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A special issue grounded in Management and Marketing

Guest Editors Khairil Wahidin Awang and Ho Jo Ann



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Office of the Deputy Vice Chancellor (R&I) 1st Floor, IDEA Tower II UPM-MTDC Technology Centre Universiti Putra Malaysia 43400 Serdang, Selangor Malaysia. Gen Enq.: +603 8947 1622 | 1619 | 1616

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PUBLISHER

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Vol. 23 (S) Jan. 2015 (Special Issue)

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Preface

Beating submission and re-submission deadlines is part and parcel of being academicians. The publication of this Special Issue entailed such a predicament, and we were excited to see that we were able to put together this issue in the given time.

The articles in this issue come from many contributors from the Department of Management and Marketing, Universiti Putra Malaysia. The diverse themes of the papers presented here are evidence not only of the contributors' diverse academic backgrounds, but also the vibrancy of the many fields of study represented here. Although richly themed in management and marketing, themes like tourism and law are equally important. In all, there are 12 empirically-veined articles collected in this issue.

We would like to personally thank all the manuscript reviewers, authors and those who have directly or indirectly made this Special Issue a reality.

Last but not the least, this issue is a concerted effort made possible with the help of Dr. Nayan Kanwal, the Chief Executive Editor and his dedicated Pertanika team at the Journal Division, UPM Press, for their generous guidance and commitment in bringing this special issue to print.

Khairil Wahidin Awang, Ho Jo Ann

Guest Editors, Jan 2015



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Employee Perception of CSR Activities, Job Attachment and Organizational Commitment

Ummu Asma' Musa1 and Azmawani Abd Rahman2*

¹Faculty of Economics and Management, Universiti Putra Malaysia, 43400, Serdang, Selangor, Malaysia ²Halal Product Research Institute, Universiti Putra Malaysia, 43400 Serdang Selangor, Malaysia.

ABSTRACT

The idea that a business has duties toward society and its stakeholders is widely acknowledged and has increased dramatically in the recent years. This study examined the mediation effect of job attachment on the relationship between employee perception on corporate social responsibility CSR activities and organisational commitment. Data were obtained through survey questionnaires from a sample of 143 firms operating in Malaysia. The results indicated significant relationships between perception of CSR and job attachment, and between job attachment and organisational commitments. However, this study found no mediation effect of job attachment on the relationships between perception of CSR activities and organisational commitment. This indicates that CSR activities can directly affect both job attachment and relate to individual feelings toward the job and organisational commitment, which relate to feelings towards the organization. These results suggest that CSR activities make a powerful contribution to intangible organizational benefits. The study offers implications for both theory and practice.

Keywords: CSR, ethical, environment, job attachment, job commitment, Malaysia

INTRODUCTION

The rapid changes in today's business environment have significant implications

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E-mail addresses: ummu87asma@yahoo.com (Ummu Asma' Musa) azar@upm.edu.my (Azmawani Abd Rahman)

* Corresponding author

not only for how businesses respond to society's expectations but also for current and potential employees. In 2012, the Forbes website reported that a study conducted by Cone Millennial Cause group revealed that 80% of the respondents, from a sample of 1,800 people between the ages of 13 and 25, wanted to work for a company that cares about how its business activities

affect society. The focus on people, planet, and profits, known as the new "triple bottom line", is increasingly becoming essential for firms in selecting and retaining new hires. This phenomenon is an indication of the growing awareness of corporate social responsibility (CSR), which refers to the notion that business value is a function of intangibles such as goodwill, reputation, trust, talent and intellectual capital. These criteria have become an increasingly important consideration for prospective employees. Since employees are the most valuable stakeholders in an organisation, it is important for a company to have a remarkable reputation especially in terms of its CSR practices.

