of monetary policy shocks on economic activity<sup>1</sup>. These studies are justified given that the US is a large country and is not much affected by its international surroundings. In small open economy context, a limited number of studies had examined the effect of monetary policy shocks by using an open SVAR approach. For example, the most recent SVAR studies of a small-open economy were conducted by Cushman and Zha (1997), Brischetto and Voss (1999), Dungey and Pagan (2000), Parrado (2001), and Buckle et al. (2007). Most of the studies used block exogeneity restrictions in modelling the international economic linkages to the small-open economy.

Cushman and Zha (1997) and Dungey and Pagan (2000) had imposed two blocks in their structural equation model; a block representing the international economy, and a block representing the domestic economy. In modelling SVAR for the Canadian economy, Cushman and Zha (1997) included four international variables, namely the US industrial production, the US consumer prices, the US federal fund rate, and world total commodity export prices. The main identification scheme in their study has three folds. First, domestic interest rate is assumed to react contemporaneously to foreign interest rate and commodity market, but not on contemporaneous output. Second, the exchange rate is assumed to response contemporaneously to all shocks. Third, foreign variables were treated as a separate block, that is, block (exogenous) for the domestic (small open) economy. The empirical findings stated that Canadian monetary policy responds significantly and contemporaneously with home interest rates, exchange rate, foreign interest rates and foreign price levels.

In contrast, Dungey and Pagan (2000) included five international variables, namely real US GDP, real US interest rates, the Australian term of trade, the Dow Jones Index deflated with the US consumer price index, and real exports. The Australian monetary policy (cash rate) was assumed to follow a standard Taylor-rule, in which responds contemporaneously to Australian gross national expenditure and inflation. The domestic variables were assumed to not able to affect foreign variables either contemporaneously or with a lags. The main findings indicated that overseas factors are generally a substantial contributor to domestic activity, and domestic monetary policy contributes to stabilize economic activity, but the effect is not large.

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<sup>1</sup>For example, there are studies on the US economy by Sims (1986), Blanchard and Quah (1989), Gali (1992), Gordon and Leeper (1994), Christiano et al. (1996), Bernanke and Blinder (1992), Bernanke and Mihov (1998), and Sim and Zha (2005).

In the Malaysian context, there have been few studies relating to the effect of monetary policy shocks on economic activities in the existing literature. For example, Azali and Matthews (1999) employed the Bernanke's (1986) contemporaneous structural VAR approach (six variables in a closed-economy) in investigating the relationship between money-income and credit-income during the pre- and the post-liberalization eras. They found that during the pre-liberalization period, the bank credit shock had more impact compared with the money shock in explaining output variability. In contrast, after the post-liberalization period, money as well as credit innovations were significant in explaining output shocks. In short, aggregate demand was significantly influenced by credit innovation during pre-liberalization, while money innovation played an important role during post-liberalization in explaining output variability.

Another study by Ibrahim (2005) used recursive VAR identification in closed economy in examining the sectoral effect of a monetary policy shock. His results supported the real effect of monetary policy shocks. For example, it was seen that real output declined during monetary tightening (positive shocks of interest rates). In fact, some sectors such as manufacturing, construction, finance, insurance, real estate, and business services seemed to decline more than aggregate production in responding to the interest rates shocks. In short, those sectors that are heavily dependent on bank loans are more sensitive to monetary policy shocks. In comparison, a recent study by Tang (2006) examined the relative importance of the monetary policy transmission mechanism channel (interest rates, credit, asset price, and exchange rate channel) by using 12 variables in an open-economy VAR model. The variables, namely four foreign variables (foreign block), and eight domestic variables (domestic block), were estimated using a recursive VAR identification scheme. The foreign block was assumed to not be completely exogenous to the domestic block, whereby the domestic variables are allowed to affect the foreign variables in lags, but not contemporaneously. His finding concluded that the interest rates channel plays a pivotal role in influencing output and inflation. In addition, the asset price channel is also relevant in explaining output variability, but for inflation, the exchange rate channel is more relevant than the asset price channel.

To the author's best knowledge, so far there has been no empirical study in Malaysia that linked foreign shocks, monetary policy, and domestic macroeconomics fluctuations by using an open economy SVAR framework. The inclusion of foreign variables in the SVAR model is reasonable given that Malaysian is a small and highly trade-dependent economy; thus, it is expected that Malaysian macroeconomic fluctuations and monetary policy will be vulnerable to external shocks. In fact, no empirical study has examined the effectiveness of monetary policy in stabilizing the macroeconomics variables (domestic output and inflation) from external shocks. Therefore, based on this backdrop, this study provides a novel contribution to the

monetary policy analysis in a small-open economy (i.e. Malaysia) by using an open-economy SVAR study.

### 3. Estimation Procedures

#### 3.1. Data and Variables Description

All data are at a monthly frequency spanning from January 1980 until May 2009 and collected from the IMF's International Financial Statistic (IFS), except for asset price, whereby the data were collected from Thompson Datastream. All variables were transformed into logs except for FFR, INF and IBOR, which are stated in percentage points. Specifically, the endogenous variables included in the VAR are;

(i) Oil Price (*LOIL*) in US \$ per barrel; (ii) US Industrial Production Index (*IPIUS*) as a proxy for foreign income; (iii) Federal Fund Rate (FFR) as a proxy for foreign monetary policy; (iv) Malaysian Industrial Production Index (IPIM) as a proxy for domestic income; (v) Malaysian inflation (*INF*) rate in which is calculated from the changes in the Consumer Price Indices (CPI); (vi) Narrow monetary aggregate, M1 (*LM*); (vii) interbank overnight rate (IBOR) as an indicator for a monetary policy variable; (viii) Kuala Lumpur Composite Index (*KLCI*), and (x) Nominal Effective Exchange Rate (*NEER*).

In addition to the endogenous variables, the model also includes three dummy variables for breaks in the intercept, which coincide with major economic events. Specifically, the events are: the regime shift from monetary targeting to the interest rates targeting, the period in which the Ringgit was pegged to the US dollar, and the Asian financial crisis. It is assumed these three events only influence variables in the domestic block rather than the foreign block. In addition, the seasonal dummy has also considered for all endogenous variables.

#### 3.2. Structural VAR Modelling

It is assumed that a small-open economy like Malaysia is described by a structural form representation. The dynamic relationship of the system of equation in the structural model can be written as follows;

$$A_0 Y_t = \Gamma_0 D_0 + A(L) Y_t + \varepsilon_t \quad (1)$$

Where,  $A_0$  is an invertible square matrix of coefficients relating to the structural contemporaneous interaction between the variables in the system,  $Y_t$  is a (9×1) matrix that is the vector of system variables or

$$[\Delta LOIL \ \Delta LIPIUS \ FFR \ \Delta LIPIM \ INF \ \Delta LM \ IBOR \ \Delta LNEER \ \Delta LKLCI]' , D_0$$

is a vector of deterministic variables (constant, trend and dummy variables),  $A(L)$

is a  $k^{th}$  order matrix polynomial in the lag operator  $L$

$$[A(L) = A_1L - A_2L^2 - \dots - A_kL^k],$$

$$\varepsilon_t = \left[ \varepsilon_t^{\Delta LOIL} \quad \varepsilon_t^{\Delta LIPIUS} \quad \varepsilon_t^{FFR} \quad \varepsilon_t^{\Delta LIPIM} \quad \varepsilon_t^{INF} \quad \varepsilon_t^{\Delta LM} \quad \varepsilon_t^{IBOR} \quad \varepsilon_t^{\Delta NNEER} \quad \varepsilon_t^{\Delta KLKCI} \right]$$

is the vector of structural shocks which satisfies the conditions that  $E(\varepsilon_t) = 0$ ,

$$E(\varepsilon_t \varepsilon_s') = \Omega_\varepsilon = I \text{ (identity matrix) for all } t = s.$$

### 3.2.1. Identification Scheme

In identifying the structural VAR model, this study employed the SVAR-A model proposed by Amisano and Giannini (1996). Sufficient restrictions have to be imposed on matrix  $A_0$ . According to the order condition, for the system to be just identified or exactly identified, it requires  $K(K-1)/2 = 9(8)/2 = 36$  zero restrictions on the contemporaneous matrix  $A_0$ . However, since the contemporaneous matrix  $A_0$  in equation (2) has 40 zero restrictions, the SVAR model is over-identified. In matrix form, it can be represented as follows;

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{21}^0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{31}^0 & a_{32}^0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{41}^0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ a_{51}^0 & 0 & 0 & a_{54}^0 & 1 & 0 & 0 & 0 & 0 \\ a_{61}^0 & a_{62}^0 & a_{63}^0 & a_{64}^0 & a_{65}^0 & 1 & 0 & 0 & 0 \\ a_{71}^0 & a_{72}^0 & a_{73}^0 & a_{74}^0 & a_{75}^0 & a_{76}^0 & 1 & 0 & 0 \\ a_{81}^0 & a_{82}^0 & a_{83}^0 & a_{84}^0 & a_{85}^0 & a_{86}^0 & a_{87}^0 & 1 & 0 \\ a_{91}^0 & a_{92}^0 & a_{93}^0 & a_{94}^0 & a_{95}^0 & a_{96}^0 & a_{97}^0 & a_{98}^0 & 1 \end{bmatrix} \begin{bmatrix} \mu_t^{\Delta LOIL} \\ \mu_t^{\Delta LIPIUS} \\ \mu_t^{FFR} \\ \mu_t^{\Delta LIPIM} \\ \mu_t^{INF} \\ \mu_t^{\Delta LM} \\ \mu_t^{IBOR} \\ \mu_t^{\Delta NNEER} \\ \mu_t^{\Delta KLKCI} \end{bmatrix} = \begin{bmatrix} \varepsilon_t^{\Delta LOIL} \\ \varepsilon_t^{\Delta LIPIUS} \\ \varepsilon_t^{FFR} \\ \varepsilon_t^{\Delta LIPIM} \\ \varepsilon_t^{INF} \\ \varepsilon_t^{\Delta LM} \\ \varepsilon_t^{IBOR} \\ \varepsilon_t^{\Delta NNEER} \\ \varepsilon_t^{\Delta KLKCI} \end{bmatrix}$$

(2)

#### Identification of Foreign Blocks.

The variables in foreign blocks have been assumed to be completely exogenous to the domestic blocks. It is common to identify that the foreign variables do not respond contemporaneously or with lags to the movement in the domestic variables in a small-open country. This assumption is reasonable given that Malaysia is a small-open economy and has no powerful impact on the international level. Specifically, the world oil price is a structural disturbance or exogenous variable that is uncorrelated with other contemporaneous shocks. Meanwhile, the US income and

FFR can influence world oil price in lags. The US income is assumed to respond contemporaneously to the world oil price and all foreign variables lag. This means that the US income has a negative response to the world oil price because the US is a major net oil importer country in the world. The FFR is assumed to respond contemporaneously to the innovations in world oil price and the US income and all foreign variables lag. The FFR reacts positively to the world oil price in minimizing the inflationary pressure due to the positive shocks of world oil price. This assumption is also consistent with prior studies, for example, Hamilton (1996) and Bernanke et al. (1997) who found that oil price movements have a significant forecast power for the stance of monetary policy in the US economy. In contrast, FFR responds negatively to the US income in minimizing the output gap.

*Identification of Target Variables*

Domestic output growth has been assumed to respond contemporaneously only to the world oil price shocks, and respond in the lags to all endogenous variables. Domestic output growth reacts positively to the current growth of world oil price. This assumption is reasonable given that Malaysia is net exporter of oil. However, in the long run, the relationship between oil price and output is expected to be negative because an increase in world oil price will increase the cost of production, whereas the firms will respond by cutting the level of production or investment. In addition, it is assumed that Malaysian output does not respond contemporaneously with other variables in the system. For instance, the monetary policy variables, namely the monetary aggregate and interest rates, cannot influence output contemporaneously. The main plausible justification for this assumption is that firms do not change their output and prices instantaneously in responding to the monetary policy signal within a month, due to the inertia, adjustment costs and planning delay; but they will respond immediately to the current oil prices following their mark-up rule (Kim and Roubini, 2000). This type of restriction is also imposed by Bernanke and Blinder (1992), and Bernanke and Mihov (1998).

Domestic inflation has been assumed to respond contemporaneously to the innovations in oil prices and domestic output. The positive innovation in oil prices and domestic output will spontaneously accelerate the domestic price level. However, other variables in the system cannot influence domestic inflation spontaneously because inflation is a slow-moving variable. However, all endogenous variables are assumed to affect the inflation rate in the lags.

*Identification of Monetary Policy Shocks*

The main issue relating to monetary policy analysis in the SVAR study is the appropriate identification of monetary policy shocks. In market economies, the use of the interest rates as a major instrument of monetary policy does not imply that it can ignore the role of money supply. This is because the interest rates are determined by financial markets. For example, if the monetary authority wants to lower the

interest rates but not supporting the required increase in the money supply, it would find the market interest rates to deviate from the desired level. As a result, the intended effects on expenditures will not be achieved. Therefore, an interest rate policy must be accompanied by an appropriate money supply (Handa, 2009). For that reason, this study will consider two types of monetary policy shocks, namely, money supply and interest rates.

It is assumed that the monetary authority (the BNM) sets the money supply after observing the current level of all foreign variables, domestic output growth and inflation. This is reasonable given that monetary authority can observe the data on a monthly basis and chooses the amount of money supply to offset any negative effect resulting from foreign shocks, domestic aggregate demand and inflation shocks on the domestic economy. Besides money supply, the monetary authority can also use interest rates as a policy target. Thus, it is assumed that the monetary authority sets the interest rates after observing the current value of domestic variables, those are domestic output, inflation and money supply, and all foreign variables; but not the current value of other variables. The inclusion of output, inflation and money in the monetary policy reaction function is reasonable given that the central bank can observe these data on a monthly basis. For instance, if the amount of money supply has grown rapidly, interest rates will decline, which in turn increases the inflation rate due to the aggregate demand pressure. As a result, the central bank will respond immediately by increasing the policy interest rates (interest rates smoothing) to minimize the inflationary pressure. The inclusion of foreign monetary policy in the domestic monetary policy reaction function is reasonable given that the Malaysian economy is highly dependent on the US economy. Therefore, it is reasonable to assume that the BNM will respond positively to the US monetary policy in minimizing the capital outflow as well as stabilizing the domestic currency. The justification of the monetary policy reaction function is also consistent with previous studies, for example, Kim and Roubini (2000), Cushman and Zha (1997), and Sim and Zha (2005).



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*Identification of exchange rate and asset price shocks*

The exchange rate is assumed to respond contemporaneously with all foreign and domestic variables (except stock prices). In contrast, the asset price is assumed to respond contemporaneously to all foreign and all domestic variables. This assumption is reasonable given that exchange rate and stock market are fast-moving variables in the system. The asset price is assumed to respond contemporaneously to the exchange rate because any changes in the exchange rate will influence international capital mobility, which in turn affects the stock market. For instance, an appreciation in domestic currency makes domestic assets more expensive to the international investors, and therefore decreases the demand for domestic asset, subsequently leading to a decline in the asset price.

**3.3. Shutdown Methodology**

In order to examine the effectiveness of monetary policy in mitigating the effect of foreign shocks on domestic macroeconomic variables (output and inflation), the baseline impulse response function must be compared with the constrained model. In the constrained model, both monetary policy variables (money supply and interest rates) are shut down by setting the monetary policy coefficient equal to zero in the domestic output and inflation equations. To shut down the effect of monetary policy variable on domestic output, the estimated contemporaneous coefficient and all lagged coefficients of monetary policy variable in the domestic output equation are set to zero. Similarly, to shut down the effect of monetary policy on inflation, the estimated contemporaneous coefficient and lagged coefficients of monetary policy in the inflation rate equation are set to zero. By shutting down the estimated coefficients of monetary policy, the effects of foreign shocks on domestic macroeconomics variables can be examined without allowing endogenous responses of the monetary policy variables. Therefore, the deviation or difference of the constrained impulse response from the baseline impulse response represents the relative importance of monetary policy in stabilizing the macroeconomics variable in response to foreign shocks.

**4. Empirical Results**

This section discusses the main empirical findings that consist of the results of preliminary analysis and the structural impulse response function (SIRF). The results of shutdown methodology are also discussed in examining the relative importance of monetary policy in mitigating the negative effect of external shocks to domestic economy. Before estimating the SVAR model, the unit root test was conducted to investigate the stationarity of the data. Using Augmented Dickey-Fuller test, we found that only three variables, namely the federal fund rate (FFR), inflation (INF), and inter-bank overnight rate (IBOR) to be stationary at level form, at least at 10 percent

significance level; meanwhile other variables are stationary in first difference form. According to Blanchard and Quah (1989), Gali (1992), and Bjørnland and Leitemo (2009), the level and difference form variables can be combined in the VAR system as long as the system is stationary. An excellent survey about the issue of stationary systems, non-stationary I(1) systems, and a mixture of I(1) and I(0) variables in the SVAR model can be found in Levchenkova et al. (1998). However, we do not report the unit root test results in order to save space.

Since the baseline SVAR model is over-identified, we need to test the validity of the over-identification restrictions. The value of  $\chi^2$  (with four degrees of freedom) is 7.97 and the probability is 0.11; indicating that the over-identification restrictions are valid<sup>1</sup>.

#### 4.2. Structural Impulse Response Function (SIRF)

Figures 1–4 illustrate the structural impulse response functions of the endogenous variables in this study. The main focus is to analyze the foreign shock effects on domestic variables (monetary policy and macroeconomic variables), and the effectiveness of monetary policy in mitigating the negative effects of external shocks on domestic economy. The solid line represents the estimated responses; meanwhile the two dashed lines represent the confident bands or error bands. The error bands of the SIRF are derived from Hall's bootstrapping methodology, which has a 68 percent confidence interval with 300 being the number of bootstrap replications<sup>2</sup>. Accumulated impulse-response functions will be discussed for the first difference variables responses, while the usual IRF will be used for the level form variable responses. By accumulating the responses of the first-difference variable on its structural shocks, we can interpret the impact of structural shocks on the level form of endogenous ( $Y$ ) variables.

##### 4.2.1. Foreign Shocks Effects on Domestic Variables

###### *Response of domestic monetary policy*

Panel A in Figure 1 shows the accumulated response of money supply to the innovation in foreign shocks, meanwhile Panel B describes the response of interest rates to the innovation in foreign shocks. As can be seen in Figure 1 (Panel A), there was no significant response of money supply to the positive innovation in oil price growth in the first six months. However, after 6 months and up to 30 months, the accumulated response of money supply was significant and negatively responded to

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<sup>1</sup>The full result of SVAR contemporaneous coefficient estimation is available upon request.

<sup>2</sup>The SVAR model has been estimated by using J-Multi statistical software developed by Lutkepohl and Kratzig (2004).

the innovation in world oil price growth. For example, within 17 months the accumulated responses of money supply was -0.4 percent in response to the one percent increase in world oil price growth. The negative response of money supply shows that the policy maker was concerned in stabilizing domestic price level to offset an inflationary pressure due to the adverse supply shock from an increase in the world oil price. However, after 30 months, the accumulated response of money supply positively affects the innovation in world oil price growth. The positive response is because the policy maker had acted by stimulating aggregate demand to offset the adverse supply shocks. The response of the interest rates to the innovation in world oil price growth was negative within 3 months, that is, the interest rate declined by 0.15 percentage points in response to the one percent increase in world oil price growth. However, after 3 months and up to 10 months, the interest rate reacted positively to the world oil price growth, and reached the maximum point at 0.20 percentage points in 10 months. After 10 months, the response of interest rates gradually decreased, decaying after 40 months.

Money supply reacted negatively to foreign income shocks. For instance, an accumulated response of money supply in response to one percent increase in foreign income growth was appropriately at -1 percent after a 15 month period. One possible explanation is that the monetary authority was concerned in stabilizing the domestic price level, since the expansion of foreign income had triggered an increase in domestic inflation due to an increase in external demand. In contrast, the interest rate responded significantly and positively to foreign income shocks with the highest response being 0.22 percentage points within 10 months. However, after 10 months the positive response of the interest rate began to reduce and decayed after 50 months.

Money supply has positively responded to the positive innovation in FFR. For instance, the highest accumulated response recorded is within a 10 month period, whereby a one percentage point increase in FFR led to an increase in money supply of 0.6 percent. However, after 10 months, the accumulated response of money supply gradually declined and reached zero after 50 months. The positive response of money supply implies that the monetary authority was concerned to off-set the negative effect of monetary tightening in the foreign country (US). The domestic interest rate had responded positively to the FFR shocks, recording a 0.05 percentage point change in three months. However, after three months up to 5 months, the domestic interest rates responded negatively, having fallen by 0.10 percentage point in response to a one percentage point increase in FFR. In contrast, after 15 months the domestic interest rate responded positively to the positive innovation in FFR. The positive response of domestic interest rates implies that the monetary authority was concerned about the capital inflow from domestic country to the US due to the monetary tightening in the US. Therefore, to ensure that portfolio investment in

Malaysia is competitive, the BNM has to respond by increasing the domestic interest rates.

*Response of domestic macroeconomic variables*

Figure 2 in Panel A-Panel C describes the response of domestic macroeconomic variables to the innovation in foreign shocks. As depicted in Figure 2 in Panel A, a positive innovation in world oil prices growth led to an increase in domestic output for up to four months. However, after four months the positive innovation of the world oil price growth led to a decline in domestic output. For instance, within 9 months, the accumulated output declined by 1.5 percent before reducing to 1.0 percent after 25 months. The positive response of output within a four month period is reasonable given that Malaysia is a net oil exporter country. An increase in world oil price has generated higher income to the petroleum industry, and subsequently leads to an increase in domestic output. However, after four months, output responded negatively to the world oil price because of the adverse supply shocks. For example, an increase in the world oil price will lead to an increase in firms' production costs, and subsequently the firms will respond by contracting their investment spending. Domestic inflation also positively responds to the positive shocks in the growth of world oil price. For instance, the highest effect is recorded in a 5 month period, whereby every 1 percent increase in world oil prices growth led to an increase in the inflation rate of 0.225 percent. However, after 5 months the response of inflation gradually declined, and vanished within 40 months.

The exchange rate responded positively and significantly to the positive shock in the world oil price growth, and the accumulated effect was approximately 1.2 percent after 36 months. In other words, an increase in the world oil price triggers an appreciation in the domestic currency relative to other currencies because Malaysian is a net exporter of oil. In contrast, the stock market responded negatively to the positive shock in the world oil price growth after 4 months. For example, the highest accumulated effect is in 14 months, that is, a one percent increase in world oil price growth led to a decline in domestic asset prices of approximately 3 percent. One possible explanation is that firms will shrink their production and investments due to an increase in the costs of production, which in turn will reduce the firms' profit (cash flow), and subsequently reduce asset prices.

Panel B in Figure 2 plots the response of domestic macroeconomic variables to innovation in foreign income (US output). As can be seen, domestic output growth positively responded to the foreign demand shock. For example, after 30 months, the accumulated response of domestic output growth is 3.25 percent in response to a one percent increase in foreign income growth. The positive response of domestic income is reasonable since most of the Malaysian exports are concentrated in the US market. The effect of the US income shock to domestic inflation was positive within 10 months, whereas after 10 months domestic inflation had responded negatively.

For example, in a five month period, a positive shock in US output led to an increase in domestic inflation by 0.5 percent. On the contrary, within a 35 month period, a one percent of increase in the US income growth led to a reduction in domestic inflation of 0.3 percent.

A positive shock in the US income had caused the exchange rate to respond negatively within 5 months; however, after 5 months the negative response started to dwindle until it reached zero in 25 months, and a positive effect after 25 months. The positive response of exchange rate (appreciation in domestic currency) occurs because an increase in foreign income has stimulated domestic exports, and afterwards has increased the demand for domestic currency. In contrast, the asset price shows no significant effect in responding to the foreign income shock within 5 months. However, between 5 and 10 months, there was a strong response of the asset price, which decline at 3 percent in 10 months in responding to one percent increase in foreign income growth. In contrast, after 10 months, the negative response of the asset price was beginning to reduce, and had positive effect after 30 months. This might be due to an increase in foreign income which stimulated the demand for domestic assets from the foreign country, and subsequently increased the asset price.

Panel C in Figure 2 shows the effect of foreign monetary shocks on domestic macroeconomic variables. As can be seen, the accumulated response of domestic output was positive within a 5 month period; however, the effect is relatively small. After 5 months, the accumulated response of domestic output had declined. For example, within 60 months period; the accumulated response of domestic output decreased by 1 percent in response to a one percentage point increase in FFR. A possible explanation is that an increase in the foreign interest rate contracted the foreign economic activity, which afterwards decreased foreign demand, and subsequently contracted the domestic economy. Domestic inflation had responded negatively to positive innovation in FFR after 5 months. For example, in 20 months, domestic inflation had decreased by 0.125 percent in responding to one percentage point increase in foreign monetary policy.

The accumulated response of exchange rate to the innovation in FFR was negative within a 5 month period. This could be due to the capital inflow to the US because an investment in the US's financial assets is more competitive than financial investment in Malaysia. Thus, demand for the US currency will increase; while, demand for domestic currency decreases, which subsequently depreciates domestic currency. However, after 5 months, the accumulated response of exchange rate to the FFR is positive. A possible reason is that the BNM has increased the domestic interest rates to offset the capital outflow to the foreign country. The accumulated response of stock market to the FFR shocks is relatively small, which indicates that foreign monetary policy is not important in influencing the domestic stock market. For instance, a one percentage point increase in the FFR led to a decrease in domestic asset price by 1 percent within a 3 month period. However, between 3 months up to

15 months, the stock price had responded positively with the positive innovation in FFR. After 15 months, the accumulated effect of stock price had gradually decreased in response to the foreign monetary policy tightening.

#### 4.2.2. Shutdown Methodology

Figure 3-4 reports the results of foreign shocks effects on domestic macroeconomic variables (output and inflation) by comparing the constrained IRF and baseline model. The constrained IRF is reported in the left column, and the baseline model in the right column. As can be seen in the left column of Figure 3-4, the effect of world oil price shocks on domestic output and inflation is larger by shutting off an endogenous response of monetary policy as compared with the baseline impulse response. For example, after 25 months, in the constrained model, the accumulated response of domestic output growth had a negative effect by 2.5 percent, whereas, in the baseline model the accumulated output declined by 1 percent in responding to a one percent increase in world oil price growth. The effect of the world oil price growth on domestic inflation is also higher without an endogenous response of monetary policy, with the highest effect being recorded at 0.35 percent in 10 months. In comparison, in the baseline model the highest effect of inflation was at 0.25 percent in 7 months. Therefore, we can conclude that monetary policy plays an important role in stabilizing the domestic economy from the adverse supply shocks (an increase in the world oil price growth).

The Malaysian economy is also influenced by the foreign demand shocks, in particular a foreign income shock from a major trading partner (US). A positive innovation in US income will generate an expansion in domestic output growth through an increase in exports, and can accelerate inflation rates. Therefore, monetary policy can be used as a stabilization policy in minimizing the effect of a foreign shock on the domestic inflation rate. In Figure 4, by shutting off monetary policy (constrained IRF), a positive innovation in US income has increased the domestic inflation rate by approximately 0.2 percent within 8 months, while, by implementing monetary policy (baseline IRF), it can minimize an inflation rate at 0.05 percent in 8 months. However, after 18 months by shutting off monetary policy, the positive innovation in foreign income has decreased the inflation rate, with the highest level being recorded at -0.2 percent after 30 months. In contrast, in the baseline model, the inflation rate had decreased after 13 months, with the highest negative effect being recorded at -0.25 percent in 35 months.

A foreign monetary policy shock is also important in influencing the domestic economy. Therefore, monetary policy can be used to mitigate the negative effect of monetary policy tightening from a foreign country to the domestic economy. By shutting down the monetary policy variables, the accumulated response of domestic output has a negative effect after 5 months in response to the foreign monetary policy tightening. The maximum accumulated response is recorded in period 60 months,

when a 100 basis point increase in FFR led to a decline in domestic output of 1.2 percent. In the baseline model, domestic output decreased after 5 months; however the accumulated effect was approximately 1.0 percent in 60 months. This finding shows that monetary policy plays a marginal role in minimizing the negative effect of foreign monetary policy shocks on domestic output growth. The effect of FFR on domestic inflation is negative either by shutting off monetary policy or in baseline model. However, the effect of FFR shocks to domestic inflation is relatively low in the constrained model as compared to the baseline model. Specifically, after 20 months, the inflation rate has declined by 0.075 percent in the constrained model, whereas, in the baseline model, the inflation rate has decreased by more than 0.10 percent.

#### **4.2.3. Robustness Checking<sup>1</sup>**

Several alternative procedures have been considered in this study; (i) estimating the recursive SVAR model; (ii) alternative contemporaneous structural identification schemes; (iii) model with money demand; and (iv) model without money. In general, the results are robust with the baseline model. Foreign shock appeared to play a prominent role in influencing the domestic macroeconomics fluctuations, and monetary policy. Monetary policy is also able to minimize the negative effect of foreign shocks on domestic economy, in particular economic growth and inflation.

### **5. Summary and Conclusion**

This study examines the effect of external shocks, namely the world oil price and the US international transmission (US income and US monetary policy) upon domestic monetary policy and macroeconomic fluctuations. The effectiveness of monetary policy in mitigating the negative effect of external shocks to the domestic economy (output and inflation) was also examined by using the shutdown methodology. An open-economy SVAR modelling framework has been used in investigating the propagation of foreign shocks to domestic monetary policy and macroeconomic variables.

The results of the study revealed that the macroeconomic variables and monetary policy in a small open economy are vulnerable to the exogenous shocks from external environment. The effects of foreign shocks on domestic macroeconomic variables are also shown to be consistent with economic theory. Output growth decreases, and the inflation rate rises in response to an adverse supply shock (positive innovation in the world oil price). Monetary policy also plays a vital role in mitigating the negative effects of foreign shocks (adverse supply shocks) on

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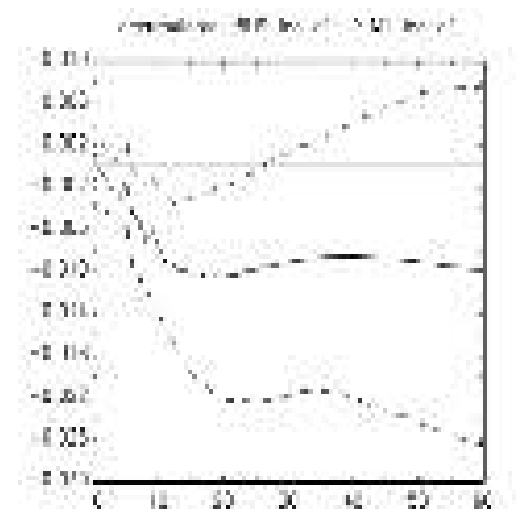
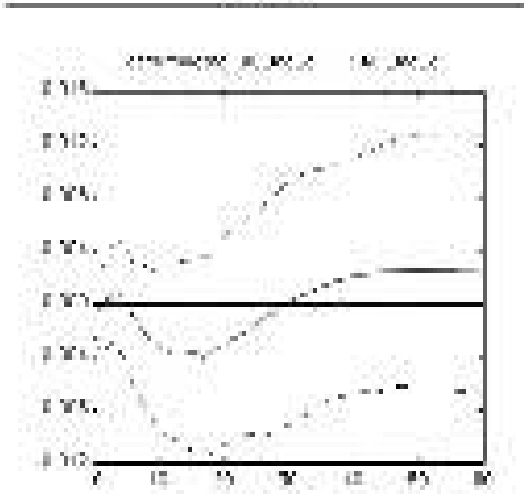
<sup>1</sup>I do not report the full result of robustness checking to save space. However, the full results are available upon request.

domestic macroeconomic variables (economic growth and inflation). This finding indicates the important role of monetary policy in stabilizing domestic economy following an adverse supply shock (for example, an increase in world oil price).

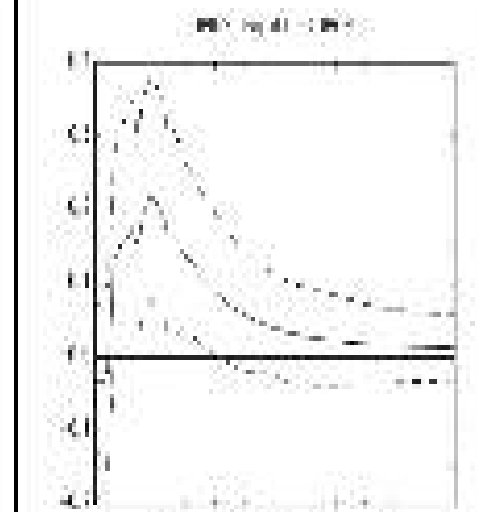
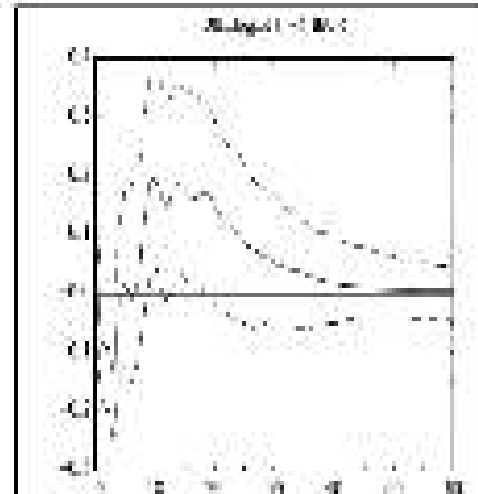
The policy implications in this study highlight two significant indications for monetary policy implementation in a small open economy. First, the monetary authority has to closely monitor the external environment, such as shocks resulting from the world oil price, and foreign monetary policy and foreign income in formulating their monetary policy. This is because the foreign shocks have a significant effect on domestic macroeconomic variables. Therefore, by considering the external events in the monetary policy strategy, the monetary authority can implement an appropriate policy in achieving their ultimate target in terms of economic growth and price stability. Second, the monetary authority can also use monetary policy as a stabilization policy in mitigating the negative effects of external shocks on the domestic economy.