Mueller et al. (2012) noted that the relevance of CSR has been extensively investigated in several domains including financial performance (McWilliams & Siegel, 2001; Orlitzky et al., 2003; Waddock & Graves, 1997), organizational performance (Ahmad & Rahim, 2005; Lee et al., 2013), consumers and marketing (Maignan & Ferrell, 2001; Vaaland et al., 2008), investor attitudes (Coffey & Fryxell, 1991; Graves & Waddock, 1994; Johnson & Greening, 1999), and job candidate perceptions (Greening & Turban, 2000). A few studies have tested the indirect relationship between employee perception of CSR activities and job attachment via either organisational ethics (Valentine & Fleischman, 2008) or organisational justice (Rupp et al., 2006). However, similar research has not been previously conducted on the relationship between this perception and organisational commitment through job attachment.

Previous studies have proven the relationship between employee perception on CSR activities and organisational commitment (Lee et al., 2013; Ali et al., 2011; Stancu et al., 2011). Meanwhile, job attachment has long been recognised to stimulate organizational commitment (Mathieu & Zajac, 1990; Buckho et al., 1998). An engaged employee is one who is fully involved in, and enthusiastic about, his or her work. Since employee's perceptions of CSR can trigger emotional, attitudinal, and behavioral responses (Lee et al., 2013), the interrelationships between CSR, job attachment and job commitment should be investigated.

Previous CSR Research in Malaysia

Research conducted by Abdul Rashid and Ibrahim (2002) found that 97.5% of 198 respondents agreed that Malaysian companies are involved in CSR activities, demonstrating an awareness of CSR engagement in Malaysian companies. Ahmad and Rahim (2005) found that managers generally perceive that their companies are aware of the concept of CSR. The study shows that the respondents are in agreement about what constitutes CSR even though the results suggest that the particular understanding of the meaning of CSR varies from one individual to another. On the other hand, Zulkifli and Amran (2006) reported that Malaysian accounting professionals' awareness and perceptions of the basic concepts, elements and

function of CSR are inconsistent. While CSR activities are commendable, they are not consistent with the general level of awareness and perceptions (Zulkifli & Amran, 2006).

Lu and Castka (2009) highlighted the fundamental issues in the journey toward broader diffusion and acceptance of CSR in Malaysia, such as misunderstanding regarding the meaning of CSR and mandatory versus voluntary CSR. A review of previous literature on this issue revealed that the focus has been more on accounting and marketing perspectives and on consumer perception (Lee et al., 2013). Studies by Abdul Rashid and Ibrahim (2002) and Ahmad and Rahim (2005) offer insightful observations but are limited to awareness and implementation of the CSR activities (Ahmad & Rahim, 2005) and factors that influence managers' perceptions of CSR activities (Abdul Rashid & Ibrahim, 2002). Previous studies on CSR have not given much attention to the concept of environmental protection as part of CSR initiatives. With the advancement of information technology and the proliferation of social media, employees nowadays are more connected and updated regarding events happening around them. As such, the need to study employees' perceptions of the CSR engagement of their employer is greater than ever. This paper measures employees' perception of CSR activities in order to determine the existence of its relationship with job attachment and organizational commitment. This study will focus on the three elements of CSR: philanthropic, ethical and environmental.

LITERATURE REVIEW

Various definitions of CSR have been used in the scientific literature. Carroll (1991) suggested that CSR should be divided into four levels; in specific, the total corporate social responsibility of a business involves the simultaneous fulfillment of the firm's economic, legal, ethical, and philanthropic responsibilities. Meanwhile, CSR can simply refer to all situations in which a firm engages in actions that appear to further some social good and go beyond compliance, the interests of the firm and the social obligations required by law (McWilliams & Siegel, 2001; Székely & Knirsch, 2005). Bidin (2008) defines CSR as open and transparent business practices that are based on ethical values and respect for the community, employees, the environment, shareholders and other stakeholders. Salmi (2012) describes CSR as a continuous and long-term process guided by the organisational and personal values of stakeholders. CSR implementation gives employers chances to provide an attractive and useful environment for employees. Several studies have provided empirical evidence on employees' involvement in CSR. Ali et al. (2011) described the benefits of CSR activities as achievement of corporate goals and customer service, loyalty to the organization and overall organisational success. CSR is positively associated with more positive attitudes toward the organization (Lee *et al.*, 2013). Greenwood (2007) noted that employees are highly prominent stakeholders to whom a firm owes a perfect duty. This statement suggests that employees have significant power and legitimacy with which to influence the firm. For this reason, it is important to identify employee's perceptions of CSR activities and their consequences for the organisation.

Stancu et al. (2011) identified the positive impact of employees' commitment towards employer as an advantage of CSR implementation in an organisation. The study noted that product or service quality depends on the level of employees' motivation and training. Higher employees' motivation and proper training enable a company to establish a strong relationship with internal stakeholders and consequently improve its profit margins. In the present study, the author identified motivation as an implication of employees' involvement in CSR activities. This motivation can also be in the form of attachment to the job. In an organisational context, attachment is described as an attitudinal response to one's job that is characterised by congruence between one's real and ideal jobs, identification with one's chosen occupation and reluctance to seek alternate employment (Porter et al., 1974; Steers, 1977). In more specific, job attachment refers to a condition in which employees are fully occupied in their work and are emotionally attached to their organisation. Employees' perceptions of CSR trigger emotional, attitudinal, and behavioural responses (Lee *et al.*, 2013). Thus, the present study assumes that perception will trigger behavioral outcomes, which will simultaneously relate to job attachment in organization.

Mowday et al. (1979) defined organisational commitment as the relative strength of an individual's identification with and involvement in a particular organisation. Organisational commitment can be identified by at least three related factors. First, it is influenced by a strong belief in and acceptance of the organization's goals and values. Second, it depends on a willingness to exert considerable effort on behalf of the organization. Lastly, it can be motivated by an individual's high aspiration to belong to the organisation. Wyatt (2007) found that stronger commitment and great optimism among employees could enhance profitability and increase the work productivity of those employees to more than double that of other employees. In addition, long-term sustainability for the company, employees and ethical environments will enhance employees' job satisfaction. Therefore, investigation into organisational commitment is important because many previous studies have shown the positive relationships between employees' commitment and organisational performance (Benkhoff, 1997; Luchak et al., 2007; Mehmud et al., 2010). Many firms are constantly making efforts to generate employees' commitment, which translates into competitive advantage and improved performance (Lok & Crawford, 2004; Yousef, 2000).

CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

This study conceptualised that employees' perception on CSR activities influences

job attachment, which then influences the organisational commitment. The proposed conceptual framework is shown in Fig.1 below.

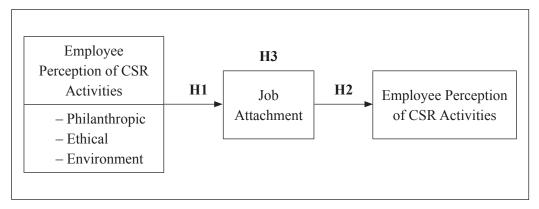


Fig.1: Conceptual Framework

According to the stakeholder theory, maximising profits is not the goal or purpose of the corporation but it is rather an outcome of a well-managed company. Employees are the most important stakeholders and a valuable asset in the organisation. Supporting and rewarding their efforts to pursue their passions in the workplace, at home, and in the community is essential to the sustained success of an organisation.

A previous study reported that employees' perception of CSR execution influences their attitudes and behaviour in an organisation (Peterson, 2004). In addition, a few studies have highlighted how the employees perception of a responsible behaviour influences the possibility of obtaining benefits from CSR practices, to the point that the measure of CSR perception becomes a key issue in the process of CSR assessment (Becker-Olsen et al., 2006; Greening & Turban, 2000;

Peterson, 2004; Turban & Greening, 1996). Similarly, stakeholder orientation reduces a company's irresponsible behaviour and offers recommendations to decision-makers for CSR management (Armstrong, 1977). Lee *et al.* (2013) reported that positive employee perception of CSR activities has a significant and positive impact on attachment to the organisation. Thus, in the context of Malaysian companies, the following hypothesis was proposed:

H1: There is a positive relationship between employees' perception of CSR activities and job attachment.