Panel A



Panel B



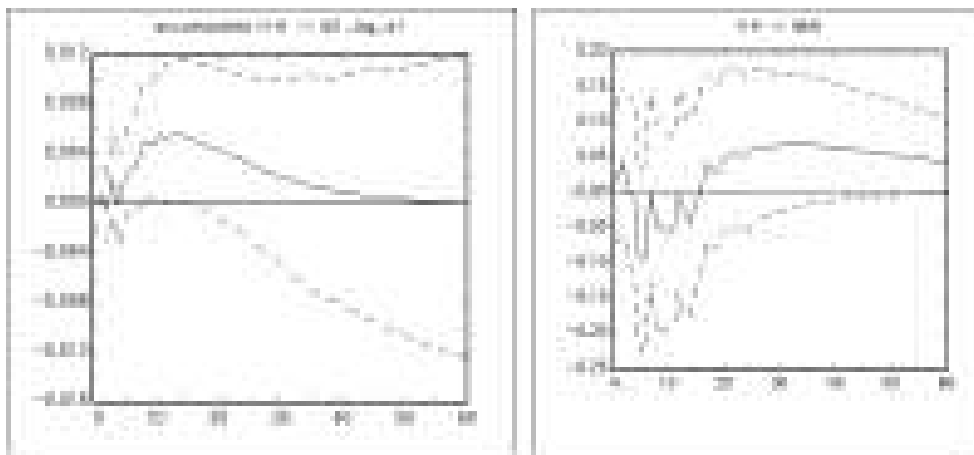
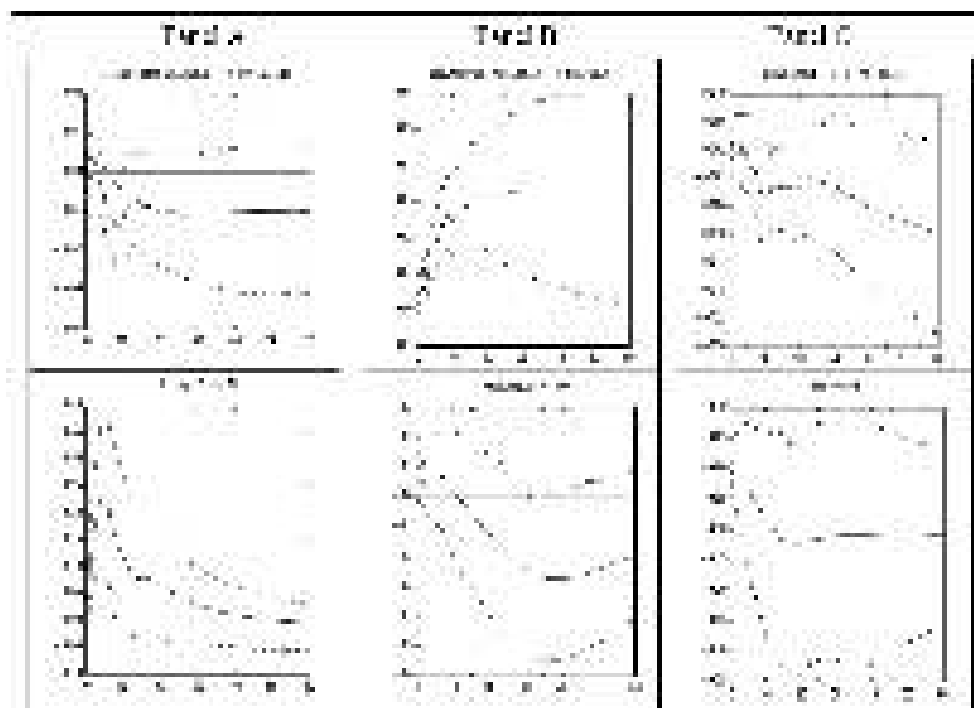
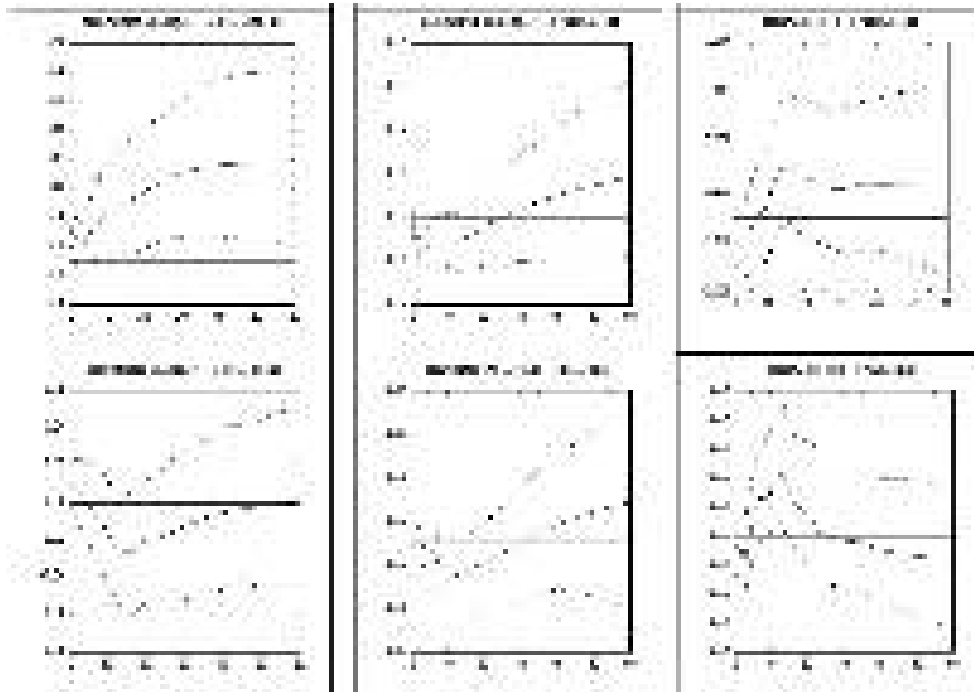


Figure 1. Structural Impulse-Response Function: The Effect of Foreign Shocks on Monetary Policy Variables





**Figure 2. Structural Impulse-Response Function: The Effect of Foreign Shocks on Macroeconomic Variables**

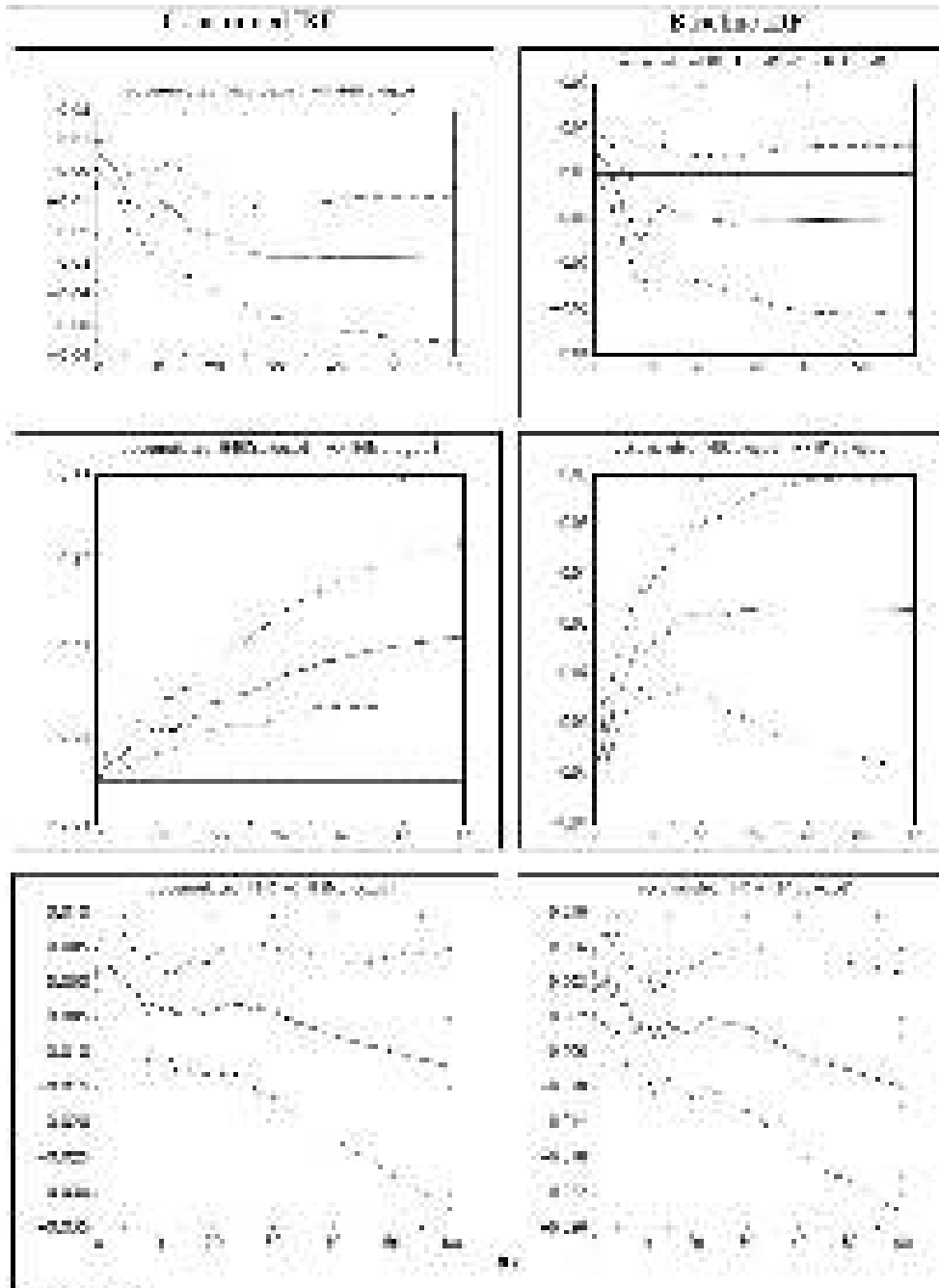
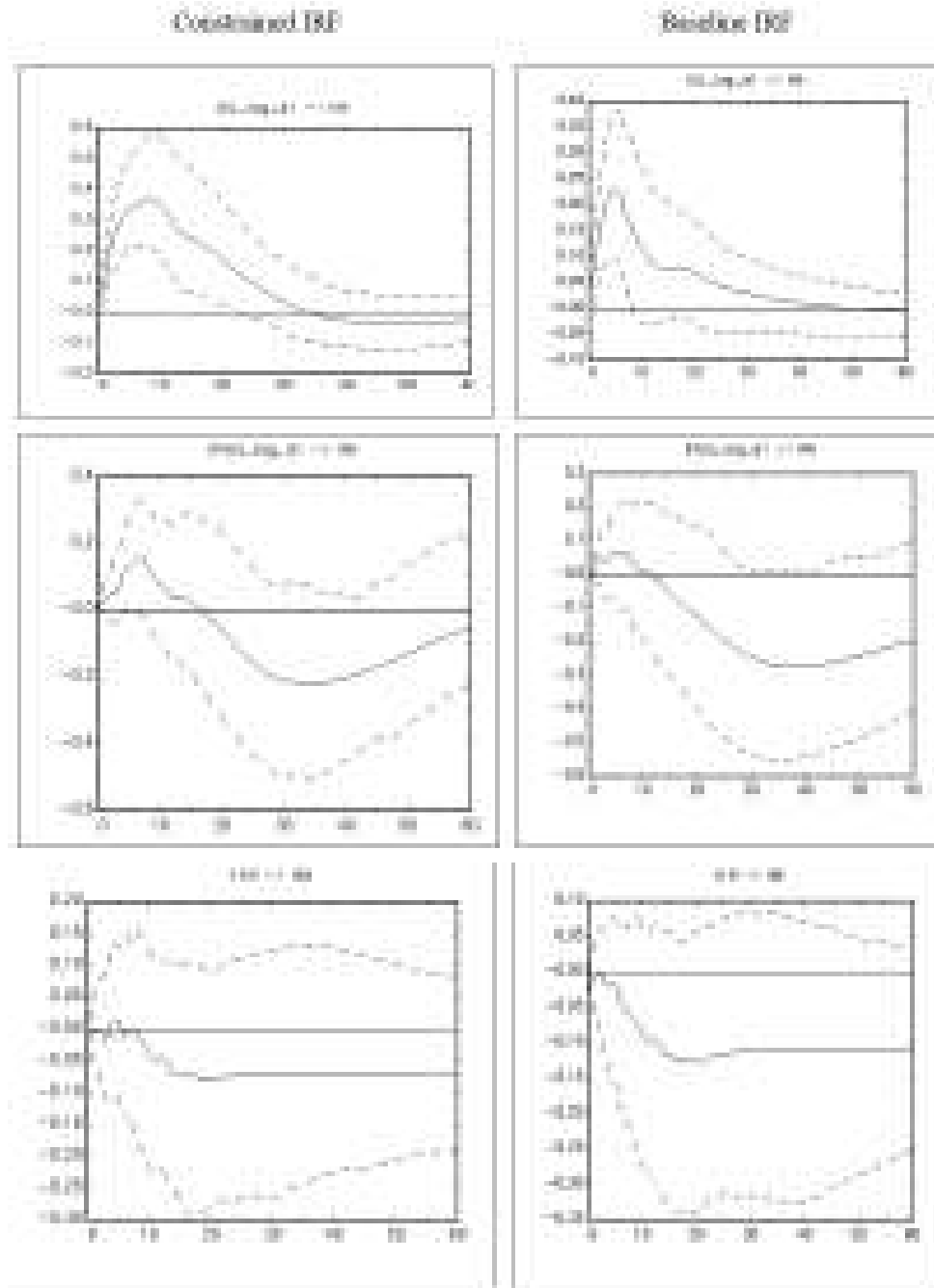


Figure 3. Structural Impulse-Response Function: The Effect of Foreign Shocks on Domestic Output



**Figure 4. Structural Impulse-Response Function: The Effect of Foreign Shocks on Inflation**

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## Information Needs for Accountability Reporting: Perspectives of Stakeholders of Malaysian Public Universities

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**Abstract:** The study aims at exploring the needs of a broad group of stakeholders of Malaysian public universities with respect to information items that should be disclosed in the university annual report, and their views on the disclosure importance of the items. This is a preliminary study towards the effort to develop an accountability reporting framework for Malaysian public universities. A questionnaire survey on the universities' stakeholders representing each stakeholder group which include policy makers, students, parents, employers, the public, university management and employees, suppliers and oversight entities was carried out in order to identify and confirm the stakeholders' disclosure needs. It is expected that the needs of the stakeholders in terms of information to be reported are comprehensive which include financial and non-financial information; and there are differences in the views on the disclosure importance of information among the stakeholder groups. The findings of this study provide a clear understanding of the information that should be disclosed in the annual reports of Malaysian public universities for accountability purpose. The findings may potentially assist the public universities to improve the way they discharge their public accountability through annual reporting.

**Keywords:** Accountability reporting; University stakeholders; Information needs

**JEL Classification:** M4

### 1. Introduction

The public sector around the world is under increasing pressure to be more productive and effective to achieve economic efficiency as well as to secure desired outcomes (Aucoin & Heintzman, 2000). In Malaysia, it has been made clear that the

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public is not only interested in the accountability for financial management of the public sector but also the accountability for its operational performance (Siddiquee, 2006). In the context of public universities and in line with the National Higher Education Strategic Plan 2020, Malaysian public universities are being promised greater autonomy, whereby, among others, the universities are given greater flexibility and freedom in their management of public financial resources. This greater autonomy means that the universities have to meet greater public accountability obligation, in which the universities are obliged or accountable to examine themselves and be examined by their stakeholders. The stakeholders have the right to be provided with sufficient and reliable information so that they can scrutinize on the accountability of the universities.

It has been recognized in the literature (e.g. Coy et al., 2001; Hooks et al., 2002; Ryan et al., 2002; Coy & Dixon, 2004) that the best possible medium to discharge public accountability obligation is through annual reporting. This is because it satisfies the needs of a wide range of stakeholders. The information needs of a broad group of stakeholders identified in this study will provide a clear understanding of the information to be disclosed in the annual reports of Malaysian public universities. The study findings could potentially assist the universities to improve the way they discharge their accountability to a wide range of stakeholders through reporting. The improvement is critical because public universities as essential components of national economic developmental strategy are facing an increased pressure to become more accountable, efficient and productive in utilizing public generated resources. The stakeholders' needs that are identified in this study can also be used as input in the development of a disclosure index which can then be applied to universities' annual reports to examine the information gap between the stakeholders' expectations and universities' reporting practices.

The findings can also be used as input for future research to develop and recommend the best practice framework of accountability reporting of Malaysian public universities. Moreover, they may also provide a basis and guidelines for regulators and legislators to review and improve current statutory provisions of annual reporting of Malaysian public sector entities in general, and public universities in particular. The paper proceeds as follows. The next section provides a review of literature. The method employed and research findings are then discussed. The paper ends with a summary, limitations and a suggestion for future research.

## **2. Insights from Literature**

Higher education institutions such as public universities have to identify their stakeholders and their needs. Meeting their stakeholders' needs is an important factor for the universities in determining their relational strategies (Dobni & Luffan, 2003). The stakeholder needs in our study are referred to as the needs for information to be

disclosed in the university annual reports. In order to identify the needs, it is necessary to first identify who the university stakeholders are.

### **2.1. University Stakeholders**

Stakeholders, according to Freeman (1984) are those individuals or groups who influence or are influenced by activities or actions of the organization and those with legitimate economic, social or political interest in the organization (Coy, Fisher & Gordon, 2001). In the context of tertiary education, Coy et al. (1997) identified 6 categories of university stakeholders within the public accountability framework. For each category, they suggested 19 groups of stakeholders of which 13 groups had been identified by Engstrom and Fountain (1989) within the decision usefulness framework. The 13 categories and groups of stakeholders are: internal campus-based citizens (senior managers, support staff, academicians, service recipients students), sister organization/competitors (employees of other tertiary education institutions), elected and appointed representatives (parliamentarians, institution council trustee board members, government and regulators, advisory committee members), resource providers (suppliers and lenders, donors and sponsors, investors and partners, professional associations), external citizens (voters and taxpayers, other pressure groups, non-student service recipients, advisers and consultants, alumni) and analyst and media (researchers, journalists, librarians).

In the current study, the internal campus-based citizens which comprised of senior managers, support staff, academicians, and students are considered as internal stakeholders. Meanwhile, those of sister organization/competitors, elected and appointed representatives, resource providers, external citizens and analyst and media are classified as external stakeholders. These two main groups of university stakeholders are the respondents involved in the questionnaire survey employed in determining the stakeholders' needs on the information that should be disclosed in university annual reports and the items disclosure importance.

### **2.2. Accountability Reporting and Stakeholder Needs**

Within the public accountability approach to annual reporting, the importance of reporting comprehensive information had been recognized in the previous research (Coy et al., 2001; Hooks et al., 2002; Ryan et al., 2002; Coy & Dixon 2004; Tooley & Guthrie, 2007; Tooley et. al, 2010). Such reporting is a significant reaction to public demand for accountability as it allows a public sector entity to publicly disclose its actions and performance and be responsible for its actions (OECD, 2004); and is a tool to enhance both external and internal accountability (Lee, 2008). In addition, for accountability purposes, the information reported should meet the expectations of a broad stakeholder groups (Coy & Dixon, 2004; Hooks et al., 2002; Tooley et al., 2010). As emphasized by the Office of Auditor General of New Zealand (OAG of New Zealand, 2002, p.5), "A framework for the external accountability reporting must take all elements of performance into consideration for

potential reporting and report performance elements that stakeholders want to know”.

Prior studies have recognized the importance of annual reporting in supporting public accountability. However, the literature in relation to information needed for the purpose of accountability is limited (Boyne et al., 2002; Connolly & Hyndman, 2004). In the context of Malaysian public sector, Suhaiza and NurBarizah (2011) investigated the disclosure level of the annual reports of public universities. The twenty five accountability index information classified under four main categories (Overview, Service Performance, Financial Performance and Physical and Financial Condition) were compared to the actual reporting practices of Malaysian Public Universities. It was found that the level of disclosure of accountability information was lower than the level of disclosure for complying with the Government Treasury Circular. In their study, the level of disclosure of accountability information was determined based on the accountability index proposed by Coy et al. (1993), a study conducted in a developed country, New Zealand. As Lee (2008) affirmed that types of information required by stakeholders often varied from one context to another, it is necessary to identify the needs of stakeholders of Malaysian public universities.

A number of previous studies had been conducted to determine the information needs of users of public sector annual reports. In Daniels and Daniels's (1991) study, four types of information based on users' needs were identified. The information types are information on compliance, information about financial viability, including current financial position and the prospects of the future continuation of services and the repayment of debt, information on operating performance and information about cost efficiency and effectiveness. Hay and Antonio (1990) noted on the importance of specific and detailed information rather than general statements in order to promote greater accountability. Detailed information should be extended to narrative and non-financial information which includes descriptions of objectives of services provided, performance indicators, and budgeting information (Lapsley, 1992). In other words, information that may indicate the performance of the service provided and the performance of an organization as a whole is useful for accountability purposes (Boyne et. al., 2002).

In terms of disclosure of performance indicators, Clark (2003) found that users of government annual reports had identified outcome measures as the most important performance indicators. This is followed by effectiveness measures, output measures, staffing ratios, efficiency measures and workload measures. In addition to these indicators, Clark also found that descriptive review of operations, statistical performance information, the auditor-general report, financial statements, notes to financial statements, and information regarding department secretary foreword are important items to be disclosed. Also, in the context of government annual reporting, Mack and Ryan (2004) discovered the users perceived that information such as summary facts, figures and key statistics, financial review and analysis, performance

indicators and budget versus actual information as useful and should be disclosed for the purpose of discharging accountability to stakeholders.

Wisniewski and Stewart (2004) recognized a broad group of stakeholders in a study that focused on performance measurement information in a sample of Scottish local authorities. They found consistency in the type of performance measurement information required by each stakeholder group (elected representatives, service managers, client departments, direct customers, staff and auditors). The required information identified in the study included target performance (based on stakeholder expectations, past performance and national standards), actual performance (against targets and over time) and stakeholder perceptions (against their expectations). These findings emphasized on the need for information pertaining to current responsibilities and intentions to be publicly reported (Farneti & Bestsbreur, 2004) so that the stakeholders are able to be involved in informed debate over the public sector's organizational goals as well as in monitoring and evaluating of the achievement the goals.

Previous research also found that the different groups of stakeholders need different types of information. For example, the group of oversight and legislative bodies may require wider performance information including efficiency and probity. Financiers and creditors groups may focus on information relating to solvency. The group of managers may need information regarding structural measures of organizational characteristics as they have control over such factors, while the clients as well as customers prefer outcome measures because they want to assess the results (Kanter & Summers, 1987).

Tooley, Hooks and Norida (2010) identified the information set which the stakeholders of Malaysian local authorities considered to be relevant in monitoring and assessing the local authority's performance. The stakeholders indicated strong interest in performance information that is not traditionally disclosed in the financial statements: non-financial information particularly performance measurement of outputs, outcomes, efficiency and effectiveness. Disclosures in the Statement of Revenue and Expenditure and forward-looking information were generally regarded by the stakeholders as the most important disclosures. The results of the study also indicated differences amongst stakeholders relating to the level of importance that they placed on certain items especially items that are related to internal policies and governance and financial position of the local authorities.

To summarize, the prior studies on stakeholders or users' information requirements had agreed on the importance of the needs of users or stakeholders. Attention to stakeholders is important because the accomplishments of public organizations are dependent on satisfying what key stakeholders perceive as valuable (Bryson, 1995). Meeting the needs of a broad group of stakeholders is important for accountability purposes (Coy & Dixon, 2004; Hooks et al., 2002; OAG of New Zealand, 2002; Coy

et al., 2001). The public university stakeholders, including the public, government and other stakeholders such as students and their families, employers and potential employers, the university management and employees have the right to be provided with sufficient and reliable information. This is because it allows them to debate and evaluate the accountability of the universities. As a public organization, a public university has a complex environment with many dimensions of accountability. This may lead to different types of information and disclosure requirements (Patton, 1992) from various groups of stakeholders, who have a social, economic and political interest (Coy & Dixon, 2004; Devas & Grant, 2003).

In the context of Malaysian public organizations, in particular public universities, questions that arise are on the needs of Malaysian public university stakeholders in terms of information that should be disclosed for accountability purposes; and do different stakeholder groups require different scope and nature of information disclosures. Thus, the objectives of this study are to (1) identify the stakeholders' perceptions of the importance of information items for disclosure in the university annual reports for the discharge of accountability and (2) examine whether or not there are significant differences in perceptions on the importance of information items for disclosure among the groups of stakeholders.

### **3. Method**

The process of data collection began with the selection of potential items for disclosure. The selection was based on an extensive review of literature, annual reports of public universities of Malaysia and other countries as well as statutory requirements such as a circular issued by the Treasury of Malaysia i.e. the Treasury Circular No. 4/2007 – Guidelines for the Preparation and Presentation of Financial Statements and Annual Reports of Federal Statutory Bodies. The questionnaire which includes the potential items for disclosure selected in this process was developed. A questionnaire survey was then carried out to identify and confirm the needs of a broad group of stakeholders of Malaysian public universities with respect to information that should be disclosed in university annual report and their views on the disclosure importance of the items (Likert Scale: 0 = unimportant to 4 = extremely important).

In total, 600 questionnaires were distributed amongst the stakeholder categories - to the internal stakeholders or campus-based citizen (university management, supporting staff, lecturers, students) and to the external stakeholders which comprises the groups of competitors (private university staff and students), elected and appointed representatives (the education executive council of state assembly, the Ministry of Higher Education management and advisory committee – the National Professor Council), resource providers (sponsors for student and lecturer scholarships or education loans, research grant providers and university suppliers),

external citizens (general public, employer/potential employers, NGOs, university alumni) and media. The response summary according to the groups of stakeholders is shown in Table 1.

**Table 1. Summary of Response**

	<b>Number Questionnaires Distributed</b>	<b>of</b>	<b>Number Questionnaires Received</b>	<b>of</b>	<b>Response Rate</b>
Internal stakeholders					
University management	20		13		65%
University supporting staff	25		16		64%
Lecturers	50		45		90%
Students (postgraduate and undergraduate)	125		102		82%
External stakeholders					
Competitors	25		15		60%
Elected and appointed representatives	25		14		56%
Resource providers	20		12		60%
External citizens	300		238		79%
Media	10		7		70%
	380		286		
<b>Total</b>	<b>600</b>		<b>462</b>		<b>77%</b>

#### 4. Findings

All items listed in the questionnaire were identified by stakeholders of Malaysian public universities as being significant in discharging of university accountability and should be disclosed in university annual reports. As summarized in Table 2, none of the total 78 information items rated below the level of 'quite important' and none of them were identified as being 'extremely important'. Thirteen items (17%) were rated as being 'very important' and majority of them (82%) were identified as being 'quite important'.

**Table 2. Degree of Importance of Disclosure**

Classification of Information Item	Frequency of Items (based on mean score)				
	4	3	2	1	0
Overview (12)	0	1	11	0	0
Financial Items (12)	0	3	9	0	0
Service – General (10)	0	0	10	0	0
Service – Teaching					
• Input (11)	0	2	9	0	0
• Process (8)	0	2	6	0	0
• Output and Outcome (11)	0	4	7	0	0
Service – Research (10)	0	0	10	0	0
Community Service and Industrial Network (4)	0	1	3	0	0
<b>Total (78)</b>	<b>0</b>	<b>13</b>	<b>65</b>	<b>0</b>	<b>0</b>

*Note: 4 = Extremely important; 3 = Very important; 2 = Quite important; 1 = Minor important; 0 = Unimportant*

The 13 items rated as being ‘very important’ cover the financial and non-financial information (refer Table 3). It is apparent that out of the 13 items, 9 of them (69%) are non-financial items and the rest are financial items. This shows that in particular, public university stakeholders have a high preference on non-financial teaching service items with two of the items receiving the top two scores; and the other 5 items receiving the fourth, seventh, tenth, eleventh and thirteen highest scores. In addition, the other non-financial items are related to overview and community service and industrial network items, namely auditor’s report and industrial network information, respectively. The four financial items which were identified as being very important by the stakeholders are financial performance statement, budget information, cost per student and financial position statement.

**Table 3. Top Thirteen Score Items**

Information Item	Category	Mean score (Max 4.00)
Qualifications of student intake	Service – Teaching	3.25
Processes to ensure quality of teaching	Service - Teaching	3.17
Auditors’ report	Overview	3.14
Number of graduates	Service - teaching	3.11
Industrial network	Community Service and Industrial network	3.10
Financial performance statement	Financial Items	3.08
Pass rate	Service - Teaching	3.04
Budget information	Financial Items	3.03
Cost per student	Service - Teaching	3.02
Fields of study	Service - Teaching	3.02
Destination or employment of students	Service - Teaching	3.02

Financial performance statement	Financial Items	3.01
Student satisfaction	Service - Teaching	3.01

Based on item category, as summarized in Table 4, items under the Overview category scored the highest importance mean (2.89) with Service in relation to teaching category; and the output and input indicators show the second highest aggregate mean score of 2.86. This is followed by the category of 'Financial items' with an overall mean value of 2.84. The rating of these items can be compared with items related to general service category which recorded the lowest aggregate mean score of 2.75. It is evident that, as a group, stakeholders perceived that the overview information of public university is more important and they were less concerned on university service information stated in general. However, in relation to university service, stakeholders emphasized more on teaching. University service in relation to research was rated the second highest aggregate mean score.

**Table 4. Mean Scores of Disclosure Importance by Category of Items**

Category	Means			Z-Score	P-Value
	All	Internal Stakeholder	External Stakeholder		
Overview	2.8883	2.8816	2.8924	-0.285	0.776
Financial Items	2.8436	2.8570	2.8354	-1.328	0.184
Service – General	2.7513	2.8767	2.6741	-2.602	<b>0.009</b>
Service – Teaching					
<i>Input</i>	2.8625	3.0532	2.7442	-4.790	<b>0.000</b>
<i>Process</i>	2.8328	2.9730	2.7465	-3.270	<b>0.001</b>
<i>Output and Outcome</i>	2.8636	2.9210	2.8284	-1.773	0.076
Service - Research	2.7857	2.9023	2.7137	-2.981	<b>0.003</b>
Community Service and Industrial Network	2.8160	2.9006	2.7640	-2.128	<b>0.033</b>

It is also clear in Table 4 that internal and external stakeholder groups indicated similar ranking on the relative importance of each category of informational item. They also had similar view on the level of importance for the items of Overview, Financial and Service relating to Output and Outcome measures. However, internal stakeholders rated the importance of items relating to General Service, Service in terms of teaching, service with regard to research as well as Community Service and Industrial Network more highly than the external stakeholders; and the difference of the views of both stakeholder groups for each of these categories is significant ( $p < 0.05$ ).

If Table 4 summarizes the differences of mean scores between internal and external stakeholders according to category of items, Table 5 shows the differences of the mean scores for each individual item between internal and external stakeholders. As shown in Table 5, and from the results of Mann Whitney U test, significant difference



( $p < 0.05$ ) in mean scores had been identified for 28 items of all categories. Out of the 28 items, more than 90% (26 items) were perceived by internal stakeholders as being more important than external stakeholders. In contrast, the external stakeholders rated Financial Review within the Overview category as well as the information on student retention and completion rate as the output and outcome indicator, more highly than internal stakeholders. It could be considered that collectively, the internal stakeholders are more concerned on the importance of comprehensive information which covers both financial and non-financial information in discharging university accountability. Similarly, as a group, the external stakeholders were concerned with a broad range of information, including the review of the overall financial performance and condition of the public university and student performance. A significant difference in the views of the disclosure importance between internal and external stakeholders is apparent for almost all items within the categories of teaching service in relation to input and process; whereby the internal stakeholders perceived those items being more important to be disclosed in public university annual reports as compared to the external stakeholders.

**Table 5. Items with a Statistically Significance Difference between the Mean Scores of Internal and External Stakeholder**

	<b>Internal Mean</b>	<b>External Mean</b>	<b>Z-Score</b>	<b>P-Value</b>
<b>Overview</b>				
Vice Chancellor/Chairman Statement	2.79	2.85	-1.033	0.302
Auditors' Report	3.08	3.18	-1.521	0.128
University Background	3.03	2.93	-0.941	0.347
Statements of Objectives	3.05	2.96	-0.732	0.464
Descriptive report/general review	2.81	2.66	-1.715	0.086
Financial Review	2.83	3.07	-2.532	<b>0.011</b>
Key Facts and Figures	2.70	2.61	-0.785	0.432
Prospective information	2.74	2.83	-1.565	0.118
Accounting policies	2.87	2.88	-0.608	0.543
University governance	2.89	2.96	-1.012	0.312
Statement of managerial responsibility	3.01	2.96	-0.078	0.938
Directory information	2.77	2.84	-0.696	0.486
<b>Financial Items</b>				
Financial Performance Statement	3.01	3.13	-1.343	0.179
Statement of cash flows	2.89	2.93	-0.391	0.695
Financial position statement	2.89	3.08	-1.775	0.076
Notes to the accounts	2.67	2.60	-0.538	0.591

Statement of cost of service	2.91	2.76	-1.354	0.176
Budget information	3.05	3.02	-0.388	0.698
Financial ratios	2.81	2.62	-1.776	0.076
Analysis of financial performance	2.94	3.00	-0.025	0.980
Investments	2.82	2.87	-0.262	0.794
Total values of estate	2.65	2.47	-1.716	0.086
Commitment and contingencies	2.81	2.76	-0.524	0.600
Report on government assistance received	2.84	2.82	-0.311	0.756
<b>Service: General</b>				
Analysis of campus service	3.04	2.73	-3.219	<b>0.001</b>
Achievements vs. objectives and targets	3.01	2.84	-1.548	0.122
Comparisons of actual results over time	2.97	2.78	-1.476	0.140
The reasons why actual results differed from the projected or targeted results	2.95	2.78	-1.163	0.245
Information on the factors that influence results	2.80	2.65	-1.198	0.231
The indirect consequences of services provided	2.73	2.53	-1.918	0.055
Staff training and development	2.90	2.74	-1.363	0.173
Equal employment opportunity information	3.01	2.98	-0.156	0.876
Environmental related information	2.55	2.13	-3.684	<b>0.000</b>
Health and safety information	2.81	2.59	-1.676	0.094
<b>Service: Teaching</b>				
<b>Input</b>				
Number of student	3.14	2.84	-3.466	<b>0.001</b>
Number of Foreign Student	2.94	2.62	-3.160	<b>0.002</b>
Cost per student	3.13	2.95	-2.160	<b>0.031</b>
Tuition revenues	3.18	2.80	-3.904	<b>0.000</b>
Number of Staff	2.99	2.56	-4.582	<b>0.000</b>
Qualifications of student intake	3.35	3.18	-1.603	0.109
Building usage	2.95	2.54	-4.114	<b>0.000</b>
Financial aid received	3.12	2.85	-3.225	<b>0.001</b>
Average financial aid per student	3.06	2.78	-3.232	<b>0.001</b>
Student diversity	2.79	2.51	-2.590	<b>0.010</b>
Class size	2.94	2.54	-4.096	<b>0.000</b>
<b>Process</b>				
Student staff ratio	2.70	2.48	-1.997	<b>0.046</b>
Staff workload	2.69	2.46	-2.258	<b>0.024</b>
Processes to ensure quality of teaching	3.15	3.18	-0.034	0.973

Library service information	3.06	2.07	-3.141	<b>0.002</b>
Computer service information	3.02	2.85	-1.317	0.188
Fields of study	3.15	2.94	-2.619	<b>0.009</b>
Utilization of resources	2.98	2.76	-2.184	<b>0.029</b>
Availability of part-time /distance instruction	3.04	2.61	-4.560	<b>0.000</b>
<b>Output and Outcome</b>				
Number of graduates	3.28	3.00	-3.345	<b>0.001</b>
Destination or employment of students	3.05	3.00	-0.773	0.440
Departmental reviews	2.82	2.45	-3.593	<b>0.000</b>
Pass rate	3.16	2.97	-2.181	<b>0.029</b>
Student satisfaction	3.09	2.96	-1.029	0.303
Employer satisfaction	2.62	2.59	-0.128	0.898
Alumni satisfaction	2.65	2.47	-1.592	0.111
Employment rate	2.93	2.95	-0.162	0.872
Ratio of number of graduates over number of students enrolled	2.96	2.95	-0.372	0.710
Comparison between actual outputs/outcomes over targeted outputs/outcomes	2.84	2.84	-0.055	0.956
Student retention and completion rate	2.74	2.91	-2.030	<b>0.042</b>
<b>Service - Research</b>				
Number of research graduates	2.90	2.81	-1.382	0.167
Number of postgraduate students	2.95	2.80	-1.696	0.090
Type of grant received	2.85	2.65	-1.876	0.061
Amount of research grants received	2.94	2.56	-3.626	<b>0.000</b>
Analysis of research grant per department/faculty/subject group	2.85	2.67	-1.850	0.064
Number of publications	2.89	2.58	-2.779	<b>0.005</b>
Publications by departmental/faculty/subject group	2.86	2.56	-2.837	<b>0.005</b>
Patents/inventions/consultations	2.82	2.75	-1.560	0.119
Destinations or employment of research graduates	2.98	2.85	-1.921	0.055
Recognition and award	2.98	2.94	-0.716	0.474
<b>Community Service and Industrial Network</b>				
Local community service	2.69	2.62	-1.014	0.311
National community service	2.82	2.66	-1.736	0.083
International community service	2.94	2.72	-2.577	<b>0.010</b>
Industrial network	3.16	3.07	-1.707	0.088

## **5. Conclusion**

Using the context of Malaysian Public Universities, the study finds that for accountability purpose, annual reports should provide comprehensive information which includes both financial and non-financial information. While the study results indicate that information within the categories of overview and teaching service is important, stakeholders also showed strong interest in financial items. This supports prior studies' findings in which financial statements information is useful (Connolly & Hyndman, 2004) besides the performance information located outside financial statements (Clark, 2003, Tooley, et.al, 2010), particularly the output and outcome measures (Clark 2003) and operating results (Jones et al. 1985).

This study shows that internal and external stakeholders differ significantly in their views on the disclosure importance at 5 out of 8 information categories (63%) of service in general, teaching service in relation to input and process measures, research service as well as community service and industrial network. These findings are consistent with prior studies (Jones et al. 1985; Hay & Antonio, 1990; Tooley et al. 2010) that identify in the differences in information requirement amongst different group of stakeholders. The findings also support Patton (1992) who stated that a complex public sector environment with many dimensions of accountability, may lead to different types of information and disclosure needs. This suggests that if various groups of stakeholders' information needs are to be met for accountability purposes, a broad range of information should be reported. In this regard, future research may examine gaps between the stakeholders' information needs and the actual reporting of information in public university annual reports. In this study, the information needs of university stakeholders are categorized into internal and external stakeholders; thus, future studies may analyze in greater detail on the differences between the stakeholder groups within the categories of internal and external stakeholders.

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## **Does Smart Power of ASEAN Cooperation Influence Firm Value? Evidence from Geopolitical Perspective**

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**Abstract:** This study examines the influence of the ASEAN cooperation on firm value. As far as the cooperation of the Association of Southeast Asian Nations (ASEAN) is concerned, one aspect of geopolitical mechanisms is ASEAN's smart power which combines hard and soft power. This smart power is considered an important mechanism for corporate strategies. Any changes in geopolitical decision between the ASEAN members will affect firm value especially firms segmented in the ASEAN countries. From a geopolitical perspective and by using data from public listed firms in Malaysia that were actively traded in ASEAN countries from 2009 to 2013, the study examined the influence of hard power indicated by military power, and soft power which refers to material resources and social power in terms of the relationship of political elites. The study found that the soft power of the ASEAN cooperation is positively associated with firm value. In contrast, the social power of political elites is negatively related to firm value, while the hard power fails to show any influence. Overall, the evidence suggests that corporate strategies should consider the benefit of ASEAN's material resources and the risk of forging relationships with political elites when designing market penetration strategies.

**Keywords:** Geopolitics; Firm Value; ASEAN Cooperation; Political Economy

**JEL Classification:** F23

### **1. Introduction**

Southeast Asia has long been recognized as an important region in the world's politics. The diversity of culture, language, and landscape throughout the region coupled with its wealthy natural resources make Southeast Asia significant to the economic prosperity of major economic powers (such as the United States of America).

More recently, the US has shown interest in the Trans-Pacific Partnership (TPP)

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negotiation (Straits Times, 2014). The success of TPP will represent 40 percent of world GDP and one-third of total world trade. It is seen as a core political interest of the US to tap into Southeast Asian growth and enjoy the prosperity of the Asian market. As the world's second largest economy, China has also offered huge investment and trade opportunities to Southeast Asia countries. Besides the clashing interest between the US and China in the Southeast Asia region, the new model of Sino-Japan is another critical path to the Southeast Asia architecture (Straits Times, 2014). Both China and Japan have their own hierarchical worldviews, in that China provides market opportunities and Japan provides investment opportunities.

Given the major powers' political games, it is crucial for the unity of ASEAN (Association of Southeast Asian Nation) to strengthen the region as a new major power across the globe (Rajaratnam, 1992). Starting with the Bangkok Declaration in 1967, the establishment of ASEAN, and followed by Malaysia's first call for 'neutralization of Southeast Asia' as an initiate Zone of Peace, Freedom and Neutrality (ZOPFAN), formalized in the 1971 Kuala Lumpur Declaration, ASEAN remains a key multilateral mechanism to promote regional cooperation in Southeast Asia.

As a founding member of ASEAN, Malaysia has enjoyed substantial trade and investment flows. Based on an investment study in 2013, Malaysian companies had emerged as ASEAN leaders in several key sectors such as plantations, finance, and oil and gas (Yan, 2013). Malaysia's largest multinational companies have also provided unique investment opportunities for global investors to take advantage of ASEAN's growth. Any political decisions among ASEAN member countries and Asian major powers are important considerations at advancing national strategic interests. Many scholars in this area suggest that besides economic uncertainty, geopolitical uncertainty is a new important element to be taken into account in corporate decision making (e.g. Behrendt & Khanna, 2003; Reynaud & Vauday, 2009; Teixeira & Dias, 2013). To provide a fundamental understanding on geopolitical influence on businesses in Southeast Asia, we raised two research questions. Does the ASEAN cooperation influence firm value of public listed firms in Malaysia? Which geopolitical components are significantly related to firm value?

To answer the above questions, we have chosen Malaysia as our study setting as it is an active ASEAN member. Moreover, the distinctiveness of the Malaysian market, which is relationship-based as opposed to rule-based and the unique political structure with a multi-party system, may offer new interesting insights into the political economy as well as business and finance literature.

The remainder of the paper is organized as follows. In the next section, we review the theoretical background and existing empirical literature as a basis for research hypothesis development. This is then followed by the elaboration of data and research method. Finally, we discuss the results and conclude the paper.



## **2. Geopolitics and Business in Malaysia**

Geopolitics is a multidisciplinary approach that studies the geographical, political, historical, strategic, and economic state in terms of boundaries and international structures (Flint, 2006). A Swedish political scientist Rudolf Kjellén (1864–1922) defines geopolitics as the ‘geographical organism or phenomenon of space’ and relates the power of state territories as a subject of studies. Post World War II, with the emergence of a world-economic system, modern geopolitics pioneered by Taylor (1994) had introduced hegemonic states as a subject of study. Nowadays, when market competition becomes more complex, most geopolitical intellectuals discuss issues related to hegemonic power of multilateral institutions and its impact on regional economics, finance, and business (Cohen, 2008).

In order to understand the hegemonic power of ASEAN, we first relate the geopolitical phenomena with world system theory proposed by sociologist Immanuel Wallerstein in the 1970s. The theory suggests that the world is divided into core, semi-periphery, and periphery countries (Chirot & Hall, 1982). Core countries are dominant capitalist countries that have strong and independent military power, high technology of skill, and are capital intensive. The United States and Japan are examples of core countries. Periphery countries are commonly referred to as third-world countries and have less developed industries. They are low-skilled, highly labor-intensive, and dependent on core countries for capital aids. Within the ASEAN region, Cambodia is an example of a periphery country.

Semi periphery countries fall into the middle of the economic spectrum. They play a major role in mediating economic, political, and social activities that link core and peripheral areas. They are generally industrialized countries and allow for possibility of innovative technology and reformed social and organizational structure, which as a result, may lead the semi periphery countries to become core nations. Some ASEAN countries that fall into this category are Singapore, Indonesia, and Malaysia (Babones & Alvarez-Rivadulla, 2007).

To achieve the highest level in the world system hierarchy, Malaysia upholds its commitment to ASEAN cooperation. In today’s globalization and as a small state, it is difficult for Malaysia to compete with giant countries in the global marketplace. Thus, the unity of ASEAN is the best opportunity for Malaysia to secure hegemonic power. As a multilateral institution, ASEAN members will adjust their own bargaining positions and invest some of their power resources for the development of ASEAN. This organization will then contribute to the smooth functioning of the global market system (Eichengreen, 1989); and at the same time, provides benefits to foreign companies that invest in any one of the member countries.

While involving directly in the ASEAN market, we suggest that corporate strategies should calculate the capabilities of ASEAN's smart powers and how the power may affect firm value. Smart power is a geopolitical mechanism that combines hard and soft power of states or institutions (Wilson, 2008). Hard power refers to traditional power strategies that focus on military intervention, coercive diplomacy, and economic sanctions to enforce national interests; while soft power describes the intangible ways of obtaining hegemonic power (Nye 1990). Nye defined soft power as the capability in persuading, attracting, and appointing people to do what they do not want to do and these strategies are usually associated with natural resources, cultural attraction, ideology, and bilateral relations. Understanding the smart power of ASEAN is considered an important geopolitical mechanism for corporate strategies because it can provide a basic understanding of how ASEAN has navigated its geopolitical uncertainty. Any changes in political decisions between ASEAN members are expected to affect the value of firms especially those segmented throughout ASEAN countries. From the geopolitical perspective, the influence is examined in the context of Malaysian public listed firms.

### **3. Theory and Hypothesis Development**

This study applied hegemonic stability theory initiated by Charles Kindleberger, an economic historian, as a basic theory for hypothesis development. Hegemonic stability theory explains the origin of conflicts and ways to minimize conflicts that may occur between countries or a single dominant power when pursuing a hegemonic position within the world's economic system (Snidal, 1985; Webb & Krasner, 1989). The highest priority for a hegemonic country is the maximization of its economic gains.

To achieve this objective, most countries will foster ties with their major competitors and develop multilateral institutions. Through this institutional cooperation, countries have the opportunity to rule both economic and military power (Schubert, 2003). Businesses will gain benefit from this alliance. For example, they can minimize transaction costs, reduce policy uncertainty, and build consistent expectations for economic interactions. Hegemonic stability, however, is not easy to sustain because of the conflict of autonomy interest between institutional members, which may negatively impact business performance (Salehi, Ranjbari et al., 2014). Based on this underlying theory, we hypothesize the following:

H<sub>1</sub> ASEAN geopolitics does affect the value of public listed firms in Malaysia.

### **4. Method**

This study used content analysis as the mode of data collection. We gathered financial information from the annual reports of active public listed firms in Bursa Malaysia from 2009 to 2013. We also used data from the World Development Indicators database, image data from multimedia photo gallery, and access from the Prime Minister’s Office links within 2009 – 2013 to measure the smart power of the ASEAN cooperation.

**4.1. Data sampling**

We began the sampling procedure by excluding companies from the financial, banking, insurance, trust, closed-end funds, and securities sectors since these companies are subjected to different regulations compared with those of other industries. The data from mining, hotels, and IPC industries were also excluded because these companies are not fairly distributed across industries. The procedure ended up with 82 companies or 410-year observations over the period of 5 years.

**4.2. Measurement of dependence variables**

This study used Q ratio as a proxy for firm value following the method of Chung and Pruitt (1994) as follows:

$$Q_{it} = \frac{\sum MVE_{it} + PS_{it} + DEBT_{it}}{TA_{it}} \tag{1}$$

Where;

MVE<sub>it</sub> = the market value of equity computed as price per share multiplied by the number of common shares outstanding.

PS<sub>it</sub> = the liquidating value of preferred stock.

DEBT<sub>it</sub> = the value of short-term liabilities net of short-term assets plus the book value of long-term debt.

TA<sub>it</sub> = the book value of total assets.

If the value of Q is greater than 1, it indicates that the firm has a market value that is greater than total assets. This means that the higher the value of Q, the higher the firm value.

### 4.3. Measurement of independent variables – The smart power ASEAN cooperation

To measure the smart power of the ASEAN cooperation, we based on the definition used by most scholars in this area such as Taylor (1994), Cohen (2003), Salehi, Ranjbari et al. (2014), in that smart power comprises hard and soft power. We use military power as a proxy for hard power strategies and both material resources and social power as proxies for soft power strategies.

#### 4.3.1. Military power

Military power is a traditional geopolitical power. According to Venier (2004), any state that has a dominant maritime power exerts a significant political influence globally. Following past studies (see; Venier, 2004; Virmani, 2006; Reynaud & Vauday, 2009 and Armijo, Mühlich et al., 2014), this study used a number of military personnel and military expenditures as proxies to military power possessed by ASEAN. Data were obtained from the WDI for 2009-2013 and based on the weighted average basis by countries listed under the members of ASEAN.

#### 4.3.2. Material resources

We followed Nye's (1990) soft power approach to explain the power of material resources of ASEAN and to define five sub dimensions of material resources as shown in Table 1. This table provides details of the proxies for material resources of the ASEAN cooperation based on the geopolitical capabilities index. These proxies are the most acceptable mechanisms among geopolitical scholars such as Armijo et al. (2014), Teixeira and Dias (2013), and Reynaud and Vauday (2009).

**Table 1. Material resources of ASEAN cooperation**

<b>The sub dimensions of material resources (MR)</b>	<b>Indicator</b>	<b>Index</b>	<b>Article / source</b>
1. Natural resources (NR)	Energy use	Comprehensive National Power Index (CNP)	
	Total natural resources rents	(CCI), (CINC), (CNP)	
	Nuclear energy	Nuclear Non Proliferation Treaty Index (NPT)	Nuclear Energetic Agency
2. Population Size (P)	Population Density	(CCI), (CINC), (CNP)	
	Urban population		

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3.	Science and Technology Capability (T)	Research and development expenditure	(CNP)
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*Material resources are calculated as follows:*

$$MR_{it} = NR_{it} + P_{it} + T_{it} \quad (2)$$

#### 4.3.3. Social Power

Based on Flint (2006), social power is state power over social relations, social groups, social safety, ideology, and cultural. We limit our study to social relationship among political elites as a proxy for social power and to measure the uniqueness of the business culture in Malaysia, which is relationship-based between politicians and businesses. Political elite is measured as bilateral activities between the present Malaysian Prime Minister, Dato ‘Sri Najib Bin Tun Haji Abdul Razak and the heads of all ASEAN countries.

We obtained the data from reports of the Prime Minister of Malaysia, which can be accessed via multimedia photo gallery of the Prime Minister’s Office. We characterized the Prime Minister’s bilateral activities into four different agendas:

- i. A personal visit to the heads of state of all ASEAN countries to Malaysia.
- ii. A personal visit of the Malaysian Prime Minister to ASEAN countries.
- iii. Conferences or seminars in Malaysia attended by the heads of state of all ASEAN members.
- iv. Conferences or seminars conducted in other ASEAN countries attended by the Prime Minister of Malaysia.

The value one (1) is allocated if the above criteria are matched, and zero (0) otherwise.

In order to analyze the influence of the ASEAN cooperation on firm value, we matched the country’s geopolitical score with firm segmentation scores. We assumed that, holding firms that have their segmentation in ASEAN countries will be more affected compared to firms that have no segmentation in ASEAN countries. A dummy variable of one (1) is used if a firm locates its segment in ASEAN countries, and 0 if otherwise. Thus, the formula for ASEAN smart power is:

$$Gp_{it} = \frac{\sum (d_{it} * sp_{it})}{C_{it}} \quad (3)$$

Where;

$Gp_{it}$  is the potential of ASEAN smart power to impact firm  $i$  in year  $t$ .  $sp_{it}$  is the smart power score,  $d_{it}$  is the segmentation score, and  $C_{it}$  is the total number of ASEAN members.

#### 4.3.4. Control variables

To control firm characteristics, we followed several variables which were widely used in earlier studies (e.g. Berger & Ofek, 1995; Brick & Chidambaran, 2010). The control variables are:

$$f(\text{CONTROL}) = \beta_0 + \beta_1\text{TOA} + \beta_2\text{ROA} + \beta_3\text{LOA} + \varepsilon \quad (4)$$

Where;

Firm size (TOA) = logarithm of total assets

Profitability (ROA) = EBIT/total assets

Leverage (LOA) = total debt/total assets

#### 4.4. Data Analysis

Descriptive and regression analyses were performed on the data. The equation for the regression analysis is:

$$Q_{it} = MP_{it} + MR_{it} + SP_{it} + \varepsilon \quad (5)$$

Where;

$Q_{it}$  = Firm value

$MP_{it}$  = Military power

$MR_{it}$  = Material resources

$SP_{it}$  = Social power

$\varepsilon$  = Error term

### 5. Results

#### 5.1. Descriptive analysis

The descriptive statistics of the smart power of the ASEAN cooperation and firm value are shown in Table 2. Q ratio has a negative mean score of 0.085. The mean scores of military power, material resources, and social power are positive at 0.513, 0.428, and 15.400, respectively. The sub dimension of science and technology capability of material resources shows the highest score of 0.490; whereas, the sub dimension of a personal visit of the heads of all ASEAN countries to Malaysia under social power shows the highest mean score of 4.600. The descriptive results raises the question of whether the smart power of the ASEAN cooperation has a negative influence on the value of Malaysian public listed firms. This evidence has an interesting implication requiring further regression analysis.

**Table 2. Descriptive statistics**

<b>Variables</b>	<b>Mean score</b>
<b>Dependence variables:</b>	
Q ratio	-0.085
<b>Independence variables:</b>	
<i>Military power (MP)</i>	0.513
<i>Material resources (MR)</i>	0.428
Natural resources (NR)	0.406
Population size (P)	0.389
Science and technology capability (T)	0.490
<i>Social power (SR)</i>	15.400
A personal visit of the heads all ASEAN countries to Malaysia (PH)	4.600
A personal visit of the Prime Minister of Malaysia to ASEAN countries (PM)	4.000
Conferences or seminars in Malaysia, attended by the heads all ASEAN countries (CH)	2.000
Conferences or seminars conducting in other ASEAN countries, attended by the Prime Minister of Malaysia (CM)	4.200
<b>Control variables:</b>	
Firm size (TOA)	8.861
Profitability (ROA)	0.010
Leverage (LOA)	0.529

## 5.2. Regression Analysis

This section shows how the smart power of the ASEAN cooperation affects firm value. Q ratio was used as a proxy for firm value. We developed a panel regression model and the statistics were adjusted for heteroskedasticity analysis. The analysis began with pooled OLS regression and fixed-effects model. We conducted a poolability test to ensure good and reliable estimates of the parameters of the model. The results of the fixed-effects model show that all  $\alpha_i$  are zero, which means that the OLS estimator is biased and inconsistent. Thus, the null hypothesis is rejected, while the presence of individual effects is accepted. The Hausman test (see Figure 1) was then conducted to verify the presence of correlations between the unobservable heterogeneity and explanatory variables.

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
MilitaryPo~r	.2273027	.0238083	.2034944	.3727091
MaterialRe~s	.5681628	-.0770633	.6452261	.1535423
SocialPower	-.0009321	-.0003496	-.0005826	.
toa	-.2489857	-.1378878	-.1110979	.0155948
roa	.0812524	.0649911	.0162613	.
loa	.5312949	.5633141	-.0320192	.0054113

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)'[(V\_b-V\_B)^(-1)](b-B)  
 = 44.09  
 Prob>chi2 = 0.0000  
 (V\_b-V\_B is not positive definite)

Figure 1. Hausman test

Based on the results of the Hausman Test shown by Figure 1, the probability is less than 0.05. The null hypothesis is therefore rejected, and the fixed-effects regression model is continued. Figure 2 shows the results of Fixed-Effects (within) Regression Model.

Fixed-effects (within) regression	Number of obs	=	410
Group variable: no	Number of groups	=	82
R-sq: within = 0.8141	Obs per group: min =		5
between = 0.1444	avg =		5.0
overall = 0.2357	max =		5
corr(u_i, Xb) = -0.7468	F(6,322)	=	234.96
	Prob > F	=	0.0000

Q	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
MilitaryPower	.2273027	.3888927	0.58	0.559	-.5377887 .9923941
MaterialResou~s	.5681628	.1921523	2.96	0.003	.1901304 .9461953
SocialPower	-.0009321	.000834	-1.12	0.265	-.0025728 .0007086
toa	-.2489857	.0197165	-12.63	0.000	-.2877751 -.2101964
roa	.0812524	.0160622	5.06	0.000	.0496524 .1128524
loa	.5312949	.0259185	20.50	0.000	.4803039 .5822859
_cons	1.493474	.2223812	6.72	0.000	1.055971 1.930978
sigma_u	.26901489				
sigma_e	.06167935				
rho	.95005678	(fraction of variance due to u_i)			

F test that all u\_i=0: F(81, 322) = 17.80 Prob > F = 0.0000

Figure 2. Fixed-effects (within) regression model



The estimated standard deviation of  $\alpha_i$  (sigma\_u) is 0.269. The value is larger than the standard deviation of  $\varepsilon_{it}$  (sigma\_e) which is 0.062. This finding suggests that the individual-specific component of the error is more important than the idiosyncratic error. The standard error component model assumes that the regression disturbances are homoskedastic.

To ensure the validity of the statistical results, a modified Wald test was conducted for the group-wise heteroskedasticity in the Fixed Effects Model. The serial correlation was also tested using the xtserial command implemented by David Drukker. The results ( $p < 0.05$ ) indicate that the null hypothesis of homoskedasticity is rejected. The probability of serial correlation for our model is  $F = 0.0000$ , which indicates that the errors are auto correlated.

For the two problems of heteroskedasticity and serial correlation, the xtsc command implemented by Daniel Hoehle was used to adjust the standard errors of the coefficient estimates for possible dependence in the residuals because the xtsc, fe performs fixed-effects (within) regression with Driscoll and Kraay standard errors. The error structure has been assumed to be heteroskedastic, auto correlated up to some lag, and correlated between groups. Figure 3 shows the results of fixed-effects (within) regression with Driscoll and Kraay standard errors.

```

Regression with Driscoll-Kraay standard errors   Number of obs   =       410
Method: Fixed-effects regression                Number of groups =        82
Group variable (i): no                          F( 6, 4)        =    12307.12
maximum lag: 2                                  Prob > F         =     0.0000
                                                within R-squared =     0.8141
    
```

Q	Drisc/Kraay				
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
MilitaryPower	.2273027	.2417435	0.94	0.400	-.4438849 .8984903
MaterialResou~s	.5681628	.2331074	2.44	0.071	-.079047 1.215373
SocialPower	-.0009321	.0003915	-2.38	0.076	-.002019 .0001548
toa	-.2489857	.0473933	-5.25	0.006	-.3805707 -.1174007
roa	.0812524	.0218992	3.71	0.021	.0204505 .1420542
loa	.5312949	.0354002	15.01	0.000	.4330081 .6295817
_cons	1.493474	.3375496	4.42	0.011	.5562863 2.430662

**Figure 3. Fixed- effect (within) regression with Driscoll and Kraay standard errors**

Based on the results, we derived an econometric model of the smart power of ASEAN geopolitics and firm value as follows:

$$Q_{it} = 1.493 + 0.568MR_{it} - 0.001SP_{it} - 0.249TOA_{it} + 0.081ROA_{it} + 0.531LOA_{it} \quad (6)$$

The equation model value shows that material resources (MR) displayed positive and low estimated coefficients of 0.568 at significance level of  $p < 0.10$ . The social power (SR) is negatively correlated with firm value at the significance level of 10%

with the coefficient value of 0.001. As a proxy for hard power of ASEAN geopolitics, military power fails to exhibit any significant relationship with firm value. Overall, the results support the hypothesis that ASEAN geopolitics has an influence on firm value, but only its soft power.

### 5.3. Robustness check

Our main analysis using Q ratio as a measure for firm value shows that the soft power of ASEAN geopolitics influences firm value at low significant results of 10%. To confirm our model, we checked the robustness of our results by using an alternative measure of firm value. We used value added intellectual coefficient (VAIC<sup>TM</sup>) model developed by Pulic (1998), a model commonly used in estimating non-financial value of firms. VAIC<sup>TM</sup> is the composite sum of three indicators formally termed as follows:

Capital employed efficiency (CEE) – indicator of the value added efficiency of capital employed.

Human capital efficiency (HCE) – indicator of the value added efficiency of human capital.

Structural capital efficiency (SCE) – indicator of the value added efficiency of structural capital.

VAIC<sup>TM</sup> is calculated by the following equation:

$$\text{VAIC}^{\text{TM}} = \text{CEE} + \text{HCE} + \text{SCE} \quad (7)$$

Where;

$$\text{VAIC}^{\text{TM}} = \text{ICE} + \text{CEE}$$

$$\text{ICE} = \text{HCE} + \text{SCE}$$

$$\text{HCE} = \text{Value added (VA)} / \text{Human capital (HC)}$$

$$\text{SCE} = \text{Structural capital (SC)} / \text{Value added (VA)}$$

$$\text{CEE} = \text{Value added (VA)} / \text{Capital employed (CE)}$$

$$\text{VA} = \text{Operating profit (OP)} + \text{Employee cost (EC)} + \text{Depreciation (D)} + \text{Amortization (A)}$$

$$\text{HC} = \text{Total investment for salary and wages for firm } i$$

$$\text{SC} = \text{VA} - \text{HC}$$

$$\text{CE} = \text{book value of the net assets for firm } i$$

Different control variables were used to examine the relationship between the smart power of the ASEAN cooperation and VAIC, thereby ensuring the precision of the results. The control variables used are firm size (logarithm of total assets), returns

on equity (EBIT/total shareholders' equity), leverage (total debt/total assets), dividend yield (cash dividends paid/total shareholder equity), and R&D sensitivity (dummy variables).

The same procedure was used to run the regression analysis. Figure 4 shows that material resources and social power are significantly related to non-financial value of a firm (VAIC) at 1% to 5% significant levels, respectively. The results show similar patterns with the earlier reported results with Q measure for firm value.

```

Regression with Driscoll-Kraay standard errors   Number of obs   =       410
Method: Fixed-effects regression                Number of groups =       82
Group variable (i): no                          F( 8, 4)        =    366.16
maximum lag: 2                                  Prob > F         =     0.0000
                                                within R-squared =     0.1214
    
```

vaic	Drisc/Kraay		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
MilitaryPower	-1.157873	2.177001	-0.53	0.623	-7.202198	4.886451
MaterialResou~s	22.45794	7.284764	3.08	0.037	2.232191	42.68368
SocialPower	-.0459182	.0089937	-5.11	0.007	-.0708887	-.0209476
toa	-.9719057	1.003588	-0.97	0.388	-3.758312	1.814501
roe	1.419098	.3656011	3.88	0.018	.4040261	2.434169
divyield	-5.598025	.7683934	-7.29	0.002	-7.731427	-3.464623
rdsensitivity	-2.440911	.5737105	-4.25	0.013	-4.033787	-.8480353
loa	-5.413783	.3015288	-17.95	0.000	-6.250961	-4.576605
_cons	6.601068	7.148622	0.92	0.408	-13.24669	26.44882

Figure 4. Robustness check - the influence of ASEAN cooperation on VAIC

## 6. Discussion and Conclusion

The objective of this study is to examine the relationship between ASEAN geopolitics and the value of public listed firms in Malaysia. Our results show that ASEAN geopolitics does to some extent influence the value of public listed firms in Malaysia. However, only the soft power of ASEAN geopolitics, namely material resources and social power exert a significant influence on firm value. The hard power of ASEAN geopolitics on the other hand does not correlate with firm value. Based on these findings, we suggest that corporate strategies should exploit the soft power of the ASEAN cooperation as an important mechanism for corporate decision making. Specifically, they have to utilize the benefits of material resources and be aware of social power risks. We recommend that the Malaysian government reviews bilateral activities of political elites for the benefit of Malaysian public listed companies which are actively traded in ASEAN countries. Finally, we suggest that the government reviews the extent of military power of the ASEAN cooperation in order to benefit the firms. This is because according to Nossel (2004), soft power or

military power per se, is not the best strategy for achieving hegemonic power, but the combination of those powers is the most important strategy in the geopolitical agenda.

This study makes several noteworthy contributions to geopolitics and finance literature. Firstly, it introduces the combination of geopolitics and finance disciplines in one study. This new method should be used widely in future research. Secondly, the empirical findings of this study provide a new understanding of the effects of the ASEAN cooperation on the value of Malaysian public listed firms. Finally, we provide panel data analysis of five years, which is able to analyze the geopolitical condition and firm performance during Dato 'Sri Najib Bin Tun Haji Abdul Razak service as the Prime Minister of Malaysia. However, our study is not without its limits. In this study, we did not measure the direct impact of the ASEAN cooperation on firm segmentation value. Thus, it is recommended this limitation be addressed in any future research.

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## Managerial Coaching in Enhancing Employees' Motivation

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**Abstract:** This study aims to measure the relationship between managerial coaching and employees' motivation. Survey method was employed to collect survey data via questionnaires distributed to mid-level officers at a military training center in Peninsular Malaysia. The results of hypothesis testing using SmartPLS path model analysis showed two important findings. First, communication did not significantly correlate with employees' motivation. Second, management support was significantly correlated with employees' motivation. These findings confirmed that communication is not an important determinant of employees' motivation, and management support is an important determinant of employees' motivation in the studied organizations. Furthermore, discussion, implications and conclusions are also elaborated.