A previous research indicates that there is a positive correlation between job involvement and organisational commitment (Mathieu & Zajac, 1990). Buckho, Weinzimmer and Sergeyev (1998) found a positive relationship between job attachment and organisational commitment. Several studies have found

that employees' dedication and attachment to their supervisors influence their selfreported in-role and extra-role behaviours (Becker & Kernan, 2003; Meyer et al., 2002). In the context of industrial salespeople, Bashaw and Grant (1994) and Benkhoff (1997) found a positive link between organisational commitment and job performance. Eventually, engaged employees are the most productive, the best team players, and the most committed organisational goals (Turban Greening, 1996). Thus, it is expected that organisations with committed employees will be more effective and that employees who exhibit high levels of organisational commitment are more productive and less likely to leave their jobs. Therefore, it was hypothesised that:

H2: There is a positive relationship between job attachment and organizational commitment.

previous Although research on the relationships between employees' perception of CSR and their attachment to the firm is limited, the earliest finding by Gavin and Maynard (1975) revealed significant relationships between the level of firm's CSR activities and employees' satisfaction with their jobs. CSR might affect organisational identification because it could influence the amount of value similarity or dissimilarity people perceive between themselves and the organisation (Bauman & Skitka, 2012). When employees feel a true sense of belongingness towards an organisation, they should internalise responsibility for its success and be willing to make substantial efforts to attain the organization's goals. Therefore, a positive perception of CSR activities promotes in-role performance and organisational citizenship behaviour, which may be linked to job attachment and organisational commitment. Lee et al. (2013) suggest that employers should consider employees' perception of CSR with reference to their feeling of attachment. This evidence supports the proposal that job attachment could mediate the impact of employee's perception on CSR activities towards their organisational commitment. This understanding leads to the formulation of the following hypothesis:

H3: Job attachment mediates the relationship between employee perception on CSR activities and organizational commitment.

RESEARCH METHODOLOGY

Survey questionnaires were sent via postal mail and email to all companies listed in the Federation of Malaysian Manufacturer (FMM) 2012 directory. At the end of the data collection period, a total of 143 usable survey questionnaires were obtained for further analysis. Employees' perception of CSR activities was measured using a 5-point Likert scale. CSR activities were composed of philanthropic (4 items), ethical (4 items) and environmental (8 items) activities, which were adapted from Maignan and Ferrell (2001), Lichtenstein, Drumwright, and Braig (2004), and Montgomery and Stone (2009), respectively. The scales are as follows:

Philanthropic CSR activities:

- 1. Allocating some of the company's resources to do voluntary activities.
- 2. Playing a role in society that goes beyond the mere generation of profits.
- 3. Encouraging employees to participate in voluntary activities.
- 4. Emphasising the importance of the company's social responsibilities to its employees.

Ethical CSR activities:

- 1. Organising ethics training programmes for employees.
- 2. Providing full and accurate information to all customers.
- 3. Has a comprehensive code of conduct.
- 4. Is recognised as a trustworthy company.

Environmental CSR activities:

- 1. Making efforts to offer environmentally friendly products.
- 2. Has an environmentally related mission.
- 3. Making efforts to maintain and preserve the environment.
- 4. Practicing conservation of electricity as part of its environmentally friendly effort.
- 5. Reusing or recycling waste materials such as paper, plastic and glass.
- 6. Using proper procedures in waste management (e.g., proper chemical disposal and outsourcing of waste collection).

- 7. Assessing and choosing environmentally friendly suppliers (e.g., recyclable cartridge supplier or recyclable packaging supplier).
- 8. Organising environmental awareness activities (e.g., talks, games and speeches) to educate the society on the importance to be environmentally friendly.

Meanwhile, employees' attachment was measured using an 8-items scale adopted from Thomson *et al.* (2005). The respondents were asked to rate their feelings towards their company on a 7-point evaluative scale. Finally, a questionnaire developed by Mowday *et al.* (1979) was used to measure organisational commitment. This instrument has been used by many scholars in various fields since 1979 (e.g., Mowday, 1979; Buckho *et al.*, 1998; Mize *et al.*, 2000; Alexandrov *et al.*, 2007; Lamm *et al.*, 2013).

According to De Vellis (2003), the Cronbach alpha coefficient of a scale should be above 0.70 to be considered as acceptable; however, a value of 0.8 is preferable. Table 1 below shows the results of reliability tests for the variables used in the present study; all are above the minimum accepted level.