**Keywords:** Communication; Management Support and employees Motivation

**JEL Classification:** M1

### 1. Introduction

The concept of Managerial Coaching is named as a new effective management and leadership behavior in organizations. It has been recognized as a relatively new practice for HRD and management whereby it contributes to the importance of enhancing employees' productivity and development (Ellinger et al, 2014; Egan, 2013). According to operational definition, coaching is a process which guides and leads employees towards the achievement of the objectives of the employee and organization, as well as improve existing skills, efficiency and performance; and thus, improve the effectiveness of employees (Peltier, 2010). In organizations, an employer establishes a human resource development and management to plan and implement managerial coaching to enhance organizational and employees' career development. This coaching program emphasizes on using knowledge, equipment

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and opportunities to guide employees to be effective workers. These workers are highly eager to use optimum potentials in doing daily job, solve growth resistances and problems, enhance organizational productivity and realize organizational strategy and goals (Grant & Cavanagh, 2011; Egan, 2013; Merwe & Sloman, 2013).

Traditionally, many employers implement managerial coaching programs as a way to solve daily job weaknesses and increase daily performance of their employees and teams (Bacon & Spear, 2003; Feldman, 2005; Kampa-Kokesch & Anderson, 2001; Izaskun Rekalde Jon Landeta Eneka Albizu, 2015). Nonetheless, despite the importance of this coaching approach, it may not be strategic for the future. Coaching is one of the tools that aims to contribute and assist in the development of strategies of the personal and professional growth of manager (Izaskun Rekalde Jon Landeta Eneka Albizu, 2015). In an era of global competition, many excellent organizations have shifted their paradigms from a traditional job based managerial coaching to contemporary based managerial coaching in order to support their organizations' strategies and cultures (Analoui, 1999; DeSimone *et al.*, 2002; Ellinger *et al.*, 2014). Under this new coaching approach, management and supporting staff are aware that they need to work together in improving the quality of employees' roles and functions as well as to motivate them to learn new knowledge, up to date skills, latest abilities and other capabilities consistent with their organizations' needs and expectations (Sherman, & Freas, 2004; Peltier, 2010).

A review of the recent literature pertaining workplace training highlights that effective managerial coaching has two salient features: communication and management support (DeSimone *et al.*, 2002; Ellinger *et al.*, 2014). From the managerial coaching perspective, communication is commonly defined as management uses of communication openness in delivering information about coaching programs to employees who are of different job levels and classifications (Gilley, 2000; Liraa, Ripolla, Peiro' b and Zornoza, 2013). For example, direct relationship between coach and coachees through effective and clear communication can help the coachees to improve their performance and motivate them to continue studying in work-related courses (Jeanette, 2013; Zornoza, 2013). In addition, management support is broadly defined as management that provides physical and moral support to employees before, during and after coaching programs (Merwe, & Sloman, 2013). Result from previous research showed that a highly supportive management can enhance employees' engagement and performance in performing their tasks (Rekalde, Landeta & Albizu, 2015).

Surprisingly, extant studies in workplace coaching program reveal that the ability of management to appropriately implement communication and support in the design and administration of coaching program may have a significant impact on employees' motivation (Egan, 2013; Catrin Johansson Vernon D. Miller Solange Hamrin, 2014). From a training management perspective, employees' motivation is normally defined as an interest and attitude that influence trainees to attend, learn

and master the knowledge, skills and abilities, as well as have positive attitude towards their fields. This content explains that, employee motivation can encourage an individual to transfer what he or she has learned from trainings to the organization (Catrin et.al, 2014).

In organizational coaching model, many scholars believed that communication, management support, and employees' motivation are distinct, but interconnected concepts. For example, the ability of management to openly communicate the information about coaching program to employees and adequately provide support to employees may lead to greater employees' motivation in organizations (Myeong-Gu Seo, 2014; Jeanette, 2013). Even though the relationship has been widely discussed, the role of managerial coaching as an important determinant has been given less attention in organizational training model. This situation may be caused by several factors. First, coaching activities in the organization are not clear. Usually, coaching duties are carried out by direct manager or direct report to the employees. Due to problems in terms of time constraint, coaching is reported to be a common activity and is not emphasized in detail; and despite coaching duties served as an essential service, these duties have not been evaluated for specific objectives (Gilley, 2000, Bass & Bass, 2008, Myeong-Gu Seo, 2014). Second, since implementation of Managerial coaching involves those employees of middle and lower-income groups, the concern about the role of managerial coaching is not widely discussed. This is because most organizations nowadays are more interested in the development of their senior and executive employees who greatly impact the direction and strategic development of the organization through executive coaching research (Goldsmith & Lyon 2006, Ellinger, 2014).

## **2. Purpose of the Study**

This study has two major objectives; first, to measure the relationship between communication and employees' motivation. Second, it is conducted to measure the relationship between management support and employees' motivation.

## **3. Literature Review**

Some previous studies had been carried out by applying a direct effect model to study the effects of Coaching Management on employee motivation using different samples, such as the 151 employees of Southeastern health care facility (Milton Mayfield, 2010), 353 workers from the electronics company (Hill, Yeung Jae Kang, Myeong-Gu Seo, 2014), a total of 469 businesses from the Korean banking industry (Jaewon et. al 2013), and 234 respondents drawn from a number of South Korean private companies (Peltier, 2012). The findings of those studies showed that the effectiveness of a coaching program contributed to work effectiveness through



individual encouragement (motivation). In addition, the findings also showed that the motivation of workers is affected by the support shown by the manager or management (Myeong-Gu Seo, 2014; Sewon Kim, 2014).

The relationship between Managerial Coaching and employee motivation is consistent with the recommendations put forward by the theories of motivation. As an example, a goal-setting theory states that it can cause an individual to perform a task. In addition, the relationship between the role of communication and motivation of the employees has the support of the theory of motivation-based language. The principles of this theory are used to explain the role of a chairman in ensuring effective communication process. This is because it will encourage employees to improve their performance through mutual relationship, as shown by the coaches and trainers (Mayfield and Field, 2007; Sullivan 1988). Besides that, the Leadership Path Goal theory also explains how managers and coaches play an important role in influencing employee motivation and focusing on individual and organizational goals. This theory also explains the role of Managerial Coaching as one of the effective methods to ensure the effectiveness of the organization to manage and improve the understanding of the direction of the employee (Mayfield and Field, 2007; Jaewon et. Al., 2013). For example, leaders or managers in organizations will lead the workers towards the desired goal, which is in line with goals set by the organization.

Based on the above discussion, the hypotheses to be tested are:

H1: There is a positive relationship between communication and employee motivation

H2: There is a positive relationship between management support and employee motivation.

## **4. Methodology**

### **4.1. Research Design**

This study employed a cross-sectional research design which allowed the researchers to integrate the pay structure literature and the real survey as the main procedure to collect data. This procedure may help the researchers to gather accurate data, decrease bias and increase quality of data being collected (Aimi 2014; Azman et al. 2014; Sekaran & Bougie, 2013). This study was conducted at a military training center in Peninsular Malaysia. In order to avoid intrusiveness, the name of this organization is kept anonymous. At the initial stage of this study, the researchers had drafted questionnaires based on the relevant past literature. After that, a pilot study was conducted by discussing the questionnaire with 20 administrative and academic employees in the organizations. These employees were selected using purposive

sampling technique because they already have working experiences ranging from 10 to 20 years, and possessed good knowledge and experience about the management of compensation programs in their organizations. The information gathered from this pilot study helped researchers to improve the content and format of the questionnaires for the actual study.

#### **4.2. Measurement**

The questionnaire is consisted of three major parts: first, *communication* has 5 items adapted from the research literature related to the open communication (Beheshtifar, M. & Vazir-Panah, Z. 2012; Cianciolo & Bickley, 2011; George & Singh, 2000; Maimunah, 2014; Mohd. Nasir, 2008; Patrick *et al.*, 2009). The dimensions used to measure this concept are in terms of teaching pointers, facilitators, experts and administrators. Second, management support has 7 items that have been modified from the literature study with the support of management (Azman & Sofiah, 2007; DeSimone, 2002; Elangovan & Karakowsky, 1999; Gade *et al.*, 2003; Nijman *et al.*, 2005; Yamnill & McLean, 2001). The dimensions used to measure this concept are in terms of moral support and material such as financial assistance, the welfare of individuals and families, involvement of employees in decision-making and guidance provided to workers in applying learned competencies. Finally, employee motivation is represented by 12 items that have been modified from the literature study with the support of the management. The dimensions used to measure this concept were taken from the aspects of whether it could motivate trainees to attend, learn and master the knowledge, skills, abilities and develop positive attitude in the program (Azman *et al.*, 2010b; Azman & Inani, 2010c; Chiaburu & Tekleab, 2005; Lim *et al.*, 2005; Nikandrou *et al.*, 2009; Patrick *et al.*, 2009; Scadutto *et al.*, 2008; Tai, 2006) and organizational of commitment (Abd Hair *et al.*, 2010; Madi *et al.*, 2011; Mullen *et al.*, 2006; Sahanidis & Bouris, 2008). All items used in the questionnaire were measured using a 7-item scale ranging from “very strongly disagree/dissatisfied” (1) to “very strongly agree/satisfied” (7). Demographic variables were used as controlling variables because this study only focused on employee attitudes.

#### **4.3. Sample**

A convenient sampling technique was used to select 120 mid-level officers in the studied organizations before the questionnaires were distributed to them. This sampling technique was chosen because the list of registered officers was not given to the researchers for confidentiality reason; and this has prevented the researchers from randomly selecting participants in the organizations. From 120 questionnaires distributed, 92 usable questionnaires were returned to the researches, yielding 77% response rate. Before the participants answered the survey questions, their consents were first obtained; and it was on a voluntarily basis.

#### **4.4. Data Analysis**

The SmartPLS was employed to assess the validity and reliability of questionnaires' data, and further test the research hypotheses. The main advantage of using this method is because it may deliver latent variable scores, avoid small sample size problems, estimate complex models with many latent and manifest variables and error terms, and handle both reflective and formative measurement models (Henseler et al. 2009). The path coefficients for measuring a structural model use the standardized beta ( $\beta$ ) and t statistics ( $t > 1.96$ ). The value of  $R^2$  is used as an indicator of the overall predictive strength of the model. The value of  $R^2$  is considered as follows: 0.19 (weak), 0.33 (moderate) and 0.67 (substantial) (Chin 1998; Henseler et al. 2009; Rozila, 2013).

## 5. Findings

### 5.1. Respondent Profile

In terms of sample profile, all respondents were males (100%), aged between 21 to 25 years old (34.8%), bachelor degree holders (54.3%), captains and lieutenants (81.5%), working experiences less than 5 years (50%), and platoon leaders (72.8%).

**Table 1. Sample Profile**

Participant Characteristics	Sub-Profile	Frequency	Percentage (100%)
Gender	Male	92	100
	Female	0	0
Age	21 to 25 years old	32	34.8
	26 to 30 years old	29	31.5
	31 to 35 years old	20	21.7
	> 36 years old	11	12.0
	Total	92	100.0
Education	Degree	50	54.3
	Diploma	34	37.0
	STPM	1	1.1
	SPM	7	7.6
	Total	92	100.0
Length of Service	1 to 5 years	46	50.0
	6 to 10 years	19	20.7
	11 to 15 years	12	13.0
	16 to 21 years	13	14.1
	22 years	2	2.2
	Total	92	100.0

Training Experience	Company Leader	25	27.2
	Platoon Leader	67	72.8
	Total	92	100.00

Note:

STPM/HSC: Sijil Tinggi Pelajaran Malaysia/Higher School Certificate

SPM/MCE: Sijil Pelajaran Malaysia/Malaysia Certificate of Education

SRP/LCE: Sijil Rendah Pelajaran/Lower Certificate Education

## 5.2. Confirmatory Factor Analysis

Table 2 shows the result of validity and reliability of the construct. Items of each construct have met the standards of validity and reliability analyses since their values exceeded 0.70 (Fornel & Larcker 1981; Gefen & Straub 2005). Besides that, each construct had composite values exceeding 0.80, indicating that the measurement scales had a high internal consistency (Chua 2006; Henseler et al. 2009).

**Table 2. The results of factor loadings and cross loadings for different constructs**

Variable	No. of Items	Cross Loading	Composite Reliability
Communication	5	0.78085-0.86626	0.896649
Management Support	7	0.74035-0.92465	0.936444
Employees' Motivation	12	0.75314-0.86606	0.953215

Table 3 shows that the loadings of variables are stronger on their own constructs, i.e. greater than 0.7 which are considered adequate for the factor loadings (Chin, 2001). Besides that, all constructs' AVE values are larger than 0.5; indicating that they met the acceptable standard of convergent validity (Fornell & Larcker, 1981; Henseler et al., 2009). Further, all constructs values of  $\sqrt{\text{AVE}}$  in diagonal are greater than the squared correlation with other constructs in off-diagonal, indicating that all constructs met the acceptable standard of discriminant validity (Henseler et al., 2009; Yang, 2009).

**Table 3. Results of convergent and discriminant validity analyses**

Variable	AVE	Communication	Management Support	Employee Motivation
Communication	0.6849	<b>0.827</b>		

Management Support	0.6794	0.8308	<b>0.824</b>	
Employee Motivation	0.6298	0.4422	0.5272	<b>0.793</b>

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	T		Tolerance	VIF
(Constant)	3.898	.446		8.738	.000		
Communication	.026	.133	.032	.198	.843	.329	3.04
Management Support	.354	.119	.475	2.971	.004	.329	3.04

a. Dependent Variable: motivate.

Table 4 shows that the mean values for the variables are from 5.73 to 6.08, showing that the levels of communication, management support and employees' motivation ranged from high (4) to highest level (7). The values of variance inflation factor for the correlation between the independent variable (communication and management support) and the dependent variable (employees' motivation) are less than 0.10, showing that the data are not affected by serious collinearity problem (Hair, et al., 2012).

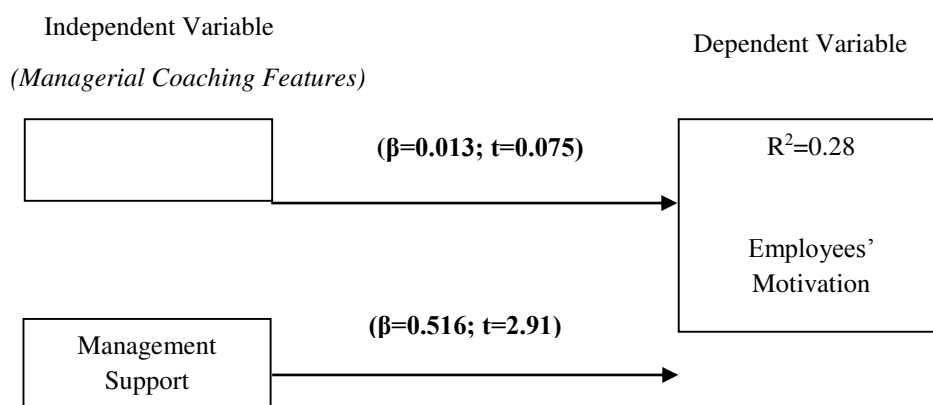
**Table 4. Variance Inflation Factor and descriptive statistics**

Variable	Mean	Std Dev	Pearson Correlation Analysis		
			1	2	3
1. Communication	5.76	.817	1		
2. Management Support	5.73	.786	.46**	1	
Employee Motivation	6.08	.821	.56**	.58**	1

### 5.3. Outcomes of Testing Hypothesis

Figure 1 presents the outcomes of testing a direct effects model using SmartPLS path model. The inclusion of communication and management support in the analysis explained 28 percent of the variance in dependent variable. Specifically, the results of testing research hypotheses displayed two important findings: first, communication is insignificantly correlated with employees' motivation ( $\beta=0.013$ ;  $t=0.075$ ); therefore, H1 is not supported. Second, management support is significantly correlated with employees' motivation ( $\beta=0.516$ ;  $t=2.91$ ); therefore, H2 is supported. The result demonstrates that communication is not an important determinant of employees' motivation, and management support is an important determinant of employees' motivation in the studied organizations.

Further to the above hypothesis testing, a test of accuracy of the estimate (predictive relevance) using Stone-Geisser, the Q2 test had been carried out as specified:  $q2 = Q2_{included} - Q2_{excluded} / 1 - Q2_{included} = 0.331$  (Hair et al., 2012); and it was found that the  $Q2 = 0.331$  is above the standard, that is greater than zero (Henseler et al., 2009). Therefore, these findings generally support the expected accuracy SmartPLS route model used in this study.



**Figure 1. The Outcomes of SmartPLS Path Model Showing the Relationship between Training Assignment and Trainees' Motivation**

*Note: Significant at \*  $t > 1.96$*

## 6. Discussion and Implication

The findings of this study show that communication does not act as an important determinant of employees' motivation while management support does act as an important determinant of employees' motivation in the studied organization. In the context of this study, majority of the respondents perceived that the levels of communication, management support and employees' motivation are high. This

indicates that communication openness is actively practiced in coaching activities; but it is unable to enhance employees' motivation. Conversely, management has adequately provided physical and moral support to employees in coaching activities and this practice may lead to enhanced employees' motivation in the organizations.

This study provides three major implications: theoretical contribution, robustness of research methodology and practical contribution. In terms of theoretical contribution, this study reveals two important findings: First, management support has been able to increase employees' motivation. This finding also supports and extends those studies by Lyne de Ver H, Kennedy F (2011) and Sukanlaya Sawang (2010). Second, communication has not been able to increase employees' motivation programs. A thorough review on the outcomes of the semi-structured interview in this finding may be affected by external factors: first, respondents who have different service and personal backgrounds may have different values and judgments about the impact of implementing communication openness in coaching programs. Second, the nature of military organization emphasizes on tall structure, high centralization and high distance power. This condition restricts communication openness because relationship between officers who have different job levels and classifications are strictly bounded by military rules and orders.

With respect to the robustness of research methodology, the questionnaire used in this study has met the requirements of validity and reliability analyses. This may lead to its ability to produce accurate and reliable findings. With regard to practical contribution, the findings of this study may be used to improve the design and administration of coaching programs of army officers. This objective will be met if management focuses on the following aspects: first, organizational psychological training content and methods assignment for high rank army officers should be emphasized and in line with the tasks performed. In order to provide credible leaders who are effective and efficient, military team has drawn up a leadership training syllabus that must be taken by all personnel, according to rank and position held. These activities directly train leader or manager to be a coach to his subordinates (Jeanette Maritz., 2013). This facilitates the transfer of training. Second, assignment practiced in military style is more militaristic which is clearly covered in the basic task of a soldier. The primary role of an infantry battalion in the Corps is to find and get closer to the enemy, to kill or conquer, plunder and occupy the area and repel the attacks during the day and night, regardless of season, weather or soil conditions. Therefore, based on the leading role and modernization, Kor Infantri TDM requires a membership profile that is bold, aggressive and feared, as well as professionals who are willing to shoulder the responsibility. The membership profile can be developed with good and effective training. Third, the context of participation in this study does not only involve the employees, but the management of the organization should also play a role in ensuring that the assigned tasks are smoothly carried out.

## 7. Conclusion and Future Recommendations

This study proposed a conceptual framework based on the Managerial Coaching practices research literature. The exploratory factor analysis showed that the instrument of this study had met the acceptable standards of validity and reliability analyses. Furthermore, SmartPLS model analysis confirmed outcomes of Managerial Coaching measurement like communication and management. Based on the result, communication does not have significant correlation with employees' motivation, therefore H1 is not supported. Second, management support significantly correlates with employees' motivation, and therefore H2 is supported. This result explains management support is an important factor which influences employees' motivation among middle-level officials of the Malaysian Army. On the other hand, communication factor is not influential for employees' motivation in studied organization. This occurs due to the work culture of the military departments that affects the communication style adopted. Since the military culture emphasizes on coherence and rules as a mandatory form of instruction, the role of communication cannot be clearly seen as an important contributing factor to employee motivation. In addition, employees also assume that communication takes place in work environment in which rules must be observed continuously.

The conclusion drawn on the basis of these findings must take into account the limits of the conceptual framework and methodology of the study. First, the cross-sectional method used in this study could not detect dynamic changes and patterns of relationships between variables, and variables that are more specialized in the study sample. Secondly, this study does not highlight the relationship between specific indicators for the independent variables and the dependent variable. Third, the decision analysis model SmartPLS passage only describes the level of training transfer variants that are affected by the variable-variables involved in this study. Finally, this study uses only the 92 respondents from middle-level officials of the Malaysian Army selected through purposive sampling technique. Therefore, this study only seeks to anticipate the pattern of the relationship between the dependent variables of the study in general and it may not be generalized to different organizations.

For future discussion, a research on the expected limitations could be used as a guide to improve the study. Among the actions that can be taken: First, some personal and organizational characteristics should be explored in greater depth as these can better show the impact of the implementation of the coaching of the employees. Second, the design- a method of research that is more reliable such as a longitudinal study should be used to collect data, elaborate pattern of relationships, the direction and degree of firmness of the relationship between independent variables and the dependent variable. Third, future research should include more respondents as to



ensure the accuracy and validity of the findings. Fourth, the independent variables and the dependent variable also need to be taken into account in future studies, whereby selected variable can contribute to the novelty concept. Besides, indirectly it may also be interesting to discuss about the variable's relationship with the framework. If the above proposals are taken into account it could help to produce more robust findings in the future.

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## **Halal Finance and Halal Foods: Are They Falling Apart?**

**Abdul Ghafar Ismail<sup>1</sup>, Mohd Ali Mohd Noor<sup>2</sup>**

**Abstract:** For a country that is looking for new sources of growth, the Halal industry has the potential to achieve that ambition. To realize this aspiration, the country has to put in place measures to support the industrial growth, and should have the strategy of becoming one of the most trusted and reliable Halal providers in the world. To achieve the aspiration of becoming a centre for production and trade of halal foods and services, regulations need to be developed. However, our analysis indicates that: first, the regulation on halal foods and services shows that the halal property is used as the underlying assets for Islamic financial transactions. Second, a new set of filter needs to be introduced that look into the halal sources of funds (halal funds/money) for companies operating in the halal industry. Third, a halal GNP could be introduced as a result of the integration between halal finance and halal foods. Therefore, both halal foods and halal finance should be integrated to create a new source of growth.

**Keywords:** standardization; halal goods; sharia compliant; regulation; Halal GNP

**JEL classification:** D01; D10; D21; D83; L15

### **1. Introduction**

The halal industry is reported as being the fastest growing global business across the world. According to the Halal Journal,<sup>3</sup> a Kuala Lumpur-based magazine, it was estimated to be at USD2.3 trillion in 2012, a tremendous increase from 2008 which was at about USD560 billion.<sup>4</sup> Halal food accounted about 29% of total halal trade which was approximately about USD661 billion. It has created a lucrative market and huge opportunities for halal food businesses - both domestic and international trades. This could be considered as a new source of growth. At the same time, the Halal food products have spread out into wide range of products – from raw and processed agricultural-food industry to non-food products such as pharmaceuticals, health products, medical devices, cosmetics and toiletries; and services such as

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<sup>3</sup> Please visit: <http://www.halaljournal.com/> and Socio-economic Environmental Research Institute ([www.seri.com.my](http://www.seri.com.my)).

<sup>4</sup> Please also refer to <http://www.mihas.com.my/> 2013.

logistics and hotel business. In addition, the increasing demand for safe, high quality food in primary markets also encourages the producer to tap into those markets. Nonetheless, the incidents of food marketed as Halal failing to meet Halal requirements has spurred demand for genuine Halal products. Therefore, regulation is very crucial from this perspective.

Principally, the halal business must be lawful and wholesome (*halalan toyibban*),<sup>1</sup> which means quality and wholesome. The halal standard is created to fulfill those characteristics. From here, the term of standard for halal foods appears as defining the market parameter for the Halal industry. In reality, the term also covers the processes of producing halal foods or known as halal services. To ensure that the entire production processes are halal, the source of financing should also be from a halal source. It is after all, what Islamic finance is all about – promoting justice and equity in transactions while abandoning usury. Islamic banking's concept of sharing risks and returns could protect a fledgling Halal business, while simultaneously nurtures the growth of the Halal industry.

Countries like Malaysia, Indonesia, London, Bahrain, United Arab Emirates,<sup>2</sup> Australia and Singapore have declared themselves as Islamic financial centres, which basically considered as part of halal services. Sharia compliant financial products or services are used as the defining market parameter.<sup>3</sup> It seems that both halal foods and halal finance are not well-integrated, except in Malaysia and Pakistan.<sup>4</sup>

Our aim in this paper is to propose that they should be integrated. We will prove this proposal with the following proposition. Our proposition is that the integration will generate new sources of growth, because it will be able to complete the cycle from finance-growth and growth-finance hypotheses. The proposition would also suggest a new methodology in calculating GNP.

The remaining discussion of this paper will be divided into five sections. Section two will discuss on the insight into the regulation of halal industry. Section three will establish that Islamic finance will be part of halal industry. Section four will discuss the new way of calculating the halal GNP. The conclusion will be presented in section 5.

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<sup>1</sup>al-Baqarah (2:168), al-Maidah (5:1), (5:4-5), (5:87-88), (5:96), al-A'raf (7:157), an-Nisa'(4:160), at-Tahrim (66:1), al-Hajj (22:30)

<sup>2</sup>Only recently Dubai declared itself as capital city of Islamic economy.

<sup>4</sup> In this paper, we simplify sharia compliant financial products or services as halal finance.

## **2. An Insight into the Regulation of Halal Industry**

In addition to the points raised in section 1, Halal emerges as a defining market parameter only in recent years. The defining market parameter could be seen from various forms: the estimated value of this market (<http://www.mihis.com.my/> 2013), and demand from 1.6 billion Muslim consumer or 23 per cent of world population (Pew Research Centre 2013). Another defining market parameter is the regulation in Halal industry. Halal funding in reality is actually small in relative to potentially lucrative Halal related sectors. Although no exact figures are available, guesstimates indicate that only 30 per cent of total Islamic loans in Malaysia are actually being used by businesses in potential halal sectors. If 1.6 billion Muslims spend USD1 a day on Halal food, the total would come up to USD584 billion a year.

According to Mohd Ali & Mohd Rizki (2015) to ensure that the entire production process is halal, the source of the financing should also be from a halal source, i.e. using Islamic banking services. It is after all, what Islamic finance is all about; promoting justice and equity in transactions while abandoning usury. Islamic banking's concept of sharing risks and returns could protect a fledgling halal business.

As of August 2008, less than 10% of those in the halal industry in Malaysia had adopted Islamic financing which has definitely shown its potential. This has left many to ponder why halal producers have not opted to create a complete halal supply chain from A to Z, beginning with financing. Some producers deem halal financing as being a more expensive option to conventional financing. Currently more than 80 per cent of the halal producers in Malaysia are non-Muslims. This is one of the reasons of slow take up of Islamic fund. It is paradox that such Muslim concern is being capitalised on by non-Muslim businessmen. By right, Muslim businessmen should lead the industry to grab any available opportunities and make the most profit from halal industry.

Secondly, according to industry sources, lack of knowledge and exposure to halal financing structures could be the main reasons behind this perception, as some have argued that the provision of halal financing is indeed cheaper than conventional structures available to business and small and medium-sized enterprises (SMEs). In fact, all halal producers should only be seeking halal financing. This is to ensure that the entire chain is halal, starting with the capital. It depends on where the producers are. In some countries, the tax laws have not been changed to provide a level of playing field for Islamic financing, so invariably it costs more. For example, stamp duties may be higher as several documents are involved in one financing structure. Legal documentation also plays an important part due to its unique sharia requirements and some countries do not have legal concepts that support these requirements, for example, trusts law. In summary, pricing reflects the relative

difficulties in establishing working products. However, over time, this should resolve by itself.

Thirdly, it is even a sad situation when the Muslim entrepreneurs themselves are using interest financing. Despite their knowledge of impermissibility of interest, they are still using the conventional medium to finance halal businesses. This value deterioration is caused by a low conviction on tawhid (oneness of God) and exact understanding on the teachings of Islam. There are also occurrences of Muslim entrepreneurs using non permissible technique of slaughtering or haram ingredients in the processes of their halal businesses.

A producer typically produces a full package of non halal products and services or a full package of halal products and services or partially produces halal products and services. In general, a producer of Halal products and services is a company established under the Company Act. For example, in Malaysia, it is regulated under Companies Commission of Malaysia. The regulation focuses, among others, on the formation of companies, legal personality, capacity and power, director's duties, governance and financial aspects. The companies also have to comply with several requirements such as to act as private companies and not be involved in any insider trading. For certain companies such as Islamic banking institutions or Islamic trust fund companies, they are required to spell out in their article of association that their businesses follow the sharia. However, for companies having no such provision that requires them to disclose their activities, i.e. compliance with sharia or produce a halal products and services, regulation becomes important as the defining parameter. Traditionally, the regulator has to keep a close watch on the reasons of regulation and the areas of halal activities that need to be regulated.

### **2.1. Reasons of Regulation**

**Public Confidence** – products and services labelled as halal could develop public confidence and the sharia standard guideline is very much needed here. That is, building confidence at the microeconomic level focuses on exposing the non-compliant risk of each individual product or services; and at the firm level, isolating company from the holistic framework of sharia-compliant companies. The regulator would try to see that the products and services operate in a lawful and wholesome manner. By supervising the sharia-compliant companies, the regulator is expected to maintain public confidence in the real sectors, at least toward new proposal on halal GNP.

**Market Discipline** - Both, disclosure and market discipline complement formal supervision. Market participants (i.e., producers, customers, non-profit organizations) can play an important role in this situation. In free and open markets, market participants can use their decisions (e.g. boycotting the non-halal products and avoiding the sharia non-compliant investment) to reward those producers that



are complying most effectively. More accurately, reward producers with most performed products and services as a way of going forward.

How market participants make those decisions are not always easy to determine. Even in a system with a well-structured regulation and other market “regulators” (for example, Muslim Consumer Groups) that provide the list of halal products and services, it seems that the market relies heavily on ingredients and logo for example, often seemingly exposing the shortfalls in the current practices of regulation.

These market reactions can be explained to certain extent by the difficulty of projecting the producers’ performance based on available disclosures. For market discipline to be a truly effective complement to formal supervision, market participants must be armed with accurate and timely information, not just current list of products and services. They also need to be equipped with information that has a longer-term value such as qualitative and quantitative information on the operators’ business strategies, products and services compliant risk profiles, and risk appetites.

**Basis for Sharia Based Public Policy** - The main objective of a public policy is to establish a relationship that involves three major groups, i.e., capital providers, producers and customers. The capital providers are the government, individuals or private and non-governmental organizations (NGOs). Producers are those who operate halal businesses. The customers are the users of halal products and services. These three groups are linked in this verses: “*On the Day when every person will be confronted with all the good he has done, and all the evil he has done, he will wish that there were a great distance between him and his evil* [Surat Al-Imran, Verse 30]. In another verse, “*They believe in Allah and the Last Day, they enjoin Al-Ma’ruf (Islamic Monotheism, and following Prophet Muhammad (saw) and forbid Al-Munkar (polytheism, disbelief, and opposing Prophet Muhammad (saw), and they hasten in (all) good works, and they are among the righteous* [Surat Al-Imran, Verse 114]

The overall effectiveness of a public policy, however, will depend on the extent of its contribution to develop human self in order to achieve its real well-being that spans beyond an increase in income and wealth, as guided by the Sharia. In a broader context, how the framework of Maqasid Shari’ah could be brought into the picture of the Halal development model.<sup>1</sup>

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<sup>1</sup>Namely, in preserving the human’s faith (*deen*), their self (*nafs*), their intellect (*‘aql*), their posterity (*‘nasl*), and their wealth (*maal*). In addition, all of these universal intents should be able to interact with each other and are closely related in preserving one another.

## 2.2. Activities of Regulation

In this section, we suggest several areas that become part of the activities in regulating the halal development.

### 2.2.1. Regulation on Halal Activities

The widely accepted *Qaid'a* (or maxim) in 'Usul ul-Fiqh (principle of jurisprudence) is: **The initial rule is that an object or a thing is permissible unless stated otherwise.**<sup>1</sup> The verses mentioned in footnote lead to the conclusion that Allah (swt) has made everything halal. However, from this wide group of permissible things and objects, there are certain prohibitions that also come from the al Quran and al hadith. Among the objects or things that are clearly not permissible to consume are: pork,<sup>2</sup> blood, carrion (carcasses of dead animals), animals slaughtered in the name of anyone but "Allah", an animal that has been strangled, beaten (to death), killed by a fall, gored (to death), savaged by a beast of prey (unless finished off by a human),

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<sup>9</sup>This *Qaid'a* is derived from many verses in the Qur'an: for example "He it is Who created for you all that is on earth." [Al-Baqarah 2:29], and "Allah is He Who has created the heavens and the earth and sends down water from the sky and thereby brought forth fruits as provision for you; and He has made the ships to be of service to you, that they may sail through the sea by His command, and He has made rivers to be of service to you." [Ibrahim 14:32] and also "This day [all] good foods have been made lawful, and the food of those who were given the Scripture is lawful for you and your food is lawful for them. And [lawful in marriage are] chaste women from among the believers and chaste women from among those who were given the Scripture before you, when you have given them their due compensation, desiring chastity, not unlawful sexual intercourse or taking [secret] lovers. And whoever denies the faith - his work has become worthless, and he, in the Hereafter, will be among the losers." [Al Ma'idah 5:5] and "All food was lawful to the Children of Israel except what Israel had made unlawful to himself before the Torah was revealed. Say, [O Muhammad], "So bring the Torah and recite it, if you should be truthful." [Al Ali Imran 3:93]

<sup>2</sup>"Prohibited to you are dead animals, blood, the flesh of swine, and that which has been dedicated to other than Allah, and [those animals] killed by strangling or by a violent blow or by a head-long fall or by the goring of horns, and those from which a wild animal has eaten, except what you [are able to] slaughter [before its death], and those which are sacrificed on stone altars, and [prohibited is] that you seek decision through divining arrows. That is grave disobedience. This day those who disbelieve have despaired of [defeating] your religion; so fear them not, but fear Me. This day I have perfected for you your religion and completed My favor upon you and have approved for you Islam as religion. But whoever is forced by severe hunger with no inclination to sin - then indeed, Allah is Forgiving and Merciful." [Al Ma'idah 5:3], "I do not find within that which was revealed to me [anything] forbidden to one who would eat it unless it be a dead animal or blood spilled out or the flesh of swine - for indeed, it is impure - or it be [that slaughtered in] disobedience, dedicated to other than Allah. But whoever is forced [by necessity], neither desiring [it] nor transgressing [its limit], then indeed, your Lord is Forgiving and Merciful." [Al 'an'am 6:145] and also "He has only forbidden to you dead animals, blood, the flesh of swine, and that which has been dedicated to other than Allah. But whoever is forced [by necessity], neither desiring [it] nor transgressing [its limit] - then indeed, Allah is Forgiving and Merciful." [An Nahl 16:115]

alcohol,<sup>1</sup> and food over which Allah’s name is not pronounced.<sup>2</sup> The concern is how to make it fully utilized and continuously evolved as it may involve new product like genetic engineering. This will require good standard and governance.