TABLE 1 Reliability and Mean Score of Variables

Variables	Cronbach's Alpha (α)	Mean Score of Variables
Employee Perception of CSR – Philanthropic, Ethical and Environmental Activities	0.83	3.30
Job Attachment	0.98	5.91
Organisational Commitment	0.79	3.76

RESULTS AND DATA ANALYSIS

Company Profile of the Respondents

Table 2 highlights the demographic characteristics of the sample, showing an almost equal distribution between male and female employees. A majority of the

respondents (84.6%) are at the executive level. In addition, a majority have been working for more than three years. In terms of organisation size, a majority of the responding firms are local firms with fewer than 200 employees.

TABLE 2 Demographic characteristics of the sample (n = 143)

Profile	Frequency	Percentage (%)
Gender		
Male	74	51.7
Female	69	48.3
Job position		
Executive	121	84.6
Manager	22	15.4
Tenure		
Less than 3 years	21	14.6
Between 3 to 5 years	85	59.5
Between 6 to 10 years	30	21
More than 10 years	7	4.9
Total number of employees		
74 or less	54	37.7
75 – 199	57	39.9
200 or more	32	22.4
Number of company's years of establishment		
Less than 3 years	2	1.4
Between 5 to 10 years	8	5.6
Between 10 to 15 years	27	18.9
More than 15 years	106	74.1
Status of company		
Locally owned	114	79.7
Foreign owned	16	11.2
Joint venture with foreign company	10	7.0
(More than 50% foreign majority)		
Joint venture with foreign company	3	2.1
(Less than 50% foreign majority)		

Testing of Hypotheses

Regression analysis was used to test hypotheses 1 to 3. HI hypothesised that there is a positive relationship between employees' perception of CSR activities and job attachment. The results of the analysis are depicted in Tables 3 and 4 below.

TABLE 3 Model summary and ANOVA

Dependent variable	Model	Model summary		OVA
	R	R Square	F	Sig.
Job attachment	.27	.07	3.60	.000

Predictors: (Constant), CSR

TABLE 4 Regression results between CSR and employee attachment

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	3.94	.68		18.75	.00
	CSR	.09	.03	.26	2.24	.02

a Dependent variable: Job attachment

The model summary in Table 3 shows that the value of R² is .07. This means that the model explains 7% of the variance in employees' attachment. The model is significant, with a statistical significance value of 0.02 at p<0.05. Table 4 shows that CSR makes a significant and unique contribution to the prediction of employee

attachment. Therefore, the association between employee perception of CSR activities and job attachment is supported.

Hypothesis 2 postulates that there is a positive relationship between job attachment and organisational commitment. The results of the analysis are depicted in Tables 5 and 6 below.

TABLE 5 Model summary and ANOVA

Dependent variable	Model summary		ANC	OVA
_	R	R Square	F	Sig.
Organizational commitment	.26	.07	10.31	.00

Predictors: (Constant), Job attachment (JA)

TABLE 6
Regression results between CSR and job attachment

Model		Unstandardi	Unstandardized Coefficients St		_ t Si	
		В	Std. Error	Beta		
1	(Constant)	3.22	.17		18.75	.00
	Job attachment	.092	.03	.26	3.21	.00

Dependent Variable: Organizational commitment (OC)

The model summary in Table 5 shows that the value of R² is .07, indicating that the model explains 7% of the variance in organizational commitment. The model is significant, with a statistical significance value of 0.00 at p<0.05. Table 6 shows that job attachment make a significant and unique contribution to the prediction of organizational commitment. Thus, H2 is supported.

Hypothesis 3 postulates that job attachment mediates the relationship between employees' perception of CSR activities and organisational commitment. A mediated hierarchical regression test was conducted to test the relationships. In order to complete a mediation analysis,

Baron and Kenny (1986) suggested that four conditions need to be fulfilled. The first condition is that the independent variable must be significantly related to the dependent variable. For the present study, the independent variable is the employees' perception of CSR activities, and the dependent variable organisational commitment. standardised regression coefficient (beta) was examined to determine the size and direction of the relationship and whether it is significant. If this relationship is not significant, there will be no mediation as there is no relationship to mediate. Tables 7 and 8 present the results for the first condition.