**2.2.2. Halal Standard**

Risk factors in the Halal industry include complexity in definition, requirements and variations in interpreting the same requirements across geographical and cultural background.<sup>3</sup> What are the items to be covered in the Halal standard? Based on the sample of few standards, the information presented in Table 1 shows that parameter for halal differs according to jurisdictions and organizations. For example, the processing and preparation of derivative or new food (other than as described above) are subjected to various ingredients and the processing, preparation, packaging, transportation and storage require elements that comply with the sharia standard. Therefore, each requirement needs to have a specific certificate, for example, certificate for slaughtering house, certificate for processing plant or kitchen (e.g. halal kitchen), and the certificate for restaurant.

**Table 1. Halal Standard Parameter by Different Organizations**

FAO	Halal Food Standards Alliance of America	Malaysia Halal Standard
Definition	Definition	Definition
Halal Term Lawful Food Food of animal origin Food of plant origin Drink Additives Slaughtering Preparation, Processing, Packaging, Transportation and Storage	Slaughtering Requirement	Halal Term Food and beverage products Consumer goods
Labelling Requirement	Requirement for Processing Plants	Governing Law – follow the Shafi’I school of thought, or the Maliki,

<sup>1</sup> *O you who have believed, indeed, intoxicants, gambling, [sacrificing on] stone alters [to other than Allah ], and divining arrows are but defilement from the work of Satan, so avoid it that you may be successful. [Al Ma’idah 5:90]*

<sup>2</sup> *“And do not eat of that upon which the name of Allah has not been mentioned, for indeed, it is grave disobedience. And indeed do the devils inspire their allies [among men] to dispute with you. And if you were to obey them, indeed, you would be associators” [of others with Him]. [Al ‘an’am 6:121]*

<sup>3</sup> Variations in opinion are due different schools of thoughts. There are four major schools of thoughts in Islam: Hanafi, Maliki, Shafi’i and Hanbali.

		Hambali or Hanafi school of thought
	Requirement for Halal Meat Stores	Requirement for food premises
	Requirement for Halal Restaurants and Caterer	Requirement for Slaughter House
		Requirement for Halal logo
		Recognized regulatory authority (JAKIM, JAIN or MAIN)

Source:

a) *FAO, General Guidelines for the Use of the Term "Halal", 1997.*

b) <http://halaladvocates.net/site/hfsaa/our-standards/>

c) <http://www.halal.gov.my/v3/index.php/en/guidelines/malaysia-standard>

### 2.2.3. Sharia Governance

Based on the maxim discussed above, if scholars want to derive a legal ruling on an object or a thing (or activities) that was not known to be eaten or consumed at the time of the Prophet (saw), then it is subjected to a new ruling (or fatawa). The new ruling might also be due to: a mixed of halal and non-halal items; the process in arriving to the halal status needs to be in place. For example, a fatawa is needed to determine the status of genetic engineering. In reaching the fatawa on genetic engineering, the eminent scholar, Sheikh Yusuf Al Qardawi states the following:

*"One of the blessings of Islam is that it never abstracts scientific programs or narrows the scope of the mind in the field of science and technology. .... There are many benefits we can derive from this, say, for instance in treating genetic diseases by using the effective genes to prevent harm or disease. This is something commendable in Islam according to legal rule "Prevention is better than cure"; the rule is taken from the hadith; "There should be neither harm nor reciprocating injury."<sup>1</sup>*

It shows that research done by scholars on scientific knowledge and technology (e.g. food scientists, veterinary doctors, doctors, and pharmacist) and scholars (e.g. sharia and economic scholars) from the aspects of benefits, and harm of a particular halal object or thing (another maxim) is necessary. The role of scholars in giving a fatawa is also needed especially in the presence of the complex definition of halal. Therefore, to avoid the sharia non-compliant risk, halal committee council is needed at different levels, namely at producer, provider and country levels.

<sup>1</sup>[http://www.infad.my/FMS\\_en/index.php?option=com\\_fatwa&task=viewlink&link\\_id=2128&Itemid=59](http://www.infad.my/FMS_en/index.php?option=com_fatwa&task=viewlink&link_id=2128&Itemid=59).



#### **2.2.4. Multiple Standard Setting Body**

As reported in Table 1, the consumer should be aware that there is an approved standard setting body in each jurisdiction. The agencies dedicated to play a role as regulator for halal products and services are such as Jabatan Kemajuan Islam Malaysia (Malaysia), Majelis Ulama Indonesia (Indonesia), Brunei Islamic Religious Council (Brunei), the Central Islamic Committee of Thailand for Halal Food Standard (Thailand), Halal Research Council (India) and the Halal Food Standards Alliance of America (HFSAA). Consumers should also be able to identify the logos of other approved standard setting body in other jurisdictions as this could assist them in making decisions when buying imported consumer goods or patronizing certain food outlets overseas. Therefore, in encouraging the cross border activities, the existence of multiple standard setting bodies should be minimized. A single standard setting body, like FAO, should be considered as a concerted effort to harmonize the rulings on halal products and services, and also to the need of such common standard in the Muslim minority countries.

#### **2.2.5. From regulation to supervision**

The supervisory framework in addressing the supervisory issues which impact operations and institutional development of Halal industry should be developed. Arguing against universal supervision or creating separate specialized supervisions, the approach should be able to set up risk-based supervisory framework. This framework needs to be able to highlight on the need to supervise Halal industry and focuses on the issues of supervision such as risk management (e.g. reputational risk to operator/country), governance, transparency and disclosure and market conduct; and should be part of the operational standards.

### **3. Sharia Compliant for Financial Transactions and Companies**

As discussed above, the current regulation on halal products and services is based on the products themselves; hence the halal products and services. Our aim in this section is to establish that the financial products and services comply with the sharia based on the underlying contract.

#### **3.1. Sharia Compliant in Financial Products and Services**

Under the sharia law on transactions, there are various types of contracts, from contract of sales and purchases (e.g. murabahah), contract of usufructs such as leasing (ijarah), contract of sharecropping (muzara'ah), to partnerships and equity participation (musharakah and mudarabah). Islamic financial institutions are permitted to adopt all these types of contract.<sup>1</sup> Under these contracts, the law

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<sup>1</sup>See (Ismail & Tohirin, 2010, pp. 178-199).

prohibits the collection and payment of interest, the avoidance of economic activities involving speculation or ‘gharar’ and the investment in unlawful activities.

The consequences of each contract can be seen in the rights, obligations and legal effects. These effects are not one and the same in all contracts, but they vary from one to another. For example, the effects of the contract of sale are the transfer of proprietary rights in things, obligation of the seller to deliver goods (which is known her quantity and quality) and establishment of his right to demand the price. The effects of rent are the transfer of proprietary rights in usufruct to the tenant. Thus, we found that these effects differ from one contract to another.

In general, it can be said that the following effects accrue from the contracts. *First*, the owner has the obligations to perform the transfer of proprietary rights in things or usufruct, commutative or non-commutative, such as sale, gift, rent, and borrowing. *Second*, obligation of performing a specified work regardless whether this work is the delivery of fungible property which is a debt which a person owes to another, such as contract of loan, or other work, such as the work of a hiring or agent. *Third*, arising the right of security as, for example, in pledge, surety and bail, and transfer of debt.

Hence, Islamic financial institutions conduct their activities in accordance with Sharia which entails that the institution pledges: (i) not to engage in interest-based debt transactions; (ii) not to conduct pure financial transactions disconnected from real economic activity; (iii) not to participate in transactions where there is exploitation of any party; and (iv) not to participate in activities regarded as harmful to society. In addition, laws are needed to allow financial institutions to operate according to Islamic rules. The example of financial transaction is presented in Table 2. For example, Islamic financial institutions can offer the sales based transaction using *murabahah*, *istisna*, *ijarah* or *tawarruq* contracts.

The above compliance would be able to define the financial transactions (i.e., financial products and services) based on the underlying contractual features. Also the lists of property to be traded and financial products to be invested and/or offered need to comply with the sharia.

### **3.2. Sharia Compliant Companies**

The involvements of companies in the following elements are criteria used for evaluating the status of sharia-compliant companies. Countries, like United Arab Emirates, Indonesia, Malaysia and Pakistan come up with the following parameter for sharia compliant companies.

#### **3.2.1. Primary Filter (Industry/Business Activity)**

- Financial services based on *riba* (interest);
- Gambling;

- ***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;
- Stockbroking or share trading in sharia non-compliant securities; and
- Other activities deemed non-permissible according to sharia.

**Table 2. Hypothetical Example of Islamic Financial Institution's Balance Sheet**

Assets	Capital and Liabilities
<b>Sales Based</b> <input type="checkbox"/> <b>Murabahah</b> <input type="checkbox"/> <b>Istisna'</b> <input type="checkbox"/> <b>Ijarah</b> <input type="checkbox"/> <b>Tawwaruq</b>	<b>Liabilities:</b> Islamic Deposits <input type="checkbox"/> Wadi'ah <input type="checkbox"/> Qard <input type="checkbox"/> Tawarruq <input type="checkbox"/> Murabahah
<b>Equity Based</b> <input type="checkbox"/> <b>Mudarabah</b> <input type="checkbox"/> <b>Musharakah</b>	<b>Investment Account</b> <input type="checkbox"/> Mudarabah <input type="checkbox"/> Musharakah <input type="checkbox"/> Wakalah
<b>Fee Based</b> <input type="checkbox"/> <b>Wakalah</b> <input type="checkbox"/> <b>Kafalah</b> <input type="checkbox"/> <b>Rahnu</b>	<b>Capital</b> <input type="checkbox"/> Mudaharabah <input type="checkbox"/> Musharakah

### 3.2.2. Secondary Filter (Financial Ratios)

The Sharia Advisory Council (SAC), which establishes the ruling on sharia compliant companies, 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. Dividends received from investments 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: (i) the public perception or image of the company must be good; and (ii) The core activities of the company are important and considered *maslahah* (public interest) to the *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 recognized by Islam.



In addition, to determine the tolerable level of mixed contributions from permissible and non-permissible activities for turnover and profit-before-tax of a company, the SAC has established several quantitative benchmarks based on *ijtihad* (reasoning from the source of sharia by qualified sharia scholars). If the contributions from non-permissible activities exceed the benchmark, the securities of the company will be classified as sharia non-compliant. The benchmarks are:

**The five-percent benchmark** - this benchmark is used to assess the level of mixed contributions from activities that are clearly prohibited such as *riba* (interest-based companies like conventional banks), gambling, liquor and pork.

**The 10-percent benchmark** - this benchmark is used to assess the level of mixed contributions from activities with the element of *`ulum balwa'*; which is a prohibited element affecting many people and difficult to avoid. An example of such a contribution is the interest income from fixed deposits in conventional banks. This benchmark is also used for tobacco-related activities.

**The 20-percent benchmark** - this benchmark is used to assess the level of contribution of mixed rental payment from sharia non-compliant activities, such as rental payments from premises used in gambling, sale of liquor, etc.

**The 25-percent benchmark** - this benchmark is used to assess the level of mixed contributions from the activities that are generally permissible according to sharia and have an element of *maslahah* (public interest), but there are other elements that may affect the sharia status of these activities. The examples of activities that belong to this benchmark are hotel and resort operations, share trading, and stock broking. This is because these activities may also involve other activities that are deemed non-permissible according to the sharia.

By combining the analysis in sections 2 and 3, that is, the sharia compliant financial products and services that use the halal goods and services as the underlying property, we may conclude that both are closely attached to each other.

#### **4. Moving Forward – Halal GNP**

The significant development and rapid expanding trend of Halal industry may lead us to think on the contribution of this industry to the economy. In deriving the figure on Gross National Product (GNP), the current methodology does not take into account the halal and non-halal activities. Furthermore, the maqasid sharia based socioeconomic development indicators, which also aim to preserve the five elements, could also provide the space for halal GNP as one of the indicators. In this section, we would like to suggest a new dimension of Gross National Product which calculates the contribution of each agent (i.e., consumer, company, government and exporter/importer) in the economy.

How does the methodology work? Theoretically, GNP can be viewed from three different ways: The *production approach* sums the “value-added” at each stage of halal production, where value-added is defined as total sales less the value of intermediate halal inputs into the production process. For example, flour would be an intermediate halal input and bread the final halal product; or an architect’s services would be an intermediate halal input and the building is the final halal product if it is used in sharia based activities.

The *expenditure approach* adds up the value of purchases made by final users - for example, the consumption of halal food, televisions (which provide halal services), and halal medical services by households; the investments in machinery by sharia compliant companies; and the purchases of halal goods and services by the government and foreigners. Gross savings are calculated as the difference between GNI (Gross National Income) and public and private consumption plus net current transfers. GNI and GNI per capita are the sum of gross value added by all resident producers plus any product taxes (less subsidies) that are not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. The *income approach* sums the halal incomes generated by production - for example, the compensation employees receive and the operating surplus of companies (roughly sales less costs).

## 5. Conclusion

The objective of this paper is to integrate the halal foods and halal finance. Our analysis shows the following results: first, the regulation on halal goods and services shows that this property is used as the underlying assets for Islamic financial transactions, therefore both are integrated. Second, a new set of filter needs to be introduced that look into the halal sources of funds (halal funds/money) for companies operating in the halal industry. Third, a halal GNP could be introduced as a result of the integration of halal finance and halal foods.

Currently, non-Muslims control 80 percent of Malaysia’s halal business. In fact, one of the main reasons for the slow take up rate of Islamic funds for Halal initiatives is the fact that the Muslims themselves, who should be making up the core of Islamic finance customers, are unaware of the potentials, hence staying away from the halal venture. It is a paradox that such Muslim concerns are being capitalised on by non-Muslim businessmen. By right, Muslim entrepreneurs should lead the industry and grab any opportunities as well as making the most profit from Halal goods and services.

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## Lending Interest Rates' Relationships of Malaysia and Other Countries

Noor Azryani Auzairy<sup>1</sup> & Chee Yong Thing<sup>2</sup>

**Abstract:** This paper is to examine the relationship of Malaysia's lending interest rate with other countries which include China, Singapore, United States, Indonesia and Thailand. Those five countries are Malaysia's major trading partners. The daily base lending interest rates from 2006 to 2014 were applied to this study. The associations of the interest rates were tested by coefficient correlation and multivariate regression analysis. Results showed that Malaysian lending interest rate is significant and positively related to those of China, Thailand and the United States. Among the five countries' interest rates, only the changes in interest rates of China, Thailand and the United States would affect Malaysia's lending rate. The independence of monetary policy would hardly be expected by the Malaysian authority, Bank Negara, in its decision on lending interest rate. In addition, it may affect the trade finance and money market hedge decisions by the international traders. This study provides an overview and guidance to the government authorities in making more effective decisions related to monetary policy, international trade and foreign exchange exposure in order to strengthen the economy.

**Keywords:** lending interest rate; monetary policy; trade finance

**JEL Classification:** E4; F3

### 1. Introduction

Interest rate, the cost of borrowing and return on investment of a financial asset, is part of economic mechanism. An increase in interest rate is an increase in the opportunity cost of household consumption. Thus, an increase in interest rate would reduce household consumption. In addition, firms would rather cut down on their investments than to finance their equipment and machineries at higher interest rate. Since the household consumption and firms' investments are the components of GDP, the GDP of a country would also be affected by an increase in interest rate. Indeed, Qi, Bin and Alexiadis (2012) stated that not only consumption and

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investment would be affected by interest rate, but also national savings, demand for domestic currency, prices of commodities and balance of payment. This statement shows the significant role of interest rate in affecting the economy of a country.

Interest rate is also a determinant used in monetary policy. According to Case and Fair (2004), in an effort to stimulate the economy, the central bank would expand the money supply and lower interest rates. This policy is called easy monetary policy. Tight monetary policy is implemented as an effort to restrain the economy, in which the money supply is contracted, and pushed the interest rates higher. Indeed the authors pointed out that in practice, the interest rate values are chosen by the authorities and the money supply is a consequence, rather than vice versa. Thus, interest rate plays a significant role in the decisions of monetary policy.

Changes in interest rates would affect money market, labor market, property market, stock market and market of goods and services. Rising interest rates would have an adverse impact on investors' confidence in the property market. Higher interest rates would cause higher borrowing costs; thus, reducing investments in the property and stock markets as well as goods and services market. Such reduction would affect the national income and the economic growth negatively. Najarzadeh, Ashena and Jezdani (2012) further confirmed that the interest rate and investment are key variables affecting the rate of economic growth. Ahmad, Rehman and Raof (2010) also noted that changes in interest rates increase the cost of a business and reduce stock returns. GRK, Cvetkovic and Vidas (2008) added that interest rates have direct influence on banks' decision in security investments and stock market price.

Knowing that interest rate is one of the economic mechanisms, how the interest rate is determined or related is questioned. Should the interest rate of a country be determined by the domestic variables, or should it be influenced by or related to the interest rates of other countries too? In other words, is the interest rate implemented in one country independent from the rest of the world, and thus does the country enjoy independent monetary policy? As such, this paper intends to investigate the relationship between interest rates in Malaysia and interest rates in other countries. The findings would indicate the level of dependence of the interest rate of the country compared to others. Thus, it would assist the authorities, especially the central bank, in making decisions related to interest rates and monetary policy in order to come out with more effective policies in stimulating the economy. Indeed, this paper focuses on the relationship between lending interest rate of Malaysia and its trading partners. Having any differences in the lending interest rates among those countries would affect the international traders' decisions in trade financing; and thus affecting trade activities and current account balance of the country. Should there be any difference and relationship among those countries, lending rates would also affect the decisions on money market hedge, especially that of with foreign exchange exposure.

The objective of this paper is to examine the relationship between the daily lending interest rates of Malaysia and those of China, Singapore, the United States, Indonesia and Thailand. Those five countries analyzed are Malaysia's close trading partners, and data from January 2006 to December 2014 were used.

## 2. Literature Review

Interest rate is defined as the price of money which is the amount of interest payable per unit of time expressed as a percentage of the amount borrowed (Alao, 2010). Ahmad et al. (2010) defined it as the cost of money, while Ozun (2007) defined it as a measure of the time value of money, which explained the volatility in stock returns.

There are various types of interest rates, which include base lending rate (BLR), base financing rate (BFR), and interbank offer rate (IBOR). BLR is the ceiling, average or minimum lending rate prescribed by central bank to be offered by commercial banks and finance companies to their customers (Bank Negara Malaysia, 2010). BFR is offered by Islamic banks, in which the funding is provided through contracts compliant. IBOR is the interest rate offered by banks when lending to each other. Normally, this rate is used as the basis for determining the cost of borrowing, particularly the Euro Dollar and syndicated loans (Mahmood, 1994). LIBOR, the London Interbank Offered Rate, is a daily reference rate based on the interest rate at which banks borrow unsecured funds from other banks in the London money market (or interbank market). It is the most widely used short-term interest rate as benchmark in the world (Fukuda, 2011).

The literature has mostly been focusing on the determinants of interest rates. Some of the determinants discussed are monetary policy, oil price, gross domestic product (GDP), investment and financial growth rate. According to Kim and Sheen (2000), Najarzadeh et al. (2012), monetary policy has a significant effect on interest rate and its volatility in the short term. Indirectly, the unemployment rate would also affect the level of interest rate. Having high unexpected unemployment rate would increase an expectation on monetary expansion; thus, reduces the interest rates. Wu (2010) revealed that changes in oil prices would also affect the interest rate. Interest rates have both, direct and indirect relationships with economic growth (Najarzadeh et al., 2012). Interest rate is also positively related to investment and money demand (Kudlacek, 2009), but negatively related to the supply of loanable funds (Brock, 1996).

The relationship of the interest rates between one country and the others are also found in the literature. However, those studies focused on the relationship between or among the developed countries. This paper, on the other hand, analyzes the interest rates' relationship of Malaysia with those of Malaysia's closed trading

partners. Those trading partners include both developed and developing countries; the United States, Singapore, China, Indonesia and Thailand.

The daily interest rates of the two regions, the United States and Europe, are closely related. The results showed that the two regions are interdependent to each other. However, the U.S. interest rates have greater effect on Europe, than vice-versa (Ehrmann & Fratzscher, 2004). The results varied when the study was done in shorter periods. The U.S. and European interest rates had a weak relationship from 1974 to 1978, while from 1979 to 1984, the interest rates' relationships between the two nations were strong (Kirchgassner & Wolters, 1987). Fung and Isberg (1992) claimed that the U.S. interest rates caused the changes to the European interest rates in the period of 1981 to 1983. However, during the period of 1984 to 1988, the cause-effect relationship was reversed. According to the two authors, this might be due to an expansion in the size of the European markets and an increase in the Eurodollar trading. The interest rates in the European countries under European Monetary System (EMU) are integrated to each other in the long-run (Zhou, 2003).

In relation to the developing countries, Sriviyali (2004) found that the rate of interest in India responded well to those of the U.S. and Japan, both in short-run and long-run. For the Asian countries, Chinn and Frankel (1995) claimed that the rate of interest in Malaysia, Hong Kong and Taiwan cointegrated with those of the U.S. and Japan. The interest rates of South Korea, Indonesia and Thailand, on the other hand, only cointegrated with Japan, while Singapore's interest rate cointegrated with the U.S. alone.

Most of the previous studies examined the relationship between short-term nominal or real interest rates and certificate of deposit rates. No study has been conducted to examine the effects of interest rates on loans or lending rates. Therefore, this research intends to analyze the relationship between bank lending rates in Malaysia and bank lending rates in China, Singapore, United States, Indonesia and Thailand. There are also many studies being done on the relationship between interest rates and other macroeconomic variables, which is not the focus of this study.

### **3. Methodology**

In analyzing the relationship between the lending rates of Malaysia and those of its trading partners, the data on lending interest rates prescribed by the countries' central banks were collected. The daily base or prime lending interest rates for the conventional bank loans were between January 2006 and December 2014 from the central banks of the sample countries. Malaysia's close trading partners, which include the United States of America, Singapore, China, Indonesia and Thailand, were selected due to the possible impact of lending rates on trade financing decisions of their international trades; and thus would affect the trade and current account

balance of a country, generally, the country's economy. Those secondary data were obtained from Datastream.

In order to identify the behaviors of the lending rates of different countries from 2006 to 2014, descriptive statistics and time series graphs were done. The central tendency is identified in descriptive statistics. The time series graphs show the movements of the daily lending rates in eight years. The inferential statistics such as correlation and multivariate regression equation were conducted to measure the relationship between the lending rates of Malaysia and those five foreign countries. Pearson correlation analysis was utilized to measure the relationship between two variables; with correlation value may range between +1 and -1. Multivariate least square regression analysis measures a linear relationship between numbers of independent variables (Xs) with a dependent variable (Y). The results indicate whether there is a positive or negative relationship between the independent variables and the dependent variable, as well as the expected value of the dependent variable when the independent variables increase or decrease. The applied multivariate least square regression equation is as follows:

$$M_{it} = \alpha_1 + \beta_1 US_{it} + \beta_2 S_{it} + \beta_3 C_{it} + \beta_4 T_{it} + \beta_5 I_{it} + \varepsilon_t \quad (\text{Eq. 1})$$

where,  $M_{it}$  is bank lending interest rate of Malaysia at time  $t$ ;  $US_{it}$  is bank lending interest rate of the U.S. at time  $t$ ;  $S_{it}$  is the bank lending interest rate of Singapore at time  $t$ ;  $C_{it}$  is bank lending interest rate of China at time  $t$ ;  $T_{it}$  is bank lending interest rate of Thailand at time  $t$ ;  $I_{it}$  is bank lending interest rate of Indonesia at time  $t$ ;  $\varepsilon_t$  is independently distributed random error term with zero mean and constant variance;  $\alpha_1, \beta_1, \dots, \beta_5$  are the parameters to be estimated.

## 4. Empirical Results

The relationships of the banks' lending interest rates of Malaysia and its five major trading partners were analyzed using correlation coefficient and multivariate least square regression. Before conducting the analyses, the behaviors and the movements of the daily lending rates of the six countries were explored through descriptive statistics and time series graphs.

### 4.1. Interest Rates Behaviors

Table 1 and graph 1 show the descriptive analysis and the time series graphs of bank lending rates in six countries, respectively. Malaysia's lending rate was at the highest level in nine years at 6.72% from mid of 2006 to end of 2008, before it dropped to the lowest rate at 5.51% at the end of 2009, i.e. during the US subprime mortgage crisis. The rate was consistent at 6.53% from December 2011 throughout. Meanwhile, China, Thailand and Indonesia experienced the same plummeting impact of lending rates as Malaysia during the US subprime mortgage crisis.



Indonesia’s lending rate had the second highest deviation after the U.S. It plummeted from the highest point of 12.75% in 2006 to 5.75% in 2012.

The lending rate of the United States started declining at the end of 2007 from the highest rate of 8.25% to the lowest rate of 3.25% in 2009 onwards. Due to the crisis in the country, the U.S had its biggest deviation as compared to the other five countries. Singapore, on the other hand, had fixed lending rate throughout the nine years at the rate of 4.25%. Due to its constant value, Singapore’s rate could not be applied in the regression equation. Thus, the Singapore’s rate is independent from all other rates, regardless of weakening or strengthening economy. This caused Singapore to ensure that its interest rates are in line with market conditions; and that need to be supported by a set of monetary policies.

**Table 1. Descriptive Analysis: Lending Interest Rates of the Six Countries (2006 – 2014)**

	Mean	Minimum	Maximum	Std. Dev.
Malaysia	6.41	5.51	6.72	0.37
The U.S.	4.51	3.25	8.25	1.99
Singapore	4.25	4.25	4.25	0.00
China	6.12	5.35	7.45	0.63
Thailand	6.97	6.05	7.75	0.51
Indonesia	7.68	5.75	12.75	1.83

#### **4.2. Correlation**

The correlation table in Table 2 portrays that all correlations between the two countries’ lending rates are positive, except for the correlation with Singapore. The lending rate in Malaysia has the highest correlation with Thailand. After Thailand, China and the U.S lending rates are also closely correlated to Malaysia with correlations of more than 0.5. Only Indonesia’s lending rate is less correlated with Malaysia. Meanwhile, Indonesia is closely correlated to Thailand. Singapore’s lending rate is totally independent at zero correlation with the other countries. The results indicate that Malaysia’s lending rate is positively related to its trading partners, except Singapore.

**Table 2. Pearson Correlation of Bank Lending Rates of Six Countries (2006 – 2014)**

		Malaysia	The US	Singapore	China	Indonesia
The US	Correlation Sig. (2-tailed)	0.631 <i>0.000</i>				
Singapore	Correlation Sig. (2-tailed)	0.000 <i>0.000</i>	0.000 <i>0.000</i>			
China	Correlation Sig. (2-tailed)	0.756 <i>0.000</i>	0.436 <i>0.000</i>	0.000 <i>0.000</i>		
Indonesia	Correlation Sig. (2-tailed)	0.468 <i>0.000</i>	0.120 <i>0.000</i>	0.000 <i>0.000</i>	0.120 <i>0.000</i>	
Thailand	Correlation Sig. (2-tailed)	0.818 <i>0.000</i>	0.691 <i>0.000</i>	0.000 <i>0.000</i>	0.589 <i>0.000</i>	0.666 0.000

### 4.3. Regression Analysis

Multivariate least square regression analysis was conducted to examine the objective of this paper, that is, the relationship between Malaysia's lending rate and the lending rates of Malaysia's five close trading countries. The applied model as in Eq 1 is:

$$M_i = \alpha_1 + \beta_1 US_i + \beta_2 S_i + \beta_3 C_i + \beta_4 T_i + \beta_5 I_i + \varepsilon_i$$

Singapore's lending rate was not included in the model as independent variable due to its constant interest rate for the entire duration of eight years. The variable was rejected by the analysis program. Thus, Singapore's lending rate is perfectly independent.

The results in Table 3 indicates that  $M_i = 2.132 + 0.019US_i + 0.271C_i + 0.343T_i + 0.004I_i + \varepsilon_i$ . All those coefficients are significant at 1%, except for Indonesia. Thus, Indonesia and Malaysia's interest rates are not significantly dependent to each other. The other 3 countries' lending rates are positively related to Malaysia's lending rate, which means, the higher the lending rates of those countries, the higher the lending rates of domestic banks in Malaysia. Among the three countries, Thailand's lending rate has the greatest impact on Malaysia, followed by China and the U.S.

The value of  $R^2$  in Table 3 of 0.790 indicates how well the goodness of fit of the model is. Thus, the lending rates of China, Indonesia, the United States and Thailand could contribute 79% to the changes in Malaysia's lending rate. Adjusted  $R^2$  value is 0.789, indicating that lending rates of China, Indonesia, the U.S. and Thailand could affect the lending rate of Malaysia at 78.9 %. There are another 21.1 % for other countries to substantially affect the lending rates of Malaysia. The F test shows that the regression equation as a whole is statistically significant. The variance inflation factor (VIF) shown in the table above indicates that the multicollinearity

does not exist in the regression estimation. The reported VIFs are all less than 5, despite of having high  $R^2$  in the regression estimation.

The findings of the two analyses, correlation and multivariate regression, concluded that the lending interest rates between Malaysian banks and foreign banks of Thailand, China and the U.S., are positive and significantly related. The null hypothesis that there is no relationship between the domestic and foreign banks' lending rates is to be rejected. This result is consistent with the results obtained by Chinn and Frankel (1995) who reported that Malaysia cointegrated with the U.S. and Japan. The lending rates of Indonesia and Singapore, however, are found to not have significant relationship with the domestic lending rate. The findings on Singapore's lending rate contradicted the findings of Chinn and Frankel (1995). According to the two authors, Singapore's real rate of interest cointegrated with the U.S. alone. This paper shows no relationship between Singapore's lending rate with the other four countries above. Chinn and Frankel (1995) also claimed that Indonesia and Thailand are closely related to Japan instead of the U.S.

**Table 3. Relationship between Domestic and Foreign Bank Lending Rates (2006 - 2014)**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant	2.132***	.071		29.995	.000		
China	0.271***	.011	.423	23.948	.000	.432	2.313
Indonesia	0.004	.005	.020	0.846	.397	.254	3.938
The U.S.	0.019***	.004	.090	4.264	.000	.300	3.338
Thailand	0.343***	.015	.494	23.001	.000	.293	3.417
R	0.889		Adj R <sup>2</sup>	0.789			
R <sub>2</sub>	0.790		Sig. Change	F	0.000		

*Dependent Variable: Malaysia*

Predictors: (Constant), Thailand, China, The U.S., Indonesia

\*significant at 10%; \*\*significant at 5%, \*\*\*significant at 1%

## 5. Conclusion

The findings of this paper suggested that there is a positive relationship between Malaysia's lending rate and the lending rates of Thailand, China and the US. Changes in lending rates in those countries could influence the domestic lending rate.

Thus, the null hypothesis that there is no relationship between Malaysia and other countries' lending rates is rejected.

The results could be related to some policy implications. The implication is that financial markets in Malaysia could not be excluded from the effects of monetary policy changes occurred in the financial markets of those countries, specifically, Thailand, China and the U.S. Thus, independent monetary policy would hardly be expected by the authorities in Malaysia. The monetary policy decision maker, Bank Negara Malaysia, has to consider the interest rates offered and monetary policy implemented in Thailand, China and the U.S. This is to ensure the effectiveness of the policy in achieving the desired objectives.

The influence of foreign lending rates on domestic rates would also affect the trade finance decision made by international traders. The decrease in the lending interest rates of one country will encourage the traders to take more credits or trade financing from that country for trade activities. Thus, this would affect the trade and current account balances, investment growth and exchange rates between the two countries.

Due to the significant impact of the changes in lending rates of China, Thailand and the United States on Malaysia, this shows how money market hedge could be used by the international traders for foreign exchange exposure management. Indeed, such relationship could affect the exchange rates of the countries.

Indonesia and Singapore's lending rates, on the other hand, are not significantly related to Malaysia's lending rate. Even though those two countries are very closed to Malaysia, any changes in their rates and their monetary policies would not affect Malaysia.

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7. Appendix

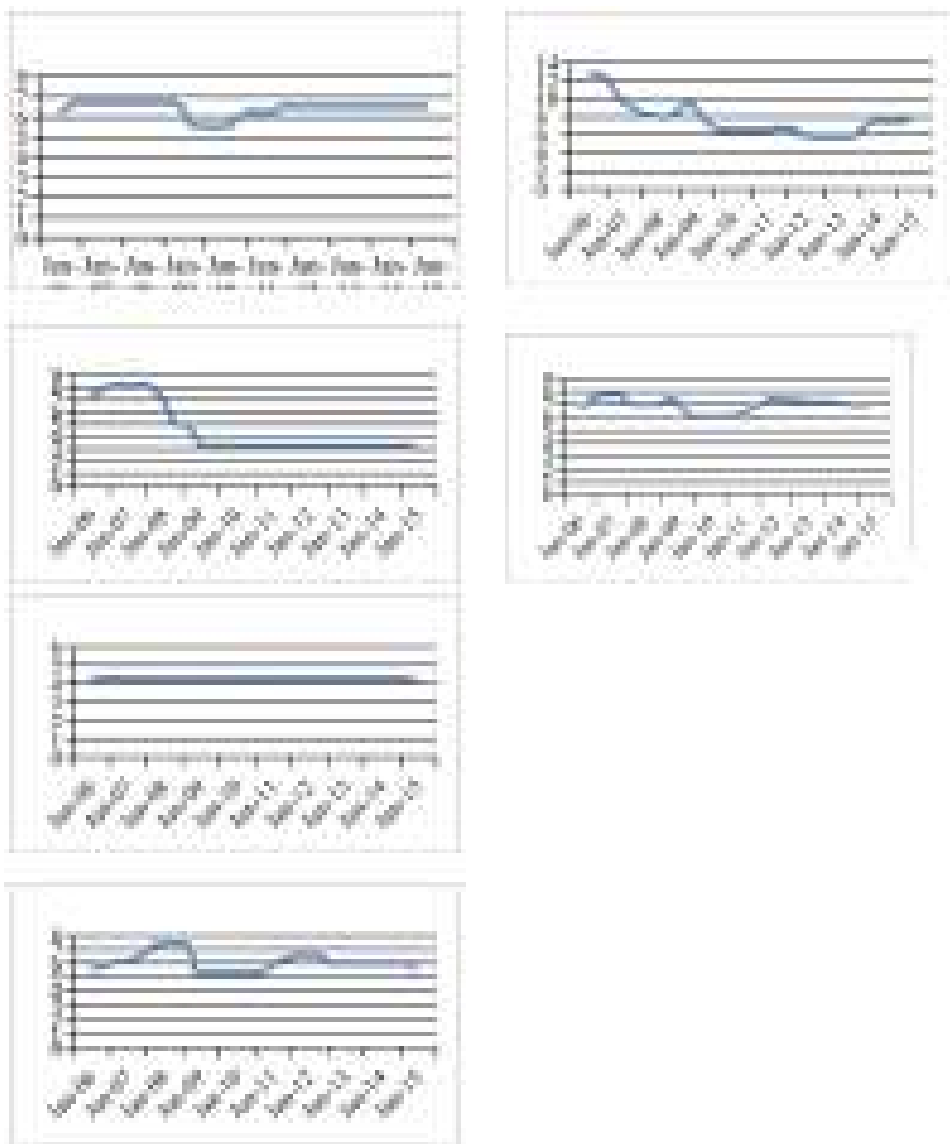


Figure 1. Time Series – Lending Interest Rates of Six Countries (2006 – 2014)

## **Cheap Talk: “Team Factors and Management Practices Influence on Team Trust”**

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**Abstract:** Team trust has been cited as a contributing factor towards team performance. This paper looks at the antecedents of team trust and to what extent they influence team trust. The antecedents of team trust are team factors like team autonomy, team stability and team member experience; and the management practices are top management involvement and management support. The results demonstrated that team factors and management practices influence team trust individually. The key findings are that management variables contribute above the team variables to team trust, but top management support is insufficient as compared to having top management involvement.

**Keywords:** team trust; team factors; management practices; top management involvement

**JEL Classification:** M14; M54

### **1. Introduction**

Wickramasinghe and Widyaratne (2012) noted that team trust is important at ensuring that a team shares its knowledge and information for the success of an organisation. Team trust is important for organisational performance (Erdem, et al., 2003). Previous studies had looked at team trust from communication (Daim, 2012; Diallo, 2005) and competence (Stahl et al., 2011) perspectives, but have not examined team factors combined with management practices.

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There are many team factors that influence team trust, i.e. to have common language, understanding, familiarity, formal and informal communication, interpersonal relationships, team stability, team autonomy, power, team member experience, level of authority, etc. (Rajagopal, 1994; Rajagopal & Ananya Rajagopal, 2006; Zárraga-Oberty & De Saá-Pérez, 2006; Harris & Moran, 1999). Nonetheless, in this paper, we will only focus on team stability, team autonomy and team member experience. On the other hand, management practices consist of top management support and top management involvement. The research questions are 1) does team factor influence team trust? 2) does top management influence team trust? ; and 3) does top management practices influence beyond team factors on team trust?

## **2. Conceptual Model and Hypotheses**

We hypothesized on two key areas: team factors and top management practices influence team trust. For team factors, we believed that team experience, team autonomy and team stability will positively influence team trust. For top management practices, we asserted that top management involvement and top management support will also influence team trust. This study attempted to determine the specific influence of top management practices while controlling for team-related factors on overall team trust.

## **3. Team Factors' Influences on Team Trust**

The team factors that have been shown in previous studies to influence team trust include team experience, team autonomy and team stability (Rajagopal & Rajagopal, 2006; Hisrich et al., 2010; Weick & Roberts 1993; Jones & Jones, 2011; Lynn & Akgun's 2012). Team members should have adequate skills and experience prior to involving in a project. The required skills include technical (Hisrich et al., 2010), marketing and manufacturing skills. Experience of team members may come from their experiences of developing and launching similar products (Hisrich et al., 2010), assignments within the company or working in several different functional areas such as engineering, manufacturing or marketing. Such shared experiences have been suggested to facilitate the development of trust (Mayer et al, 1995, Rajagopal & Ananya Rajagopal, 2006). Individuals on a team who have worked together previously may increase team trust as the shared prior work experience enables tacit coordination between individuals (Weick & Roberts, 1993, Aman and Nicholson, 2009). Members who have worked together before are better able to accurately locate knowledge in a group, effectively share the knowledge they possess, and then use this knowledge to reach a desired outcome (Liang et al. 1995; Reagans et al. 2005). In her study of auditor teams, Rose (2007) suggested to the importance of team member experience and how it could improve team trust.



In addition to team experience, team autonomy had also been cited by the prior research to impact team outcome. Higher team autonomy level contributes to reduction in absenteeism or recorded sick leave (Jones & Jones, 2011; Rafferty, Ball & Aiken, 2001). Seung-Bum Yang & Sang Ok Chop (2009) illustrated that team autonomy is important at enhancing team performance. According to Rolfsen & Langeland (2012), team autonomy is an important contributor to achieving successful maintenance improvement. Their study also showed that team autonomy will contribute towards total productive maintenance directly and indirectly via technical and the normative dimensions. Tata (2000) emphasized that it is important for managers to know the level of team autonomy suitable to their companies.

In addition to team experience and team autonomy, team stability is also a contributing factor. Adler (2003) stated that team stability is reflected through the member's loyalty to the organization, which in turn is reflected in the years of working in the organization and having team stability. This leads towards an increase in team trust. Instability in a workplace can influence the knowledge flow as well as disrupting teamwork. Borghans, terWeel & Weinberg (2011) argued that people are most productive in jobs that match their style. The returns to interpersonal interactions reflected through enhanced team stability are found to be consistent with the assignment model. Lynn & Akgun's (2012) research illustrated that team stability can assist new product development, as well as improve team learning and the probability of success in a stable environment.

Therefore, we hypothesize the following:

**H1: Team factors positively influence team trust**

More specifically,

H1a: Team member experience influences team trust.

H1b: Team autonomy influences team trust.

H1c: Team stability influences team trust.

#### **4. Top Management Practices Impacting Team Trust**

The top management practices that have been shown in the prior research to impact trust include, top management involvement and top management support (Wickramasinghe & Widyaratne, 2012; Lynn, 1998; Druskat & Pescosolido, 2006).

While there is a dearth of empirical research on the impact of Top management involvement on team trust, there are several anecdotal studies asserting a positive influence of top management involvement on team trust. For example in a study on the development of the IBM PC, due to the active involvement of the company's CEO, Frank Cary, who personally conducted the project review meetings, the team

believed that the company was behind and supportive of the team (e.g., Lynn & Akgün 2001; Lynn 1998). Cary's involvement had allowed the team to "break" a variety of policies at IBM. Without Cary's intimate involvement and support, the team would likely not have felt empowered to do so without the fear of being fired.

Conversely, the lack of top management involvement and support was one of the primary reasons that the IBM PC Jr. failed. While the PC Jr. was a powerful, versatile home computer, top management did not actively participate in the project due to a conflict. Top IBM executives were having second thoughts about selling a home / game computer, and company executives were concerned about being perceived as a home computer company. After all, they were International "Business" Machines; not International "Home" Machines. As David O'Connor, who took over from Sydnes as the PS Jr.'s System Manager, recalls (Lynn 1998):

*There were some guys at the top of the corporation who really believed that they didn't want the IBM logo in the retail or consumer distribution channel at the time. [They said] 'IBM is not a consumer company. They are a business company. They sell to professionals and businesses and large corporation and this home computer stuff is not for us.' The instant there was any problem with the program, it gave those who felt IBM should not be in that market reason to suggest that we delay the program.*

Midway into the PC Jr. Program, top management changed the rules. They required the PC Jr. to be fully compatible with the PC but not too powerful (so as not to cannibalize the low-end of the PC market); and be geared toward both home and business markets. The net result was that team members became frustrated and mistrusted that the direction was correct and would not undergo more changes. As a result, the overall project leader (Bill Sydnes) left. His leaving created a void that was difficult to fill (Lynn, 1998). His leaving combined with the changes, delayed the project, altered its target market and reduced its technical capabilities. Needless to say, the product failed.

In addition to top management involvement, according to Wickramasinghe and Widyaratne (2012), another important factor that influences team trust is a team leader's support and knowledge sharing. Based on Jackson, Farndale, Kakabadse (2003), team trust will be strong if top management provides support for both the project and team members. Druskat and Pescosolido (2006), noted that interpersonal understanding, caring behavior, creating an optimistic environment and open communications are the elements of top management support. Team trust would be positively associated by top management support. According to Bijlsmaand van de Bunt (2003) monitoring is one of the factors in top management support, so it is able to produce strong belief among team members. A manager's support is especially relevant in two areas of improving individual performance and in resolving problems

with others. Help and guidance in improving individual performance are seen as signs of caring.

Therefore, we hypothesize the following:

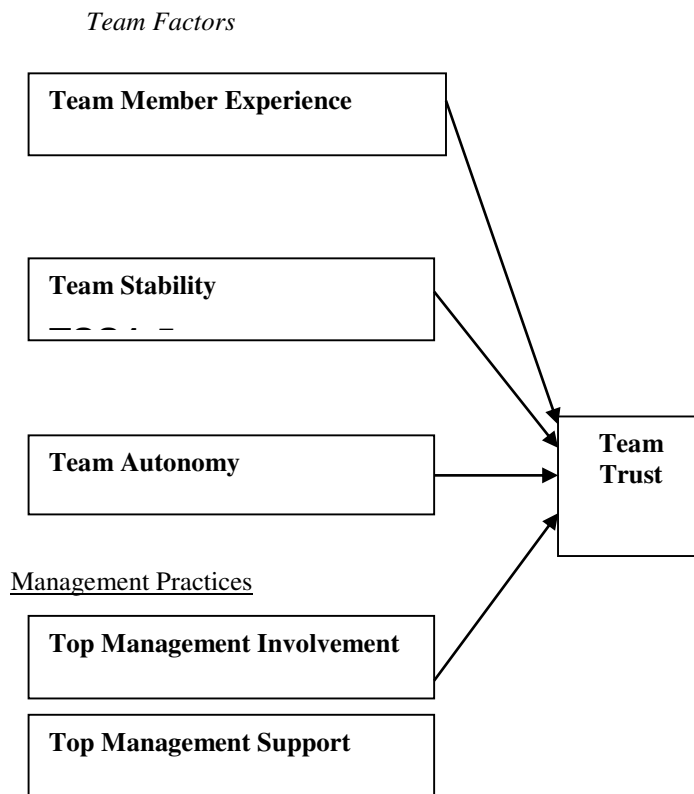
**H2: Top Management Practices Will Positively Influence Team Trust.**

More specifically

H2a: Top management involvement influences team trust.

H2b: Top management support influences team trust.

Based on our literature review, the authors have developed the conceptual model shown in Figure 1.



**Figure 1. Conceptual Model: Antecedents of Team Trust**

**5. Data Collection and Sample Description**

To test our hypotheses, an open-ended questionnaire was developed based on previous research. The questionnaire was tested, redefined and improved. The survey was conducted in the northeast region of the U.S. Respondents in a variety of

technology-based companies were selected to participate in this study. In each company, the contact person was primarily product/project managers, team leaders, or top project members. The respondents were predominately product/project managers (product/project managers 34.9%, team leaders (26.4%), or top project members as respondents (14.2%). The remainder included presidents, vice presidents or others. The anonymity of the respondents increased the motivation of informants to cooperate without bias.

A total of 81.3% of the contact persons returned the questionnaires. The high response rate was due to the collected data being a part of an executive graduate management program's exercise in identifying the companies' contacts who were intimately involved in a new product launched into the marketplace. The composition of the respondents represented the following industries: telecommunication (34 projects, 16.0%), machinery manufacturing (22 projects, 10.4%), equipment and materials (6 projects, 2.8%), chemical manufacturing (15 projects, 7.1%), food manufacturing (8 projects, 3.8%), pharmaceutical (5 projects, 2.4%), government or defense (48 projects, 22.6%), computer software (12 projects, 5.7%), information services (56 projects, 26.4%), and consumer product (4 projects, 1.9%), and pet care (2 projects, 0.9%).

Meanwhile, 40.4 % of the sample involved a new technology, 36.4% of the sample involved several new technologies, and 9.1% of the sample involved non-proved or non-existing technologies. The median team size was 12 people (the average team size was 24 people and S.D. was 40, the mode was 8). Most projects were from large companies. 63.5% of the projects were from companies earning annual income over 500 million dollars. Additionally, 27.8% of the projects were from companies employing 500-5000 people, and 48.8% projects were from companies employing over 5000 people.

## 6. Results and Analysis

The authors conducted a hierarchical regression analysis. The first step was to enter the team factors against the team's trust variable. Next, the management practices variables were entered. There were some missing values which were replaced with mean values.

The authors used a two-tailed data collection and analysis approach. Table 1 demonstrates the descriptive statistics and reliability test results. Cronbach's alpha values were used to assess the reliability of the three dependent variables. Table 1 illustrates the Cronbach's alpha values for team factors and management practices on team trust. The Cronbach's alpha ranged from 0.672 to 0.944. All the independent variable's Cronbach's alpha values were above the required reliability value of 0.70 (Nunnally, 1978) for all the team factors except for team autonomy (0.677) and

dependent variable, team trust (0.672). However, these variables were newly entered into the study of team phenomenon; they remained to provide more complex explanation since the correlation coefficients were significant; hence, suggesting further analysis is possible. The correlation values between the five variables are also shown in Table 1, whereby all the antecedents are related to team trust ( $p < 0.05000$ ).

**Table 1. Descriptive Statistics and Reliability**

	Means	ST D	Team Trust	Team Member Experience	Team Autonomy	Team Stability	Top Management Support	Top Management Involvement
Team Trust	7.90	2.00	(0.67)	0.28**	0.36**	0.37**	0.33**	0.25**
Team Member Experience	6.79	2.06		(.76)	0.27**	0.29**	0.34**	0.35**
Team Autonomy	6.57	2.23			(.68)	0.35**	0.60**	0.33**
Team Stability	6.85	2.774				(.84)	0.28**	0.31**
Top Management Support	6.76	2.17					(0.94)	0.69**
Top Management Involvement	5.08	2.79						(0.93)

The number in Parenthesis is the Cronbach's alpha.

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

To test the hypotheses, we proceed with multiple regressions. The results of multiple regression indicated a significant relationship between team factors and team trust. Management practices were also found to influence team trust, but mere top management support is insufficient, it needs to have greater top management involvement.

Results (See Table 2.) show that all team factors are significantly related to team trust. The multiple correlation between the three team variables and team trust was .378 ( $p < .001$ ) and all three variables had significant regression coefficients. These results supported hypothesis 1 and hypotheses 1a, 1b, and 1c.

The second regression model included all team factors and the two management practices variables. The results showed a significant increase the multiple correlation ( $p < .01$ ) when the two management variables were included supporting hypothesis 2. The coefficients for the two management variables showed a significant coefficient for top management involvement ( $p < .01$ ), but a non-significant coefficient for management support. Thus, hypothesis 2a was supported, but hypothesis 2b was not supported.

**Table 2. Multiple Regression Model**

Model	Beta	T	Sig.
(Constant)		27.364	.000
1 Team Autonomy	.189	5.619	.000
Team Member Experience	.122	3.692	.000
Team Stability	.191	5.670	.000
(Constant)		18.922	.000
2 Team Autonomy	.156	4.154	.000
Team Member Experience	.101	3.004	.003
Team Stability	.182	5.420	.000
Top Management Involvement	.096	2.948	.003
Top Management Support	.053	1.394	.164

*Dependent Variable Team Trust.*

## 7. Discussion

Based on the previous sections' results, it is evident that the team factors such as team experience, team autonomy and team stability, significantly influence the dependent variable, team trust. Top management practices especially top management involvement is particularly important to team trust, but top management support is not as important. One way to explain this is "Talk is Cheap!". The top management can say that new products or programs are important, but their actions speak louder than words. Mere top management support is insufficient, active participation is important for creating team trust.

Theoretically, this study extends the understanding of team trust and the factors influencing team trust. Specifically this study supported the study by Wickramasinghe and Widyaratne (2012) who indicated that team trust is important at ensuring team shares its knowledge and information for the success of an organisation. At the same time, this study added that top management involvement is equally important at ensuring the successful development of new product as it could improve team trust.

Practically, the results of this study can be used as guide for top management in the selection process of team members. By understanding the factors that could improve team trust, appropriate actions such as the selection of team members for selective project and managerial support could be arranged in the way that team members have some background skills and experience on the related project.

## 8. Limitations and Future Research

Based on the above discussions, the results demonstrated that while team factors significantly influence team trust, when management practices were added, management variables contribute above the team variables. Nevertheless, while top management support is important, the most significant change is brought by top management involvement. In short, everyone can talk, but let's get involved to get the results!

Research was based on a variety of technology-based companies. Future research could include various sectors of the economy. An interesting study could also be done on various agencies, i.e. government, non-government agencies, private and voluntary organisations.

## 9. Acknowledgement

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## Motivations of Inter Vivos Transfers Among Malaysian Muslims

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**Abstract:** The surge of interest in inter vivos transfers has sparked a debate over its motivations. However, most of the academic research has focused on developed economies; and similar to many other countries, empirical research is scarce in Malaysia too. This study, aims to unravel motives for inter vivos transfers among Malaysian Muslims. It employs logit regression analysis in which the data is collected by means of questionnaires from October to December 2012. This research discovers that exchange motive is more prevailing than altruism motive among the respondents. More inter vivos transfers are given to daughters, children who provide more services and children with low opportunity cost of their time. However, inter vivos gifts among Muslims in Malaysia have one distinctive feature, they have been a part of the Malay culturally defined sphere enriched by the Islamic law. This is called '*hibah*' in Malay language, which originates from an Arabic word. It is concluded that the cultural aspect of the inter vivos transfers provides enhanced information as to how the transfer mechanism work.

**Keywords:** Inter vivos; Hibah; Altruism; Exchange; Inheritance

**JEL Classification:** D14; D64; E21; D10

### 1. Introduction

Economists believe that intergenerational transfers are vital elements in the economic landscape of a country. Private transfer, which constitutes part of the intergenerational transfers, for instance, influences the human capital investment of children and it is considered as a form of financial assistance to the children in their early working life. Intergenerational transfers, between two parties namely parents (givers) and children (recipients) could be in the form of inter vivos or bequest (Cox & Rank, 1992). For several decades now, interest in inter vivos transfers has

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spawned a large literature attempting to measure the motives of such transfers. The two most dominant motives are exchange (Cox & Rank, 1992; Norton & Van Houtven, 2006) and altruism (Halvorsen & Thoresen, 2011).

The altruism model informs that a parent is altruistic in the sense of caring about the consumption possibilities of his/her children. This is because he/she cares about the well-being of the children. This model has one particular distinctive property in which transfers are divided unequally among children with the purposes of ensuring that the children will be equally well off; to equalize opportunities among children with different abilities; or to ensure the children will enjoy the same relative status in life as the parents. Therefore, in the altruism model, more transfers are given to the less able and lower income children (Becker (1974) and Barro (1974)). By contrast, when parents care about their old-age security in the sense of caring about the services or attention by their children, and they value such services and attention by making certain amount of transfers, then these transfers are motivated by the exchange motive (Cox, 1987; Pestieau, 2000; Laitner and Ohlsson, 2001).

Halvorsen and Thoresen (2011) suggest a broader definition that covers all types of inter vivos transfers: any money transfer, payment of regular or extraordinary expenses, payment of travels/holidays, interest on loans or down payments on loans, and financial support through transferring cars/housing or in other ways allowing the children to make free use of card/housing. This broader definition of inter vivos transfers has been used in previous studies as well as in this study.

This paper aims to investigate the presence of the exchange and/or altruism motives in the inter vivos transfers made by Malaysian Muslims to their children. Hence, in doing so, we estimate logit model for the likelihood of receiving inter vivos transfers from parents. It also integrates with the culturally defined sphere to help us comprehend the extent to which they engage with the practice of making inter vivos transfers. Through such an effort, it is possible to capture the forms of inter vivos specific to their culture, which are not discussed in the existing body of knowledge. The rest of the paper is organized as follows: section two provides the relevant literature review. Methodology and data collection are presented in section three. Findings and discussion are presented in section four, while section five concludes the study.

## **2. A Literature Survey**

Some features associated with parents and children influence the likelihood of transfers, and their amount suggest different motives for inter vivos transfers. First, previous studies have established a consistent finding implying that the parents' economic status is a significant factor affecting the probability of receiving inter vivos transfers and the amount of transfer. Thus, children with parents with higher

income and education which indicate a better economic status, are more likely to receive more inter vivos transfer and a larger amount (Nordblom & Ohlsson, 2011; Cox & Rank, 1992; Halvorsen & Thoresen, 2011). Larger amount should be received if both parents are alive. Thus, the number of living parents is inversely related to transfer amounts, indicating that higher per capital parental income leads to a larger transfer as suggested by Cox and Rank (1992). As far as the inter vivos transfers motives are concerned, researchers have closely explored the extent to which the child's well-being and motives of the parents determine the inter vivos transfers. Cox and Rank (1992) argue that an increase in a child's income should either reduce or increase the probability and amount of transfers. If altruism motives exists, the probability of receiving the transfer and the amount for the children with higher income are lower than those with lower income. On the other hand, with exchange, increases in child's income diminish the probability that a transfer occurs but increase the transferred amounts on the ground that wealthier children are able to provide more care.

Altruism motive, however, seems to be more relevant in Albertini and Radl (2012) and Halvorsen and Thoresen (2011). They contend that altruistic parents provide support to a child or children with the greatest needs. As a result, the inter vivos transfer is divided unequally between children with different needs. The children's need, even though it can be indicated by their income, other proxies such as being unemployed, single and children's education level have been widely used in the literature. Recent evidence in Halvorsen and Thoresen (2011) and Albertini and Radl (2012) indicate that altruistic parents pass on more inter vivos gift to a unemployed child, because the child is considered worse off than his or her siblings. They also discover the same motive appears in the case of larger transfer is given to a child who is single, divorced or widowed and less educated as this indicates a considerably lower household income which requires more parents' support.

According to Cox and Rank (1992), the correlation between children's education level and the likelihood of receiving inter vivos transfer could reflect an exchange motive. They observe that children with higher education level increases their likelihood to receive inter vivos transfers. Cox and Rank believe that this is due to the borrowing constraints in the U.S. This is because, they perceive that those with more education have higher future earning potential, which increases their demand for loan. However, the solution to the borrowing constraints face by children with higher education are solved by their parents by making more transfers to them.

An exchange motive is particularly noticeable in the inter vivos transfer from parents when their children's age becomes their concerns as contended by Cox and Rank (1992). Cox and Rank (1992) show that younger people are more likely to get transfer and with larger amount. A similar justification, namely 'borrowing constraints' is given. This means that more transfers are given to the younger

generation. This is because they face greater difficulty in securing bank loans (Jappelli, 1990).

A number of studies demonstrate that gender significantly affects the amount of inter vivos transfers in which females receive more gifts than males (Nordblom & Ohlsson, 2011). However, Nordblom and Ohlsson (2011) do not view that being female is associated with lower income in which requires more support from altruistic parents. On the other hand, they believe that this is an indication of the exchange motive on the premise that daughters, to a large extent, care more for their parents than sons. The findings from some of the existing research also indicate that altruistic parents are more likely to offer more inter vivos to the children who are single, as being single indicates a considerably lower household income (Halvorsen & Thoresen, 2011). Hence, marital status is one of the factors that parents consider when deciding who should receive more inter vivos transfers among their children.

Inter vivos transfers in the form of financial transfers are positively related to the services provided by the children to parents and such services could be in the form of informal care support and attention such as help, care support and contact (Norton & Van Houtven, 2006; Cox & Rank, 1992; Albertini & Radl, 2012). Hence, informal care support and attention are the important variables to test for the exchange motive since informal care support and attention involve continuous commitment from children in terms of time and effort. Cox and Rank (1992) also test distance as proxy to the services, as it is modelled that distance increases the cost of providing help to the parents. Accordingly, children who live nearer to their parent's house usually provide more help to the parents than those who live farther. The negative relationship between distance and the probability of transfer receipt is evidenced in Cox and Rank (1992); with the assumption that transfers are payments for in-kind services that are costlier to provide over longer distances.

Additional information from the literature conveys that children with a lot of siblings are less likely to receive a transfer (Cox & Rank, 1992), but there is no motive associated with this behavior. However, we can relate having siblings with the informal care provided to the parents which indicates an exchange motive as argued in Norton and Van Houtven (2006). Children are the most important source of informal care besides spouses. One of the children commonly provides informal care to the parents, while other siblings provide none. The child with the low opportunity cost of their time such as low-income children, daughters, children who do not work, children who are already caring for other dependents, or children who live close by are most likely the caregivers.

This study obtains some preliminary understanding of the inter vivos transfers with regard to the Malaysian context. Lillard and Willis (1997) is the only study conducted to investigate the motive for inter vivos transfers among Malaysians. The scope of the inter vivos transfers in Lillard and Willis is confined to time and money

transferred to and from generations both above and below the reporting generation. However, the sub area of their study – the transfers of money from the perspective of respondents as children is more relevant to this study. Their respondents were consisted of couples who separately reported the money transfers received from their parents. Lillard and Willis evidence that the child and spouse characteristics are important determinants of such transfers. They also find that parents are more likely to transfers and offer more money to the couple if they provide housework help to parents. The couple's total household income, however, has a negative effect on the money transfers. With reference to the motives of this transfer, Lillard and Willis believe that this is an evidence in favour of the exchange hypothesis. This study is also of the opinion that transfers are made due to the exchange motive since the effect of service accords with Cox and Rank (1992).

By providing a reverse relationship, Lillard and Willis (1997) focus more on the time and money transfers from children to parents, which they believe is the dominant direction of monetary transfers in Malaysia. Therefore, it is not surprising that they conclude that old age security triggers the transfers. They believe these findings fit the Malaysian context in which safety-net programmes such as the annuity market, public social security and health insurance are very limited or almost not available/existence in the market. Thus, parents rely on their children for their old age support. As a result, transfers seem to provide insurance within the family. Transfers to parents from children increase in likelihood or in value when parents are older, in poor health, or widowed. In addition, Lillard and Willis perceive that transfer made from children to parent supports the parental repayment hypothesis. Parents have made human capital investments on their children and the children are expected to repay the parents by providing old age support. This is evidenced by the positive relationship between children's education attainment, the likelihood of transfer and the amount of transfers that parents receive from their children. Lillard and Willis' (1997) argument/position fits the earlier stage of Malaysia as a rapidly growing country. It has been going through economic transition starting with the promulgation of the National Economy Policy (NEP) and accordingly, inter vivos transfers in Malaysia need to be revisited.

Comprehending the inter vivos transfers practice within the culturally defined sphere of Malaysia can be considered an inevitable and necessary extension. This is because the Islamic law and the Malaysian Muslim customs have created distinctive forms and features of inter vivos transfers. This results in inter vivos transfers' mechanisms and forms peculiar to Malaysia, which have been practiced by the society and to some extent it indicates the motives for such transfers. Banks (1976) explains the incorporation of inter vivos transfers into a Malay framework. It is observed in Banks's study (1976) that inheritance is also normally transmitted during the lifetime in the form of inter vivos transfers and this symbolises the supreme act of parental-filial kinship. Banks (1976) adds that Malays recognizes the gender differences in

the kinds of property that they provide for their children. Thus, daughters are more likely to receive inter vivos transfers in the form of moveable property such as jewellery and other valuables, while land is more appropriately considered for sons. Banks (1976) rationalizes this by highlighting the wisdom of providing daughters with the assets that they can easily take with them in case of a divorce. Altruism motive is one particular behavior mentioned by Banks (1976), according to which Malay parents provide equally to all their children regardless of the gender which are suited to the need of the recipients.

### 3. Methodology and Data Collection

In modelling the inter vivos in Malaysia, we took the parent utility function by Cox dan Rank (1992)<sup>1</sup> as a point of departure:

$$U_p = U(C_p, s, V(C_k, s)) \quad (1)$$

where  $U_p$  = parent's well-being;  $V$  = child's well-being;  $C_p$  and  $C_k$  denote parent and child consumption and  $s$  denotes services the child provides to the parents.

Equation (1) features both altruism and exchange motives. Cox and Rank (1992) argue that even though this model contains both motives, only one motive determines behavior at the margin. For example, if parental transfers to children represent implicit payment for services children provide to parents and these services are demanded inelastically, parents would tend to transfer more to their relatively high income children; whereas, as noted above, altruistically motivated parents will transfer less. If the services given by a child are a good substitute for services from other children or the available services in the market, transfers within the family will tend to go toward the child who offers the cheapest services - possibly a low income child with a low opportunity cost of time.

In addition, the exchange model predicts that financial transfers given to children are positively associated with services that children provide to parents. It should be noted that this can be possible under altruism. Cox and Rank (1990) notice that this finding does not offer much information about the transfer motives. However, they emphasize that a positive relationship is necessary for an exchange.

Equation 2 to 5 below explain the logit model developed to be tested in this study. In this model,  $y_i$  is binary, which takes any of two values; 0 (Have not received any inter vivos transfers within the past five years) or 1 (Have received inter vivos transfers within the past five years, with the probabilities  $p_i$  and  $1 - p_i$

$$y_i = \begin{cases} 1 & \text{if the } i\text{-th respondent have received inter vivos transfers within the past 5 years} \\ 0 & \text{otherwise} \end{cases}$$

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<sup>1</sup> Model used in Cox and Rank (1992) is a variant of that of Cox (1987).

$$\text{Logit } P(y_i = 1|x_i) = \frac{e^{x_i'\beta}}{1 + e^{x_i'\beta}} \tag{2}$$

$$\begin{aligned} \log\left(\frac{p}{1-p}\right) = & \beta_0 + \beta_1 \text{Gender} + \beta_2 \text{Age} + \beta_3 \text{Married} + \beta_4 \text{Education} + \beta_5 \text{Employed} \\ & + \beta_6 \text{Monthly income} + \beta_7 \text{asset} + \beta_8 \text{children} + \beta_9 \text{parent alive} \\ & + \beta_{10} \text{monthly income of parents} + \beta_{11} \text{sibling} \\ & + \beta_{12} \text{money given to parent} + \beta_{13} \text{living with parent} + \beta_{14} \text{distance} \end{aligned} \tag{3}$$

Table 1. depicts explanatory variables used in this model as well as the codifications. The explanatory variables were proxies for parents’ resources, variables capturing the characteristics of the child and proxies for informal care. We also included other variables such as total of living parents and amount of monthly money given to the parents. Eventhough there is not much discussion about money given to the parents in Cox and Rank (1992) and they emphasise more on distance variable as proxy for services, we believed that ‘money given to the parents’ is worth considering based on the fact that there is a trade off between money given to the parent and services. This is pointed out by Cox and Rank (1992, ‘money can be transferred over long distances at trivial cost, but help and companionship are more easily delivered when donor-recipient are geographically close.’ It justifies that children have two options of providing to their parents, either by giving in-kind services or in the form of financial transfer. We also assumed that this is an important variable when culture and religious obligations are taken into account. This is because it is very common for Malaysian Muslims to financially provide for their parents either on a regular or occasional basis, particularly when they are working. Thus, we retained this variable in this study as proxy for services and to examine the exchange motive.