TABLE 7 Model summary and ANOVA

Dependent variable	Model s	ummary	ANO	VA
	R	R Square	F	Sig.
Organisational commitment	.59	.35	74.44	.00

Predictors: (Constant), CSR

TABLE 8
Regression results between employees' perception of CSR activities and organisational commitment

Model B	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.	
		Std. Error	Beta			
1	(Constant) AvgCSR	2.21 .47	.18 .05	.59	12.16 8.63	.00 .00

a. Dependent Variable: OC

A total of 58.8% of the variance in organizational commitment was explained by the employees' perception of the CSR activities in Table 7. Meanwhile, Table 8 shows a significant relationship between

the predictor and the dependent variable (F = 74.44, p = 0.00). This means that the model in this test reaches statistical significance because the p-value \leq 0.05. The Beta shows that the relationship

between employees' perception of CSR activities and organisational commitment is positive. In other words, the better the employees' perception of CSR activities, the higher their organizational commitment will be. The analysis shows that the first condition for mediation has been met.

Second, the independent variable must be significantly related to the mediated variable. The mediated variable in this study is job attachment. The mediated variable is regressed on the independent variable, and the Beta is examined for its size, direction and significance. If this relationship is not significant, therefore, the hypothesised mediated variable cannot be a mediator (Baron & Kenny, 1986). The analysis is similar to the testing of hypothesis 1. The results from Tables 3 and 4 show significant relationships that fulfil the second condition.

Third, the mediated variable must be significantly related to the dependent variable. Hierarchical regression analysis is performed in two steps. In step one, the dependent variable is regressed on the mediated variable (job attachment and organisational commitment). In step two, the dependent variable is regressed on the independent variable again (employees' perception on CSR activities organisational commitment). The beta in step one (job attachment and organizational commitment) is examined to determine the strength, direction and significance of the relationship between the mediated variable and the dependent variable. If this is not significant, there can be no mediation (Baron & Kenny, 1986). Tables 9 to 11 explain the third condition.

TABLE 9
Model summary of regression between employees' perception of CSR activities and organisational commitment

Model R		R	R Adjusted R		Change Statistics	
Wiodei	K	Square	Square	the Estimate	R Square Change	Sig. F Change
1	.26ª	.07	.06	.38	.07	.00
2	.60b	.36	.35	.32	.29	.00

a. Predictors: (Constant), JA

b. Predictors: (Constant), JA, CSR

TABLE 10
ANOVA regression between employees' perception of CSR activities and job attachment and organisational commitment

Mo	odel	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.51	1	1.51	10.31	$.00^{b}$
2	Regression	7.99	2	4.00	39.39	.00°

a. Dependent Variable: OC,

b. Predictors: (Constant), JA

c. Predictors: (Constant), JA, CSR

TABLE 11 Coefficients Regression between employees' perception of CSR activities and job attachment and organisational commitment

Model		Unstandardi	sed Coefficients	Standardised Coefficients	Т	Sig.
		В	Std. Error	Beta	_	
1	(Constant)	3.22	.17		18.75	.00
	AvgJA	.09	.03	.26	3.21	.00
2	(Constant)	2.03	.21		9.86	.00
	AvgJA	.04	.02	.12	1.78	.08
	AvgCSR	.45	.06	.56	7.99	.00

Dependent Variable: AvgOC

Tables 10 to 11 show the two steps in the analysis. In step one in Table 9, employees' perception of CSR activities explains 6.8% of the variance in organisational commitment (R square = 0.07). According to the data in the same table, in step two, job attachment also adds significantly to the variance explained (R square change = 0.29, p = 0.00). Next, Table 10 shows that the variance explained by both employees' perception of CSR activities and job attachment is significant (F = 10.31, p = 0.00) and (F = 39.39, p = 0.00). So, the third condition of mediation that requires the mediated variable to be significantly related to the dependent variable, is met.