**Table 1. Definition and codifications of explanatory variables**

Independent variables	Definition
Gender	0 if female; 1 otherwise
Age	<i>Continuous</i> variable
Marital status	0 if not married; 1 otherwise
Education level	0 if not having university/college education; 1 otherwise
Employment	0 unemployed; 1 otherwise
Monthly income	<i>Continuous</i> variable
Total value of asset	<i>Continuous</i> variable
Number of children	<i>Continuous</i> variable
Total living parent	<i>Continuous</i> variable
Total monthly parental income	<i>Continuous</i> variable
Number of siblings	<i>Continuous</i> variable
Amount of monthly money given to parents	<i>Continuous</i> variable
Living together with parents	0 if not living with parents; 0 otherwise



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Distance

*Continuous variable*

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Data collection by means of questionnaire survey was used to collect the information from respondents from October to December 2012. The construction of the questionnaire mostly benefited from Cox and Rank (1992), Halverson and Thoresen (2011), Nordblom and Ohsson (2011), Norton and Van Houtven (2006) and Albertini and Radl (2012). In the end, a sample containing 446 complete dataset collected were useable for the first stage of the analysis. However, two questionnaires were excluded due to econometric problems, which resulted in 444 observations for further analysis.

A majority of respondents was the Malays, representing the largest ethnic group in Malaysia. The term Malay refers to a person who practices Islam as a religion and Malay traditions. In the sample, six respondents were not ethnic Malay but were practicing Islam. The extent to which the ethnicity might gives different finding was not the concern of this study since the religion of Islam has been used as assimilative mechanism for non-Malays converts to adopt the Malay cultures in their lives (Siddique, 1981).

As for the geographical delimitation, respondents were from Peninsular Malaysia. This study was primarily concerned with the inter vivos transfers in the form of physical asset, financial asset and savings which were commonly passed to the children in the form of inter vivos gifts. The respondents were asked whether they have received any of these assets during their lifetime from their parents within the past five years. In the logit model, Group 0 (Have not received any inter vivos transfers within the past five years) was used as a reference category.

#### 4. Findings and Discussion

As can be seen in Table 2., 47 per cent of respondents in our sample had received inter vivos transfers from their parents within the past five years. This figure was quite high indicating that inter vivos transfer was a very common practice among respondents. Descriptive statistics for the variables used in the estimations are depicted in Table 3.

**Table 2. Incidence of inter vivos transfers from parents**

	No. of obs	%
No	233	52.48
Yes	211	47.52
Total	444	100

**Table 3. Descriptive analysis**

Independent variables	No. of obs	Mean	Std. dev
Gender	Female Male	271 (61.04) 173 (38.96)	
Age		444	33.678
Marital status	Not married Married	158 (35.59) 286 (64.41)	9.806818
Education level	Not having university/college education Having university/college education	59 (13.29) 385 (86.71)	
Employment	Unemployed Employed	46 (10.36) 398 (89.64)	
Monthly income		444	3023.964
Total value of asset		444	193661.1
Number of children		444	1.556306
Total living parent		444	1.563063
Total monthly parental income		444	2581.642
Number of siblings		444	6.024775
Amount of monthly money given to parents		444	212.2973

Living together with parent	Not living with parent	330 (74.32)		
	Living together with parent	114 (25.68)		
Distance			180.8908	336.092

Notes: Percentage in parentheses.

**Table 4. Results of logit regression**

Variable	Coefficient	Marginal effect
Intercept	1.111059 (1.020176)	
Gender	-0.4528572** (0.220505)	-0.1128776** (0.05496)
Age	0.0165299 (0.0204275)	0.0041202 (0.00509)
Marital status	0.2131879 (0.2929237)	0.0531385 (0.07302)
Education level	0.1822432 (0.3452663)	0.0454253 (0.08605)
Employment	-0.9095135** (0.423314)	-0.2267022** (0.10558)
Monthly income	-0.0001625*** (0.0000904)	-0.0000405*** (0.00002)
Total of asset	0.000000103 *** (0.0000000562)	0.0000000256 *** (0.0000)
Number of children	-0.1178727 (0.0927449)	-0.0293805 (0.02311)
Total living parents	-0.18801 (0.2159202)	-0.0468627 (0.05383)
Total monthly parental income	0.0002566* (0.0000533)	0.000064* (0.00001)
Number of siblings	-0.1030672** (0.0445165)	-0.0256902** (0.01109)
Amount of monthly money given to parents	0.0000871 (0.0006496)	0.0000217 (0.00016)
Living together	-0.1822505 (0.3150443)	-0.0454271 (0.0785)
Distance	-0.0017876* (0.0006238)	-0.0004456* (0.00016)
Number of Observation		444
Degree of Freedom		14
LR chi2		80.99
Log-likelihood		-266.71557
Prob> chi2		0.0000
Pseudo R2		0.1318

Notes: Significance level: (\*)  $p < 0.01$  (1%); (\*\*)  $p < 0.05$  (5%); (\*\*\*)  $p < 0.1$  (10%). Standard errors are reported in parentheses.

Table 4 depicts the result of the logit regression. Seven variables were significant variables namely parents' monthly income and distance (at 1 per cent level), gender, employment and number of siblings (at 5 per cent level), monthly income and total value of assets (at 10 per cent level). Together, all the regressors significantly impact inter vivos transfers as the LR statistic is 80.99 ( $p$  value is about 0.0000).

The results show a significantly positive effect of parents' income on the probability of receiving inter vivos gift. This indicates that parents with high level of income tended to transfer more. The results imply that an increase in monthly parental income by one unit, raised the probability of receiving an inter vivos transfer by about 0.006 percentage points. This is an important finding that shows our result is consistent with most theories of intergenerational transfers.

As modelled, we expected children living farther cannot provide help and companionship as much as those who live nearer. Therefore, more inter vivos transfers should go to the children who live nearer. As the results demonstrate, the findings in this research are in line with Cox and Rank (1992), which shows the expected direction and this implies the existence of exchange motives. In particular, the marginal effects for distance show that every unit increase in distance decreased the probability of receiving inter vivos transfer by 0.04 per cent. The results, however, also show that the effect of monthly money given to the parents was not significant, and thus, this variable could not tell us much about the inter vivos transfer behavior among respondents. In an attempt (to do what be specific), we tried to eliminate the variable, but our result did not change very much.

The findings indicate that being male had a negative impact on the probability of receiving inter vivos transfers. In addition, the probability of receiving inter vivos transfers for being a male decreased by 11 per cent. However, the correlation between gender and inter vivos must be interpreted carefully. It can reflect both motives, but for different reasons. Being female is associated with the lower income according to the altruism theory (Nordblom & Ohsson, 2011) and if this is accepted, we tend to believe that altruistic parents are more likely to give inter vivos transfer to daughters since they need more support than sons. However, this correlation between being female and having lower income should be argued in the current contextual reality of Malaysia. It might be correct in the past, but women nowadays have extensive educational opportunities and are being employed in every sector of the economy as a result of the modernization process, which has brought equal opportunities to them. Having a career and the access to developmental opportunities has transformed these women to be more independent and provided them with the authority in making life decision. In support of this, the changes in women's employment and empowerment are evidenced in a study undertaken by the Malaysian Ministry of Women, Family

and Community Development and United Nations Development Programme (UNDP, 2007) which indicates the rising trends in female labour force participation are in parallel with the high economic growth rates experienced since 1980s.

The finding of this study fits in well with the exchange theory rather than the altruism theory. Given that daughters typically provide more informal care for their parents, this result should not come as a surprise. The gender effect on the incidence of the inter vivos with exchange motive in this study supports empirical findings by Nordblom and Ohlsson (2011) and Norton and Van Houtven (2006). This result provides an interesting point to ponder when Islamic inheritance law is taken into consideration. According to the inheritance rules developed by Islamic legal codes (*fiqh*), in most cases, a woman inherits half of what her male siblings inherit. In addition, according to *fiqh*, inter vivos do not constitute the deceased's estate and therefore, are exempted from the mentioned stipulated rules applied to inheritance. Since we found females were more likely to receive inter vivos transfers, this raised another question of whether inter vivos transfer has been used as 'compensatory gifts' for daughters due to the restriction in the Islamic inheritance law. It can, therefore, be argued that parents have been acting according to the substance of Islamic law rather than form implying that they prioritise moral responsibility over legal forms.

The findings depicted in Table 4 also indicate that being employed decreased the likelihood of receiving inter vivos transfers as did the higher monthly income. Employed respondents were found to be less likely to receive inter vivos transfers in which their probability of receiving inter vivos decreased by 23 per cent. The marginal effect for monthly income indicates that every unit increase in monthly income correlated with a 0.004 per cent decrease in the probability of receiving inter vivos. Since we only investigated the incidence of receiving the inter vivos transfers, we did not ask the respondents on the amount of inter vivos received. This, however, may have implications on both motives – altruism and exchange. Both theories posit that lower income should reduce the probability of the receiving inter vivos transfers.

The only way to confirm which motive was dominant was to consider the impact of the number of siblings. The marginal effects for the number of siblings in logit and probit model indicate that every unit increase in number of siblings correlated with a 2.6 per cent decrease in the probability of receiving inter vivos transfer. Thus, we observed indications of exchange motive consistent with the findings of Norton and Van Houtven (2006). It is assumed, as mentioned before, among siblings, those being the caregiver are the ones who have lower income as they have the low opportunity cost of their time. Therefore, we can conclude that among siblings, those who were unemployed and had lower income were more likely to receive the inter vivos as exchange for their services to the parents. In regard to the amount of asset, the marginal effect did not have the expected sign. For each additional amount of

asset, the probability of receiving inter vivos transfer for logit by a 0.0000026. This, however, contradicted both assumed motivations.

Overall, the analysis of the results supports the hypothesis that transfer behaviour was influenced by the exchange motive. This is similar to the conclusion reached by Lillard and Willis (1997, p. 115), who found support for the exchange motive in Malaysia. We also could not support Banks's (1976) argument that inter vivos transfers are equally distributed among children depending on the need of the recipients in Malay culture, which shows the altruism motive.

## 5. Conclusion

Previous research on inter vivos has largely revolved around the identification of altruism and exchange motives. This paper assumes that with regard to the Malaysian Muslim community, the inter vivos transfers are mainly driven by the exchange motives. This is justified on the ground that children normally take care of their parents by providing them with the help and companionship which can be summarized as services. In return, parents value these services, and transfer more inter vivos gifts to their children who provide such services. As findings show that when culture and custom are considered, the exchange motive indicates daughters receive more inter vivos as a compensatory gift – an argument which has been overlooked and requires further investigation. This also implies that inter vivos transfers might have been used to mitigate the restrictive implications of Islamic law of inheritance which favours males over females. We hope further research on the interaction between inter vivos and bequest be performed to enrich the current literature within this field.

As a suggestion, policy maker should be able to observe from this study that inter vivos transfers from parents to children have been practiced by the Malaysian Muslims especially among parents with higher income. Inter vivos transfers made by the respondents' parents are extremely important in order for us to understand the likelihood of the transfer. This is because this understanding helps to describe how the society reacts to the inter vivos practice, what triggers them to make such transfers and to what extent the motives shape the distribution.

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## Significant Factors Determining E-government Adoption in Selangor, Malaysia

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**Abstract:** Studies have shown that low adoption rate among citizens has been hindering the optimization of e-Government services especially in developing countries. Hence, one of the critical measures that has to be undertaken is to identify and overcome possible barriers to further facilitate a higher rate of adoption. A multistage stratified sampling was used in this study to collect data from 1000 respondents, both user and non-user residing in the state of Selangor, Malaysia. This state was chosen as to provide a better understanding of low adoption when issues of basic facilities have been successfully overcome. An exploratory factor analysis was performed to identify latent constructs and seven key factors were identified. A multiple regression model was subsequently used to analyze significant factors in determining the willingness to use e-Government services. The determinants are language barrier, educational level, secure, format, easy to use, enjoyable, reliable, visual appeal and infrastructure. The result shows significant variables that act as barriers to adoption are reliable, enjoyable, easy to use, secure, and language used. The constraints pointed out in the open ended questions mainly focus on the issue of accessibility, ease of use and awareness. Overcoming these obstacles is therefore crucial in order to enhance the usage of e-Government services which consequently will improve the quality of public administration in Malaysia.

**Keywords:** e-Government; e-Government Adoption; e-Government Barriers

**JEL Classification:** H11

### 1. Introduction

The implementation of e-Government services in Malaysia started in 1996 with the objectives of increasing the convenience, accessibility and quality of interactions between government, citizens and businesses (Ahmad, 2007). Research in e-Government services has highlighted the various benefits to governments when they provide their services online. E-Government often promises the outcome of better government including improved quality of services, cost savings, wider political participation, and more effective policies and programs (Garson, 2004; Bourquard, 2003). It also added new concepts such as transparency, accountability and citizen participation in the evaluation of government performance (Mohammad et al., 2009). It reduces red tapes and jurisdictional barriers to allow a more integrated and efficient services across the federal, state, and local governments. A particular characteristic

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that makes it even more unique is that it allows citizens to seek public services at their own convenience, be it space or time (West, 2004). Since e-Government makes it easier for citizens to participate and contribute to governmental issues, citizens are increasingly expecting government bodies to be more efficient, similar to the private sector (Reynolds & Regio, 2001). Hence, it acts as a catalyst to a higher quality and cost effective government services, promoting better rapport between citizens and government (Fang, 2002).

Nonetheless, some studies argued that e-Government has yet to accomplish its expected outcome (Jaeger, 2003; Garson, 2004) as the failure rate of e-Government projects may be as high as 85 percent (Heeks & Bailur, 2007). Despite large investment, critiques have also argued that the uptake of e-Government services among citizens is still faced with the issue of optimization. The extensiveness of usage especially in the less developing countries has been limited. The low rate of adoption in countries like Malaysia will make e-Government services costly especially when there is also the perpetual need to cope with the rapid dynamics of technological changes. There is also a risk that the digital divide among citizens will deepen, and this will further marginalize disadvantaged citizens.

However, access and the extensiveness of usage have always been linked to the economic development of the state or a country. Less developed states or countries are facing infrastructural facilities issues which include accessibility to the service itself. Thus, it becomes more crucial to fully understand factors contributing to the adoption of e-Government services especially in developed states when issues of basic facilities have been successfully overcome.

Based on these assertions, this paper attempted to analyze and identify significant factors that determine the adoption of e-Government services in the state of Selangor. Although these factors have been discussed by researchers from various perspectives, this paper will focus from the demand point of view since critiques of e-Government have pointed out that this service has been too supply driven and should be more user centered. A multiple regression model was used to achieve this objective as depicted in step 2 in Figure 1. To give an in depth understanding of the issue, mean analysis of the measurement items for each significant factor was further analyzed. Thus, the research framework for this study is as in Figure 1.

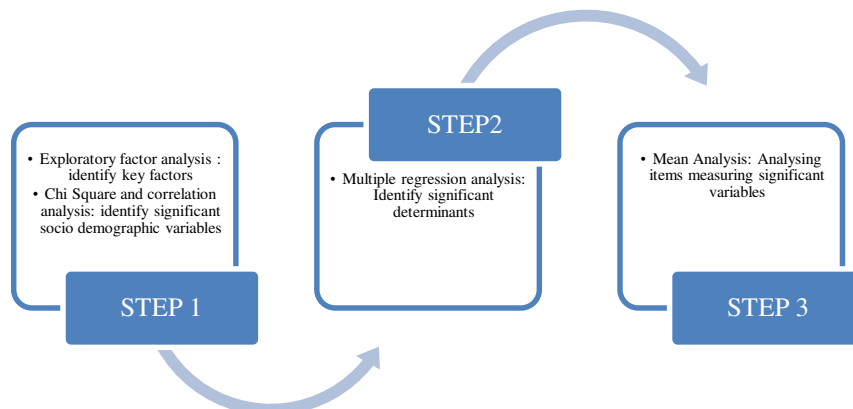


Figure 1. Research Framework

## 2. Literature Review

Previous studies had shown that acceptance and usage of e-Government services are still very limited in most countries. This consequently has a dampening effect to the progressiveness of the implementation of e-Government (Bertot & Jaeger, 2008; Ebbers et al. 2008) which is seen to be one of the best alternatives in improving government services (Jaeger, 2003; Bekkers & Homburg, 2007). The low rate of adoption will create optimization issues, and consequently reduce expected benefits (Norris & Moon, 2005).

Identifying barriers to e-Government services has thus becoming an important task that requires an in depth understanding of the issue, as to enable an increase in the adoption of this service. These barriers are referred to as

*“the real or perceived characteristics of the social, technological, legal and institutional context which hinder the development of e-Government, either through hampering demand by the citizens and business for e-Government services or through obstructing supply of e-Government services by the public sector”*

(Norris & Moon, 2005).

Most studies have adapted three main approaches in identifying factors determining adoption (Gilbert & Balestrini, 2004); namely diffusion of innovation (Rogers, 1995), modifications of the technology acceptance model (Davis & Bagozzi, 1989) and the application of the existing framework to technology which includes service quality (Dabholkar, 1996). However, technology acceptance model (TAM) is one of the most extensively used theories to predict information technology (IT) adoption; which is also been used to determine possible barriers to adoption. The theory emphasizes that perceptions about usefulness and ease of use are the determinants that influence technological adoption. However, the theory of diffusion of innovation

asserts that there are five basic stages in which an innovation is accepted or rejected; those are knowledge, persuasion, decision, implementation, and confirmation. However, based on previous literature, other constructs which were identified as barriers include confidentiality, reliable and safe (Gilbert & Balestrini, 2004).

In a developing country like Malaysia, studies have also shown that access to computers and internet services are also hindering the adoption of e-Government services (Alhabshi, 2010). The digital divide among citizens will also impede the benefits of e-Government (Ahmad, 2007). In some cases, citizens were not even aware of the existence of such services. Therefore, these issues should also be considered in identifying the factors to e-Government adoption.

### **3. Methodology**

Development and growth among the states of Malaysia vary significantly. The state of Selangor was chosen for this study because it is one of the most developed states in the country. e-Government services are more readily accessible to the citizens of this state and this keeps homogeneity in the exposure to ICT technology in the targeted population. A multistage stratified sampling technique was done to identify  $n=1000$  potential respondents, in which  $n$  is predetermined by the budget and time constraints faced by the researchers. The nine districts in the state which are Sabak Bernam, Hulu Selangor, Kuala Selangor, Gombak, Petaling, Klang, Hulu Langat, Kuala Langat and Sepang were stratified into three strata; namely developed, developing and less developed districts. These strata were further divided into sub strata based on rural and urban areas.

Questionnaire was used as an instrument to collect information by interviewing 1000 respondents of which 7 questionnaires were deemed spoiled due to too many non response items. The collected data included all the necessary items and constructs in determining the findings which include user experience, exposure to e-Government services and socio demographic characteristics. Each item in the construct was measured on a seven-point scale (7= 'Strongly agree' to 1= 'Strongly disagree'). It is suggestive of the respondent's opinion on the importance of that particular item.

Based on previous studies, barriers to adoption were segmented into issues pertaining to connectivity and non connectivity. Hence, six factors were identified as potential connectivity barriers in this study; which are secure, easy to use, enjoyable, reliable, infrastructure and visual appeal. Non connectivity barriers are socio demographic characteristics of the respondents which include education, income, skill and gender.

### **4. Findings**

Table 1 summarizes the demographic profile of the surveyed respondents. Almost all of the respondents (97.2 percent) from the remaining 993 samples were internet users. The gender distribution was at 49.1 percent males and 50.9 percent females. Majority of the respondents had more than basic knowledge in IT. Three major modes of communication with the government are via the internet, telephone and counter services.

Exploratory factor analysis was further used to identify the number of key factors at explaining the variance within the data. The Kaiser Meyer Olkin measure of sampling adequacy was 0.911, above the recommended value of 0.6 and Bartlett's test of sphericity was significant ( $X^2(406)=14080.836$ ,  $p=.000$ ). All six of the original variables remained and one factor is a combination of items obtained from two other variables that was earlier proposed and this factor was identified as format. A reliability analysis was conducted to test the accuracy of the measuring instruments. The reliability for the measures ranges between 0.749 and 0.825. A Cronbach Alpha score above 0.7 is considered as reliable (Nunnally, 1978). This seems to be in an agreement with previous studies which identified these factors as major barriers to adoption (Gilbert & Balestrini, 2004).

**Table 1. Demographic Characteristics of Respondents**

Variables		Percent
Gender	Male	49
	Female	51
Location	Rural	37.6
	Urban	62.4
Skill Level in IT	Unskilled	3.6
	Basic skilled	18.8
	Moderately skilled	28.1
	Skilled	38.7
	Highly skilled	10.8
Educational level	PhD	.7
	Masters	8.5
	Bachelor Degree	38.0
	Diploma/STPM (High School Cert)	24.5
	SPM/SPMV (Secondary School Cert)	22.8
	Less than PMR (Lower Secondary School Cert)	5.6

Table 2 contains the means and reliability analysis for each barrier variables. All variables except infrastructure have a mean ranging from 4.5 to 5.0. Since these values were taken from a seven-point scale, these satisfaction levels prove that e-Government services can be further improved by taking the appropriate and necessary measures.

**Table 2. Means and Reliability Analysis**

Construct	Mean	Reliability Analysis	
		No of Item	Cronbach's Alpha
Secure	4.578	6	0.778
Format	4.948	3	0.825
Easy To Use	4.776	7	0.803
Enjoyable	4.500	3	0.793
Reliable	4.546	3	0.823
Visual Appeal	4.932	5	0.782
Infrastructure	3.566	3	0.749

Table 3 shows the relationship between nominal demographic factors which are race, marital status, gender, residential location and willingness to use e-Government services among the respondents. Since none of the factors are statistically significant ( $p > 0.05$ ), these factors were consequently omitted in the regression analysis.

**Table 3. Demographic Vectors And Willingness To Use E-Government**

Factor	Chi Square Value	Df	p value
Race	50.465	36	0.056
Marital Status	31.362	36	0.689
Gender	10.823	12	0.544
Rural Urban	13.682	12	0.322

Correlation was tested between scale values non connectivity factors and willingness to use e-Government. These include number of family members in the household, age, number of children, educational level, income, computer literacy, internet experience and understanding of language used in e-Government websites. Only two results are statistically significant; hence, indicating significant relationship between language used, educational level and willingness to use e-Government services.

#### 4.1. Regression Analysis

**Table 4. Results of Multiple Regression**

Independent Variables	$\beta_i$	Std error	P value
(Constant)	-3.398	.200	.000
Easy to Use	.181	.027	.000
Secure	.066	.023	.004
Reliable	1.978	.049	.000
Format	.003	.017	.850
Enjoyable	.191	.019	.000
Visual Appeal	-.023	.019	.225
Infrastructure	-.001	.013	.911
Language	.490	.019	.000
Education	.003	.002	.100
Awareness	-.050	.029	.082
R <sup>2</sup>	.728		
Adjusted R <sup>2</sup>	.725		
Estimated standard error	.59356		
F	225.304***		
N	993		

\*\*\*level of significance 1%

A multiple regression analysis was subsequently performed to investigate the relationship between willingness to use e-Government and the seven independent factors identified in the factor analysis. The significant socio demographic factors were also included in the analysis. This method allows the identification of independent factors that are able to predict and have the greatest impact on the dependant variable which is willingness to use. The results are shown in Table 4. The linear combination of factors are significantly related to the dependant variable accounting for approximately 73 percent of the variance ( $F(11,928) = 225.304$ ,  $p < 0.05$ ). Five independent variables, namely format, visual appeal, educational level, awareness and infrastructure are found to be insignificant ( $p > 0.05$ ). The strongest predictors at the 95 percent confidence level, or in other words, factors perceived by the respondents as barriers to adopting the e-Government services consecutively are reliable, language used, enjoyable, easy to use and secure.

#### 4.2. Mean Analysis of Items Measuring Significant Variables

The items measuring each of the significant variables were then analyzed to give an in depth understanding of the issue at hand.

**Table 5. Mean For Items Measuring Significant Variables**

Variable	Item	Mean
Reliability	Performs reliably	4.26
	Operates reliably	4.34
	Dependable	4.33
Ease of Use	Easy to use	4.74
	Able to do what I want it to do	4.70
	Easy to operate	4.77
	Able to learn the system quickly	4.69
	Guidance on usability	4.76
	Able to operate at anytime any place	4.65
Security	Acknowledge receipt of transaction	4.56
	Protection of personal information against unintended or unauthorized access	4.60
	Security of the transaction:	4.58
	I trust the e-Government filing system	4.57
	I trust the e-Government payment system	4.59
Enjoyable	Enjoyable	4.26
	Most preferred medium of transaction	4.34
	Part of my lifestyle	4.33

The scores for each items ranged from 4.26 to 4.77 from a 7-point scale. This shows moderation in the satisfaction level for all of the items. Since these are the significant factors in determining the willingness to use the e-Government services, improvements in aspects detailed by the items should subsequently lead to increased usage. Alternatively, these items could act as barriers to adoption if there is no improvement made and if services deteriorate from the present state. From a positive perspective, moderation in the satisfaction level implies great potentials in increasing the adoption rate if effective measures are taken to improve services pertaining to the items detailed in Table 5. Reliability is measured by three items related to the functionality of the system; i.e. in terms of its performance, operation and dependability. The means for the items measuring this variable are among the lowest in comparison to other items in the table. Hence, serious efforts to increase reliability of e-Government services would mean an increase in the adoption rate. Since respondents have the alternatives of getting the government services manually, mean value for each item in enjoyable is also relatively low. Ease of use which relates more to the information quality provided by the services must also be upgraded to stimulate increased usage.

## 5. Conclusion

Critiques have argued that so far e-Government services have been too supply driven. The services given are too technological oriented and heavily focused on the adoption of the most advanced technology available. As a consequence, citizen actual needs are sometimes overlooked. A paradigm shift in perspective is needed to remedy the low uptake among citizens. Government should provide services in ways that is acceptable from the citizens' point of view. A citizen - centric government is a better approach at increasing e-Government services usage; whereby citizen needs and demands are taken into full consideration in the decision making process. Hence, overcoming the obstacles that could act as a barrier to the adoption of e-Government services should be one of the most important agendas.

e-Government is an important catalyst in improving the quality of public administration in Malaysia. Public awareness and support from all stakeholders, including citizens, NGOs, the private sector are essential in ensuring that the expected benefits are reaped from its implementation. Although e-Government services in Malaysia should be molded according to the needs of the people in this country, understanding the guidelines and practices implemented by other countries can provide a shortcut to the government especially in enhancing and developing its services. This measure will reduce the inconvenience, cost, time and resources by the government. Other measures include the understanding of current trends and review best practices that have been carried out globally. Observation must be comprehensive, which covers both the demand and supply aspects of e-Government services.

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## The Role of Financial Sector toward Economic Growth

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**Abstract:** This paper attempts to empirically examine the rule of financial sector toward economic growth and to determine the determinants of economic growth in some countries. The relationship between independent variables, exchange rate and total reserve, and economic growth was investigated for selected 67 countries. The data were analyzed using the OLS Method. Findings of the research showed that the total reserve is significant, while the exchange rate is not significant in explaining the economic growth for the selected 67 countries. The implication of the study is that countries need to increase their total reserves to boost economic growth. In the future, study should categorize countries according to those using pegged and unpegged exchange rate systems as to see the differences of impact on economic growth.

**Keywords:** total reserve; exchange rate; gross domestic product

**JEL Classification:** F43; F65

### 1. Introduction

This study attempted to empirically examine the rule of financial sector toward economic growth and to determine the determinant of economic growth in some countries. Cross sectional data were utilized in the study, i.e. year 2013. The OLS test results proved that the total reserve is significant, while the exchange rate is not significant. Total reserve comprises the holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities<sup>3</sup>. Fapetu and Oldapo (2014) noted that exchange rate is the rate at which a currency purchases another; and as pointed out by Jhingan (2003), it is a reflection of the strength of a currency when measured against another country's currency. It is the price of one currency in terms of another, which is an important decision making variable in every nation; thus making it a crucial issue for any country desirous of economic growth, refer to Ahmed and Zarma (1997). According to Akpan and Atan (2012) the exchange rate policies in

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<sup>3</sup><http://www.indexmundi.com/facts/malaysia/total-reserves>.

developing countries are often sensitive and controversial, mainly because of the kind of structural transformation required, such as reducing imports or expanding non-oil exports, which invariably implies a depreciation of the nominal exchange rate. This paper has the research objective to identify:

- i. The role of financial sector toward economic growth.
- ii. The relationship between economic growth and total reserve.
- iii. The relationship between economic growth and exchange rate.
- iv. The determinants of economic growth in selected countries.

## **2. Literature Review**

According to Akpan and Atan (2012) the earliest and leading theoretical foundation for the choice of exchange rate regimes rests on the optimal currency area (OCA) theory, developed by Mundell (1961) and McKinnon (1963). Based on the theory, a fixed exchange rate regime can increase trade and output growth by reducing exchange rate uncertainty; and thus the cost of hedging, and also encourage investment by lowering currency premium from interest rates. However, on the other hand it can also reduce trade and output growth by stopping, delaying or slowing the necessary relative price adjustment process. According to the theory, a fixed regime can increase trade and output growth by providing a nominal anchor and the often needed credibility for monetary policy by avoiding competitive depreciation, and enhancing the development of financial markets as pointed out by Barro and Gordon (1983), Calvo and Vegh (2004), Edwards & Savastano (2000), Eichengreen, et. al. (1999), and Frankel (2003). Based on the Fapetu and Oladapo's (2014) research, the finding proved that the exchange rate does not significantly determine the economic growth, but the relationship is positive. However, the variables; an effective foreign exchange rate management is deemed to affect export, while foreign direct investment is found to affect economic growth. According to Fapetu and Oladapo (2014), Harris (2002) in his research using the Generalised Least Square technique found that real exchange rate, when well managed affects productivity growth in both the short and long run. This result is consistent with the competitiveness hypothesis which suggests that the exchange rate's depreciation boosts productivity growth in the short run. Meanwhile, Dubas and Lee (2005) found a robust relationship between exchange rate stability and growth rate. Unugbro (2007) in Nigeria case observed that exchange rate appreciation stimulates foreign direct investment, while Salami (2006) found that exchange rate is the most important variable that affects private foreign investment in Nigeria as compared to other macroeconomic variables.

### 3. Research Methodology

In total, three variables were used in this study; those are Gross Domestic Product (GDP), total reserve and exchange rate. We utilized 67 countries' observations in selected cross sectional data for the year 2013. The data were sourced from the world statistics<sup>1</sup>. The major variables are defined below:

**Total reserves:** Total reserves comprise holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued at year-end (December 31<sup>st</sup>) London prices.<sup>2</sup> Meanwhile, **Foreign reserve (R)** is the total assets of central bank held in different reserves currencies abroad. The reserve currencies include; US dollar, Pound Sterling, Euro, Japanese Yen etc. The common scale variables used in the model are GDP and imports (Irefin & Yaaba, 2011).

**Exchange Rate:** According to Fapetu and Oladapo (2014) exchange rate is the rate at which a currency purchases another; and as pointed out by Jhingan (2003), it is a reflection of the strength of a currency when measured against another country's currency.

**Economic growth:** The aggregate welfare definition of economic growth derives directly from something approximating this concept of "Universal Utility". Aggregate welfare is defined as a quantitative concept; as a phenomenon which "can be brought under the category of greater or less". The quantity which changes in the process of growth is precisely the quantity of aggregate economic welfare. Therefore, the measurement of economic growth involves the measurement of changes in aggregate economic welfare. This is taken to mean quantification of the neo-classical concept of real income. The flows of goods and services, the concrete results of economic activity, are significant only as the physical counterparts of psychic want-satisfactions.<sup>3</sup>

#### 3.1. Econometric Model

The following econometric model is used:

$$\ln Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu$$

Whereby,

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<sup>1</sup><http://www.gemconsortium.org/news/766/gem-data-now-on-world-statistics>

<sup>2</sup><http://www.indexmundi.com/facts/malaysia/total-reserves>

<sup>3</sup><http://deepblue.lib.umich.edu/bitstream/handle/2027.42/75479/j.1467-6435.1961.tb00368.x.pdf?sequence=1>

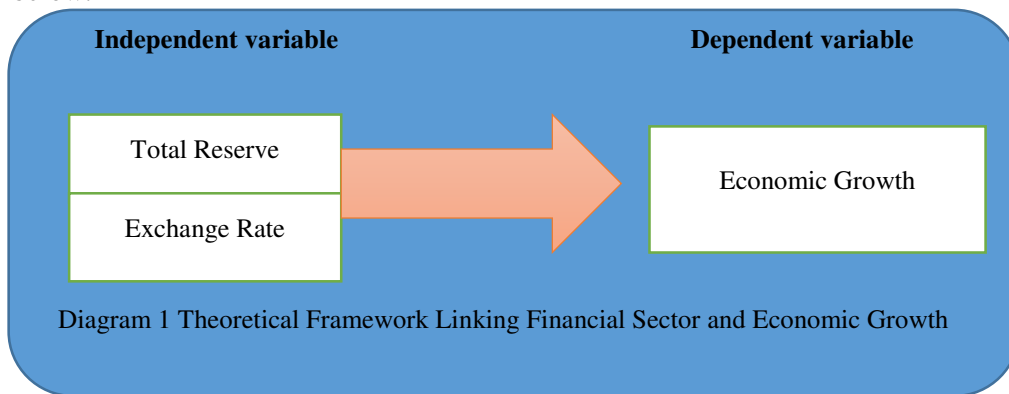
Y- Economic growth/ Gross domestic product

X<sub>1</sub>- Total reserve (TR)

X<sub>2</sub>- Exchange rate (ER)

### 3.2 Theoretical Framework

The theoretical framework based on the literature review is shown in Diagram 1 below:



Based on the above framework, the following hypothesis is derived for testing;

#### **Hypothesis 1**

H<sub>0</sub>: TR does not influence Y

H<sub>1</sub>: TR influences Y

#### **Hypothesis 2**

H<sub>0</sub>: ER does not influence Y

H<sub>1</sub>: ER influences Y

#### ***Method of Analysis***

The data analysis will help to answer the research question and research hypothesis, and to test the hypothesis. The data will be analyzed using Eviews, which is using Ordinary Least Square (OLS) method to investigate the relationship between the independent variables and dependent variable. The hypothesis test is to estimate the value of Test Statistic, i.e. whether to reject or accept the null hypothesis.

#### 4. Research Findings and Discussion

The results of the Ordinary Least Square (OLS) testing is shown below:

**Table 1. OLS Testing**

Dependent Variable: lnY  
 Method: Least Squares  
 Date: 11/11/15 Time: 20:48  
 Sample: 1 67  
 Included observations: 67

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.50307	0.193978	64.45622	0.0000
TR	1.20E-06	2.07E-07	5.786494	0.0000
ER	-1.61E-05	0.000140	-0.115100	0.9087
R-squared	0.343555	Mean dependent var		12.88318
Adjusted R-squared	0.323041	S.D. dependent var		1.762804
S.E. of regression	1.450392	Akaike info criterion		3.625287
Sum squared resid	134.6327	Schwarz criterion		3.724005
Log likelihood	-118.4471	Hannan-Quinn criter.		3.664350
F-statistic	16.74738	Durbin-Watson stat		2.028781
Prob(F-statistic)	0.000001			

Based on the Table 1 above, we can reject the null hypothesis with 1 percent level of significant, where the probability (t-statistic) is 0.0000 is less than 0.01 and the probability (t-statistic = 5.786494) is more than critical value 2 which represents highly significant relationship between TR and Y. Thus, we can accept the alternate hypothesis. Based on Table 1 the probability (t-statistic = 0.115100) is less than critical value 2 and the probability (t-statistic = 0.9087) is not significant, which represents the relationship between ER and Y. Thus, we cannot reject null hypothesis, but to reject the alternate hypothesis instead. R-squared is 0.343555 shows that 34.3555 percent of economic growth is explained by total reserve and exchange rate; and the balance 65.6445 percent is explained by other factors, not included in the model. Durbin Watson is 2.028781. Durbin Watson 2.028781 is more than critical value, whereby  $dL=1.377$  and  $du=1.500$ . Therefore, we can conclude that the data do not have autocorrelation. This is because the data are cross sectional data, which are not influenced by time factor.

## 5. Conclusion and Suggestion

From the research we found that the total reserve is significant, while the exchange rate is not significant in explaining the economic growth for the selected 67 countries. Total reserve is highly significant in explaining the economic growth of the 67 countries; and as such we can suggest that as the reserve increases, the economic growth will also increase. In view that the total reserve is influenced by the net export, as the net export is a component in total income, this suggests that the result is supported by the theory. The net export is a variable of the total reserve. The exchange rate is probably not significant and has negative coefficient as some countries adopted fixed exchange rate while other countries adopted flexible exchange rate. The results are similarly with the research by Harris (2002), and Fapetu and Oladapo (2014). Harris (2002) found that exchange rate depreciates to boost productivity growth in the short run. Meanwhile, Fapetu and Oladapo (2014) study showed that the exchange rate does not significantly determine the economic growth, but it has a positive relationship. However, the variables, which have an effective foreign exchange rate management is deemed to affect export, while foreign direct investment is found to affect economic growth.

To observe the differences of impact on economic growth, future study should categorize countries according to those using pegged and unpegged exchange rate systems.

## 6. Acknowledgement

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### Appendix

No.	Observation	Official exchange rate, LCU per USD, period average.xlsx	Total Reserves.xlsx	GDP at market prices, current US\$, millions, seas. adj..xlsx
1	Argentina	4.549547	39920.3	475196.4
2	Developing Asia	831.9153	4179035	11770056
3	Australia	0.965787	44866.05	1554792
4	Austria	0.778129	12232.1	394685.8
5	Belgium	0.778129	18600.11	483265.6
6	Bulgaria	1.521871	18371.02	50918.33
7	Bolivia	6.91	11659.29	27018.8
8	Brazil	1.954034	369566	2253022
9	Canada	0.999576	68364.97	1820902
10	Switzerland	0.937754	475659.2	631278
11	Chile	486.3323	41636.11	268375
12	China	6.309287	3333386	8190647
13	Colombia	1797.299	36444.02	370418.7



14	Costa Rica	502.9185	6856.67	45141.2
15	Czech Republic	19.56353	44265.28	196673.2
16	Germany	0.778129	67422.25	3430201
17	Denmark	5.792204	86137.54	315261.2
18	East Asia & Pacific	1074.159	3874222	9992303
19	Europe & Central Asia	589.7774	314459	1152065
20	Egypt, Arab Rep.	6.07065	11627.54	273543.2
21	Spain	0.778129	35522.62	1322962
22	Estonia	12.17508	287.3478	22396.5
23	Finland	0.778129	8453.225	247424.8
24	France	0.778129	54230.62	2612188
25	United Kingdom	0.631018	88596	2479815
26	Georgia	1.650514	2872.949	15843.14
27	Greece	0.778129	1269.616	249281.2
28	Hong Kong SAR, China	7.757025	317250.8	262963.6
29	Croatia	5.848283	14807.13	56457.55
30	Hungary	225.0717	44506.05	124655.5
31	High income: OECD	43.77112	3072346	44415484
32	Indonesia	9362.746	108837.3	880306.4
33	India	53.42984	270586.5	1718433
34	Ireland	0.778129	1386.38	210740.6
35	Italy	0.778129	50498.86	2014749
36	Jordan	0.708492	8089.514	27198.69
37	Japan	79.81889	1227147	5937979
38	Korea, Rep.	1126.426	323207.1	1130185
39	Sri Lanka	127.6523	6377.645	59319.15
40	Lithuania	2.686292	8218.173	42178.03
41	Luxembourg	0.778129	870.9995	55143.61
42	Latvia	0.542592	7110.871	28556.68
43	Macao SAR, China	7.989736	16600.23	43516.63
44	Mexico	13.15545	160413.4	1179044
45	Malaysia	3.088025	137783.9	304853.8
46	Netherlands	1.71477	22050.3	771050.1
47	Norway	5.818355	51856.4	499797.2
48	New Zealand	1.234821	17582.96	169490.4
49	Peru	2.637371	62300.32	199584.9

50	Philippines	42.22274	73478.39	250191.2
51	Poland	3.25522	103396.2	489794.8
52	Portugal	0.778129	2196.025	212275
53	Paraguay	4425.05	4556.609	24542.62
54	Russian Federation	31.06153	486576.8	2012199
55	South Asia	60.26146	304816.4	1777753
56	Singapore	1.249456	259094.5	276659.3
57	Sub-Saharan Africa	263.0689	195732.3	382756.9
58	Slovakia	23.44189	818.4068	91148.74
59	Slovenia	186.4709	782.1872	45461.03
60	Sweden	6.772264	45519.23	524299.9
61	Thailand	31.07915	173327.7	366304.7
62	Tunisia	1.562155	8357.241	45123.11
63	Turkey	1.80033	99942.63	786483.5
64	Taiwan, China	29.58199	403169	475951.9
65	Ukraine	8.083841	22655.84	174164.9
66	United States	1	139133.9	16244575
67	South Africa	8.208319	43995.47	382756.9

## **Measuring Sustainability Performance Measurement System**

**Nurisyah Muhamad<sup>1</sup>, Sofiah Md Auzair<sup>2</sup>, Amizawati Mohd Amir<sup>3</sup> & Md Daud Ismail<sup>4</sup>**

**Abstract:** This paper presents an effort to suggest a comprehensive measurement for the Sustainability Performance Measurement (SPMS) construct. Absence of a comprehensive instrument has limited the research on SPMS. This study makes a significant contribution on defining SPMS general characteristics. The SPMS construct was empirically tested through confirmatory factor analysis based on data obtained from 147 manufacturing business units. The data suggest that SPMS construct is a manifestation of three dimensions; first, financial orientation, which reflects the financial measures that link with other units and the shareholders. Second is the growth orientation which covers measures such as the customer satisfaction, new product development, effectiveness of information use and supplier performance. Finally, the third dimension is environmental and social orientation, which covers environmental and social measures, and measures that linked to sustainability strategy. Using the suggested instrument, future study could examine the effect of SPMS on performance, or study the factors that could affect the SPMS implementation.

**Keywords:** Economy; Environment; Social; Malaysia; Manufacturing

**JEL Classification:** M4

### **1. Introduction**

The concern for corporate sustainability has long been recognized in the literature, yet little is known about the measurement. The study of Sustainability Performance Measurement System (SPMS) can be regarded as still at its infancy stage and its structure has not been defined consistently. In fact, companies still face significant

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challenges such as difficulty in developing the sustainability indicators (Adams & Frost, 2008), and only use the performance measures for reporting purposes, which do not relate to managers' daily operations and decision making (Delai & Takahashi, 2011). The disconnection of sustainability measures with the daily operations will only mislead the decision making process.

In order to tackle this problem, some scholars suggest that the integrated performance measurement system (IPMS), such as Sustainability Balance Scorecard (SBSC) that integrates the sustainability measures, be combined with the traditional PMS (Figge, Hahn, Schaltegger & Wagner, 2002). However, for research purposes, it is difficult to examine the implementation of SBSC among companies, since companies have their own unique performance measurement systems (Speckbacher, Bischof & Pfeiffer, 2003). Nevertheless, with the absence of comprehensive instrument to measure the SPMS, it has limited the research in this area of study. Thus, to fill in the gap and to encourage future studies on SPMS implementation, this study aims to define the scope of comprehensive measure of SPMS.

We consider SPMS a suitable system to be implemented because it is a type of integrated PMS that supports the implementation of company strategy; communicates company's strategic goals throughout the organization; integrates the top down cascade of goals and objectives with the business units and project teams; motivates and monitors employees; as well as informs the stakeholders on the efficiency and effectiveness of actions and the prospect of success for future actions (Bourne, Neely, Mills & Platts, 2003; Fleming, Chow & Chen, 2009; Ittner, Larcker & Meyer, 2003; Kaplan, R.S. & Norton, 1996; Neely, Adams & Kennerley, 2002).

The study of SPMS is relevant to Malaysia because this country is one of the top competitive developing countries in Southeast Asia and sustainability practices are growing among companies in this country (Eltayeb, Zailani & Ramayah, 2011; Schwab & Sala-i-Martin, 2012). In sum, this study will define the characteristics for SPMS and suggest the SPMS construct dimensions. It is expected that this research may well assist managers in strengthening their SPMS structure.

## **2. Literature Review**

### **2.1. Conceptual Definition and Characteristics of SPMS**

As defined by Searcy (2012) SPMS is 'a system of indicators that provides a corporation with information needed to help in the short and long term management, controlling, planning, and performance of the economic, environmental, and social activities undertaken by the corporation'. Specifically, Fiksel, Mcdaniel, and Mendenhall (1999) highlighted the four sustainability measurement principles; first, indicators should be able to minimize resource consumption and maximize value creation. Second, the indicators should include economic, environmental and social

aspects. Third, the indicators measure throughout product life cycle, including the supply, manufacturing, use and disposition of a product. Finally, the indicators should combine both leading and lagging indicators of performance. The definition and principles align with our argument that SPMS is an integrated PMS which is important to assist company's competitive advantage in the long run.

According to the previous studies, the characteristics of PMS could be summarized as; (i) a set of operating measurements, (ii) measurements integrate with the strategy and (iii) performances are measured throughout departments, activities and the value chain (Chenhall, 2005; Hall, 2008; Ittner, Larcker & Randall, 2003; Malina & Selto, 2001). Align with the general characteristic; this study suggests the following characteristics for SPMS:

#### **i. A broad set of sustainability measures**

According to earlier research, sustainability indicators could be grouped into:

##### **a. Indicators of Environmental performance**

Sustainability measures should include the environmental performance indicator because past study had found that environmental performance (EP) able to increase economic performance (Russo & Fouts, 1997). Firms use EP measures to observe compliance, to keep track of ongoing improvement, to assist in decision making, and to produce data for external reporting (Henri & Journeault, 2008).

##### **b. Indicators of New Product Development performance**

Indicators of new product development (NPD) is important because it is able to measure the firm's R&D performance to enhance the competitive advantage (Cooper, 1998; Godener & So, 2004). Examples of NPD measures are time-to-market new items, volume of new brand, and number of sales returns (Gadenne, Mia, Sands, Winata & Hooi, 2012).

##### **c. Indicators of Employee value performance**

Basically firms measure employee value performance to gather information on employees' satisfaction on training, development, workplace relations and their health and safety (Azapagic, 2004). Employees' satisfaction is important at increasing service quality, satisfaction of the customer, as well as firm earnings (Yee, Yeung & Cheng, 2008).

##### **d. Indicators of customer value performance**

Firms need to have information on their customers' satisfaction (Pinheiro de Lima et al., 2008). Basically, customers value the selling price, efficient deliveries, design and quality (Hoque, Mia & Alam, 2001). In order to get the information, firms should measure customer satisfaction, number of customer retention, volume of new customers, and level of product quality (Hoque & James, 2000).

##### **e. Indicators of financial performance**

Financial performance measures are essential for sustainability. Basic financial measures are operating income, return-on-capital-employed, sales growth, and cash flow (Hoque & James, 2000).

f. Indicators of information technology effective performance

Previous study found that information technology is important at enhancing competitive advantage (Dao, Langella & Carbo, 2011). Besides that, business communication via internet is positively related to innovation, as well as profit and sales growth (Andersen, 2001). Therefore, firms could measure the effectiveness of information technology used and the collection rate for sales via internet.

g. Indicators of social responsibility performance

Corporate social responsibility (CSR) performance could enhance the firms' financial performance (Sun, 2012). Therefore, information on CSR performance could be gathered through indicators such as total cash and contribution for community, percentage of anti-corruption training and actions, and rate of sites or branches running CSR actions.

h. Indicators of suppliers' performance

In order to enhance firm's survival and profit, suppliers selection is essential (Kang & Lee, 2010). Therefore, firms should pay more attention to supplier selection and manage their supplier relationships (Leppelt, Foerstl, Reuter & Hartmann, 2011). Examples of supplier performance measures are suppliers' sustainability practices assessment, suppliers' sustainability training, and number of contract non-compliances (Delai & Takahashi, 2011).

**ii. Integration of financial and sustainability strategy.**

Studies show that companies that implemented competitive strategy most often include financial, customers, internal processes and long-term innovation indicators into their PMS (Chenhall, 2005). However, since sustainability strategy is a hybrid strategy that uses differentiation and cost leadership simultaneously (Baumgartner & Ebner, 2010), the company needs to have broad measurement indicators that link with the strategies. The broad measurement indicators should integrate the financial and sustainability strategies. Firms need to integrate sustainability strategy into their traditional PMS in order to sustain in the long-run (Dyllick & Hockerts, 2002; Figge et al., 2002). Thus, besides the traditional profit oriented measures, firms should integrate the social and environmental indicators.

**iii. Integration of measures across activities and value chain.**

Value chain is a cycle of activities from the developing stage, to the production, distribution and lastly disposal (Kaplinsky & Morris, 2001). Thus, indicators should cover all the stages. Besides that, firms should develop indicators that measure the

achievement of their stakeholders' needs. This is because those stakeholders have an significant influence on the legitimacy of the firms (Bansal, 2005).

In terms of cause-effect relationship between measures and activities, previous studies had shown the causal link between sustainability measures and activities. For example, Hsu and Liu (2010) found significant linkage between sustainability measures. The employees' initiative for environmental information (in learning and growth perspective) was found to be significantly correlated with; the cost of environmental improvement (in the financial perspective); with the customer satisfaction and external relation (in the customer perspective); and with the environmental performance of process and operation (in the internal perspectives). Therefore, it is reasonable to link SPMS with activities.

## **2.2. SPMS Dimension**

The above section discusses the underlying characteristics of SPMS; however, those characteristics could be grouped into several strategic dimensions. This section will discuss on SPMS dimension that could be used for future study.

Based on the previous studies, there is no consistency in terms of the performance measurement system dimensions. This may due to the differences of the studies. For example, Hall (2008) studied the comprehensive PMS, and suggested PMS as a unidimensional construct. Whereas, Chenhall (2005) found that there are three dimensions of PMS; first, the generic dimension that identifies the extent to which the system provides information linking operations to goals and strategies, and to link activities across sub units. Second, measures that are linked to customers, and third, measures that are linked to suppliers. Homburg, Artz, & Wieseke (2012) suggested there that are three dimensions of comprehensive PMS for marketing; first, the breadth of the PMS, second, the strategy fit, and third the cause-and-effect relationships.

In order to decide whether SPMS consists multiple dimensions or unidimensional, Mackenzie, Podsakoff, & Podsakoff (2011) highlighted that, if the essential characteristics have no unique aspects, and eliminating any one of them would not restrict the conceptual domain of the construct, then the construct is unidimensional from a conceptual perspective. However, if the essential characteristics describe relatively unique aspects of the construct, and eliminating any of them would restrict the conceptual domain of the construct, then the construct is multidimensional from a conceptual perspective.

For the purpose of this study, we found that SPMS construct provides a way of translating sustainability strategy into a coherent set of performance measures. Thus, this study suggests that SPMS is demonstrated by the following three dimensions: (i) financial orientation dimension, (ii) growth orientation dimension, and (iii)

environmental and social orientation dimension. If any of the dimensions is eliminated, it will not be able to describe the construct as conceptualized.

### **The financial and growth orientation**

Based on Porter (1985), in order for a company to be successful in the market, the company should deliver unique products and services (product differentiation) or the company can deliver products and services with the lowest price (cost leadership). However, according to (Baumgartner & Ebner, 2010), corporate sustainability uses the concept of hybrid strategies that consider the differentiation and cost leadership simultaneously. Indicators that usually being used for companies implementing differentiation and cost leadership strategy are financial, customers, internal processes and innovation (Chenhall, 2005; Kaplan & Norton, 2001).

Verbeeten and Boons (2009) suggested that strategic PMS could be separated into two dimensions, which are financial and growth orientation dimensions. The reason for this separation is that the financial perspective is focusing on the profit and financial measures have been used to align internal goals with the maximization of shareholder value. Another dimension is the growth perspective which focuses on the non-financial performance measures that provide information in non-monetary term such as market share, customer satisfaction, innovation, new product development and employee turnover (Verbeeten & Boons, 2009).

As SPMS is a strategy that considers both product differentiation and cost leadership simultaneously; therefore, this study suggests that SPMS will consist of financial orientation dimension, as well as growth orientation dimension. The financial orientation dimension will cover the following characteristics; i) financial indicators, ii) the measurements link with shareholders, iii) data are documented for evaluating performance, iv) the measurement links the current operating performance with the financial strategies and financial goals, and v) the measurement links between unit activities.

This study also proposed that the growth orientation dimension for SPMS will cover the following characteristics; (i) new product development indicators, employee satisfaction indicators, information effectiveness indicators, customer satisfaction indicators, and supplier performance indicators, ii) the measurement links with customer, supplier, and employees.

### **Environmental and Social Orientation**

According to Figge et al. (2002), companies should integrate the environmental and social responsibility measures into the traditional PMS. Measures in this dimension relate to society and government agencies as the major stakeholders for sustainability oriented company (Wood, 1991).



All SPMS dimensions are considered as reflective which demonstrate the SPMS construct. The characteristics or the items are assumed to be covariant and considered to be interchangeable manifestations of the SPMS dimensions; as PMS is an integrated measures which have linkages between each other (Bisbe, Batista-Foguet & Chenhall, 2007; Chenhall, 2005; Rodgers & Guiral, 2011). This is in line with previous studies that suggested most constructs in the Management Control System and PMS survey-based literature are based on reflective models. Therefore, the aim of this study is to further construct the usability questionnaire for measuring SPMS implementation among companies.

### **3. Methodology**

#### **3.1. Research Design**

This study used cross-sectional design whereby it allows the researchers to integrate performance measurement system literature, and the actual surveys as a main procedure to gather data from top managements of manufacturing companies in Malaysia.

#### **3.2. Pilot Test**

As an initial point for constructing the new scales of SPMS, the questionnaire was validated by four academicians from Malaysian public universities and four managers from manufacturing companies. The academicians are considered as experts in the areas of management accounting, business and statistic, whereas the managers are from food, textile and machinery manufacturers. The experts and practitioners were required to comment on the clarity of the items and their relevance. After analysing the responses and comments, some modifications were made to the wording of the questions as to improve their clarity.

The resulting questionnaire has 6 reflective items for environmental and social orientation dimension, 6 items for financial orientation dimension and 8 items for growth orientation dimension. A 7-point Likert-type answering scale ranging from 1 ('not at all') to 7 ('To a great extent') was used.

A pilot-test was conducted prior to the actual data collection by using online survey due to time limitation. The purpose of the pilot-test was to get an overall idea of responses that will be received in actual data collection. Target subjects were managers from manufacturing companies, randomly selected from e-directory employer 2014 provided by the Ministry of Human Resource. Of the 200 online survey sent, the effective responses were from 28 companies. The number is considered sufficient as 25 participants should be considered the lower threshold of sample size for the purpose of instrumentation (Hertzog, 2008).

### 3.3. Data Collection

This empirical study gathered the data from a sample of Malaysian manufacturing sector. The manufacturing sector is currently seriously considering the implantation of sustainability in their operations (Zailani, Jeyaraman, Vengadasan & Premkumar, 2012). Besides, performance measures are commonly used by manufacturing companies (Jusoh, Ibrahim & Zainuddin, 2008). A random sample comprising 1,000 Malaysian manufacturing organizations was formed based on the FFM Directory 2014. The sample was consisted of organizations with 100 employees or more. This criteria was adopted as to ensure that the organizations are large enough for organizational and strategic variables to apply and that management control systems are sufficiently developed (Bouwens & Abernethy, 2000; Miller, 1987).

The questionnaires were mailed to the top management of each company and the effective responses were 147<sup>1</sup> companies. It should be noted that low response rate for academic surveys is a common pattern in Malaysia (Amir, Ahmad & Mohamad, 2010).

### 3.4. Data Analysis

PLS is a commonly used second-generation multivariate technique to test psychometric properties of measurement instrument through structural equation modelling (SEM). PLS is preferred when the model includes large numbers of indicators (Vinzi, W.W.Chin, J. Henseler & H. Wang, 2010). Since our model initially had 20 indicators, and the dimensionality of the SPMS construct was still not clear, it seemed practical to choose PLS. Finally, the relatively small size of our sample makes PLS suitable, especially when the number of observation is lower than 250 (Reinartz, Haenlein & Henseler, 2009). In this study, we will evaluate the measurement model of PLS for instrument validation.

## 4. Results

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<sup>1</sup> Several cases contained missing data: four cases with one item missing and four cases with two items missing. Little's MCAR test revealed that the missing data were missing completely at random (MCAR) (chi-square =129.573, degrees of freedom = 108,  $p>0.05$ ). As the missing data is MCAR, any imputation method can be used (Hair Jr., Black, Babin, & Anderson, 2010). As such, the data were replaced using the expectation-maximization (EM) method in SPSS. The EM approach is an iterative two-stage process where the E-stage makes the best estimates of the missing data and the M-stage makes parameter estimates assuming the missing data are replaced. This occurs in an iterative process until the changes in the estimated parameters are negligible and the missing values are replaced (Hair Jr. et al., 2010). This process resulted in a complete data set of 147 responses. Non-response bias was tested through independent-samples t-test for all variables between the first and last waves of respondents. This test is to be carried out when the response rate is less than 30% (Armstrong & Overton, 1977). The test indicated that there was no significant difference between early and late respondents in terms of response behaviour suggesting that there was no evidence of non-response bias.

#### 4.1. Respondent's Characteristics

Respondents for this study encompassed top management (30.6%), middle management (51%) and lower management level (27%). More than 40 percent of the respondents (42.9%) had been working for less than 5 years in their current position, 25.2% between 5 to 10 years, and 28.6% worked for more than 10 years. Table 1 provides the profile of the responding companies that encompasses a broad spectrum of business activities. The majority of the companies were of electrical and electronics product manufacturers (28.6%); followed by Iron, steel and metal product manufacturers (12.2%), rubber and plastic product manufacturers (10.2%) and motor vehicles, trailers and semitrailers and other transport equipment manufacturers (9.5%).

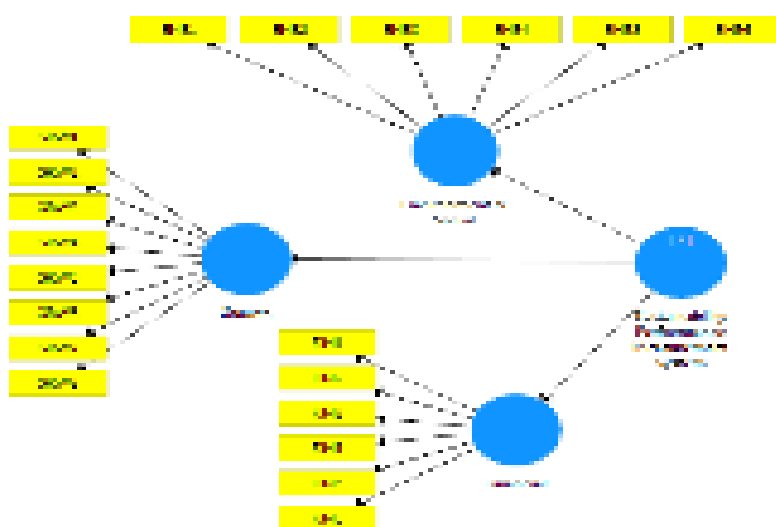
**Table 1. Number of respondents based on the primary business activity**

<b>Primary business activity</b>	<b>Frequency</b>	<b>%</b>
Electrical and electronics product	42	28.6
Iron, steel and metal product	18	12.2
Food and beverage	5	3.4
Rubber and plastic product	15	10.2
Paper, printing, packaging and labelling product	5	3.4
Chemicals and chemical product	8	5.4
Pharmaceutical, medical equipment, cosmetics, toiletries and household products	3	2.0
Furniture and wood related product	6	4.1
Textile, clothing, footwear and leather	3	2.0
Machinery and equipment	9	6.1
Coke and refined petroleum products	9	6.1
Motor vehicles, trailers and semitrailers and other transport equipment	14	9.5
Other non-metallic mineral products	4	2.7
Other manufacturing	6	4.1
<b>Total</b>	<b>147</b>	<b>100.0</b>

## 4.2. Measuring SPMS

Diagram 1 shows the model of SPMS construct and its three dimensions. The first dimension is the environmental and social orientation which is measured by six items. The second dimension is the financial orientation which is measured by six items and the third dimension is the growth dimension, measured by eight items. All the three dimensions have been suggested to explain the SPMS construct.

**Diagram 1. SPMS construct and the dimensions**



## 4.3. Validity and Reliability of the Instrument

Confirmatory factor analysis (CFA) was conducted to assess convergent validity and the discriminant validity of the measurement model. Composite reliability (CR) and average variance extracted (AVE) were used to assess the internal consistency reliability and convergent validity of the dimensions, and they are reported in Table 2. The findings show that all the CRs of the three dimensions are higher than 0.7 and AVE higher than 0.5, above the threshold suggested by Hair Jr., Hult, Ringle and Sarstedt (2014); thus, showing a high degree of internal consistency.

The validity of the measurement model was then assessed by examining the loading. The loadings threshold is 0.7 (Hair Jr. et al., 2014). It was found that all the loadings are above 0.7, except for 'Environmental indicators' item (0.684). However, according to (Chin, 2010) the rule of thumb should not be as rigid at the early stages of scale development, loadings of 0.5 or 0.6 may still be acceptable if there are additional indicators in the block for comparison basis. Since the criteria for reliability and convergent validity were met, therefore the item is considered acceptable, and thus retained.

**Table 2. Result of the Measurement Model**

Dimensions	SPMS Characteristics	Loadings	SPMS	AVE	CR
Environmental and social orientation dimension	Link to sustainability strategies (ENS1)	0.885	0.898	0.640	0.914
	Link to sustainability goals (ENS2)	0.834			
	Environmental indicators (ENS3)	0.684			
	Link to society (ENS4)	0.817			
	Link to government agency (ENS5)	0.757			
	Social responsibility indicators (ENS6)	0.805			
Financial orientation dimension	Documented for evaluating performance (FIN1)	0.717	0.877	0.599	0.899
	Link to financial strategies (FIN2)	0.863			
	Link to financial goals (FIN3)	0.866			
	Measurements link between unit activities (FIN4)	0.743			
	Shareholders indicators (FIN5)	0.700			
	Financial indicators (FIN6)	0.736			
Growth orientation	Measures link to Supplier (GRW1)	0.814	0.944	0.633	0.932
	Measures link to Employees (GRW2)	0.866			
	New Product Development indicators (GRW3)	0.705			
	Employee satisfaction indicators (GRW4)	0.836			
	Information effectiveness indicators (GRW5)	0.757			
	Customer satisfaction indicators (GRW6)	0.804			
	Supplier performance indicators (GRW7)	0.752			
	Measures link to customer (GRW8)	0.820			

The discriminant validity of the measures (the degree to which items differentiate among constructs or measure distinct concepts) was examined by following the

(Fornell & Larcker, 1981) criterion of comparing the correlations between constructs and the square root of the average variance extracted for that construct (see Table 3 ). All the values on the diagonals were greater than the corresponding row and column values, indicating that the measures were discriminant.

**Table 3. Discriminant Validity**

SPMS Dimension	ENS	FIN	GRW
Environmental and social orientation (ENS)	<b>0.800</b>		
Financial orientation (FIN)	0.686	<b>0.774</b>	
Growth orientation (GRW)	0.773	0.747	<b>0.796</b>

Note: Values on the diagonal (bolded) are square root of the AVE while the off-diagonals are correlations.

Table 4 shows that SPMS construct is well explained by the environmental and social dimension (0.898), growth dimension (0.944) and financial dimension (0.877). The structural model results showed that the relationships are significant ( $p < 0.01$ ); hence, indicating that the measurement items significantly explained the SPMS construct.

**Table 4. Path Coefficients**

Path	Path Coefficients	Std Error	t-values
SPMS -> Environment & Social	0.898	0.023	39.621
SPMS -> Financial	0.877	0.038	23.379
SPMS -> Growth	0.944	0.010	92.967

## 5. Discussion and Implication

This study suggested instruments to measure SPMS construct that can be used for future study especially in management accounting area of research. It is an effort suggesting how to measure the PMS that integrates sustainability aspects instead of using Sustainability Balanced Scorecard construct. Firstly, this study defined SPMS characteristics. Secondly this study suggested the strategic dimension of SPMS. Lastly, the measurements and dimensions were empirically tested in manufacturing companies operating in Malaysia.

This study shows that the economic measures are important in SPMS. Thus, the financial dimension provides strategic focus as to ensure that the systems monitor the company profitability for the business survival and stock market returns. Previous studies had also found that the Malaysian businesses rely heavily on financial measures (Amir et al., 2010; Burgess, Ong & Shaw, 2007; Hassan, Amir & Maelah, 2012).

This study found that the dimension of growth orientation is significant for SPMS construct. The findings are in line with previous studies, as the green supply chain indicators and supplier performance indicators are also found to be important for corporate sustainability (Eltayeb et al., 2011; Zhu, Sarkis & Lai, 2008). Also, the innovation measures are useful at ensuring the development of new products and the customer satisfaction measures could assist in increasing profitability and the survival of the company (Azapagic, 2003; Delai & Takahashi, 2011; Gadenne et al., 2012; Perera & Harrison, 1997).

Additionally, past studies showed that measures such as customer satisfaction, customer loyalty, employee training, and employee satisfaction are important to Malaysian manufacturing companies (Jusoh & Parnell, 2008). Moreover, according to previous study, the Malaysian business culture is value risk taking and highly innovative (Rashid, Sambasivan & Johari, 2003); thus, these measurements might be useful at providing information for decision making. Thus, this dimension is considered reliable for SPMS.

Social and environmental information is useful for managers in decision-making processes (Riccaboni & Leone, 2010). Many studies have suggested to the integration of environmental and social aspect into a company's performance measurement system (Dias-Sardinha & Reijnders, 2005; Figge et al., 2002; Staniškis & Arba, 2009). Consistently, this study found that dimension of environmental and social orientation is significant to the SPMS construct.

Measuring the performance towards government agency and societal needs is important because previous studies had also highlighted on the influence of regulators and public authorities in encouraging the environmental and social responsibility action by management (Bansal & Roth, 2000; Burke & Logsdon, 1996; Lämsiluoto & Järvenpää, 2008). Examples of performance measures regarding this aspect are pollution control and pollution prevention (Dias-Sardinha & Reijnders, 2005). To conclude, the combination of the three dimensions is viewed as manifestation of SPMS in achieving the economic, environmental and social performances.

### **5.1 Research Implication**

These results are consistent with the arguments that performance measures can be a strategic management tool (Chenhall, 2005; Kaplan & Norton, 2001). Hence, the measurement of SPMS construct developed in this study can be used as a guideline in future study on the SPMS implementation.

### **5.2. Policy Implication**

Businesses are under pressure from customers, competitors, regulators and society to implement sustainable business practices (Gholami, Binti, Ramayah & Molla,

2013). The findings of this study may be used as guidelines by the management to balance economic and environmental performances in their PMS structure.

## 6. Limitation and Conclusion

This study focused on the SPMS implementation among manufacturing companies operating in Malaysia. Although our comprehensive instrument may be applicable to companies in other regions, we cannot emphasize that the results would be similar. The study collected data at one point in time, thus the possibility of endogeneity cannot be ignored. Nonetheless, despite these limitations, the study makes important contribution to the PMS literature.

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