Fourth, the beta in step two for employees' perception of CSR activities and organisational commitment is examined. The regression coefficients in step two in Table 11 (along with the results in Tables 9 and 10) show that job attachment is not significantly related to organisational commitment. According to Baron and Kenny (1986), if the hypothesised mediated variable is indeed a mediator, the significant relationship between the independent variable and the dependent variable established in the first analysis should no longer be significant.

That is, when controlling for the effects of the mediated variable on the dependent variable (by entering it first into the analysis), the effects of the independent variable are no longer significant.

From the analysis, when controlling the effects of the mediated variable on the dependent variable, the effect of the independent variable on the dependent variable must no longer be significant. However. Beta for employees' perception on CSR activities in Table 11 (Beta = 0.00), which is significant in the first analysis, is now still significant when controlling for the effects of the mediated variable of job attachment. Therefore, the final condition for demonstrating mediation has not been met. In sum, the results show that only three out of four conditions in the mediated hierarchical regression analysis are fulfilled.

In order to further analyse the mediation effect, a Sobel test was conducted. The Sobel test is a statistical test performed to determine whether the indirect path from the independent variable to the dependent variable is statistically significantly different from zero (Baron & Kenny, 1986). This is the same idea as the test provides support for partial

mediation. The test statistic is equal to 0.32, with a standard error of 0.59. The statistical significance is equal to 0.75. Baron and Kenny (1986) suggested the acceptable alpha value is at 0.05; thus, technically, the result found here does not reject the null hypothesis of no mediation. As a result, hypothesis 3, which postulates that job attachment mediates the relationship between employees' perception of CSR activities and organisational commitment, is not supported.

DISCUSSION AND CONCLUSION

The first objective of this research is to study the relationship between the employee perception of CSR activities and job attachment. The results suggests that the employees' perception of CSR activities induces a positive relationship with job attachment. This indicates that as employees perceive CSR activities more positively, their attachment toward their job increases. This result supports the findings of Lee et al. (2013), Maon et al. (2010) and Ali et al. (2011), who found a positive association between employees' perception of CSR activities and positive attitudes towards their jobs. The second objective of the study is to analyse the association between job attachment and organisational commitment. The results indicate significant relationships, suggesting that higher employees' job attachment will lead to greater organisational commitment.

However, the last objective, i.e. to prove the existence of a mediation effect of job attachment on the relationship between employees' perception of CSR activities and organizational commitment, was not successfully completed. This means that, while employees' perception of CSR activities

directly affects their job commitment, it does not necessarily do so through job attachment. This further signifies that CSR activities can directly affect both job attachment and organisational commitment, although previous research findings strongly suggest that organisational commitment is reached through job attachment. One plausible reason for the insignificant mediation effect could be that job attachment relates to individual's feelings toward the job, while commitment relates to feelings towards the organisation. This indicates the powerful impact of CSR intangible activities on organisational benefits.

This study proposed to strengthen the existing theory and provide better insights on the influence and relationships between certain tested variables. The findings of this study add value to the literature, specifically in the Malaysian context, by providing empirical support for the stakeholder theory, with employees among the most important stakeholders. The findings may suggest an opportunity for improvements to the organisation, especially in selecting and organising CSR activities based on the three elements of CSR activities, which can benefit both employees and managers. CSR programmes can be accurately designed by managers to increase the motivation of employees. Finally, this study reveals that employees' perception of CSR activities is significantly related their organisational commitment. to Again, managers could benefit from understanding the predictors of committed employees, because they can initiate interventions in companies' events. thus making them feel committed to the company. Because a high response rate is important in assuring the accuracy of results, future studies should attempt to expand the data sample to cover a wider population. In addition, future research can extend the survey to other stakeholders to evaluate their perspectives because the current study is limited to employees at the executive and managerial levels.

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Institutional Corporate Social Responsibility (CSR) Practices: The Influence of Leadership Styles and Their Perceived Ethics and Social Responsibility Role

Ho, J.A.¹, Ang, Y.H.² and Tee, K.K.³*

¹Faculty of Economics and Management, Universiti Putra Malaysia, Malaysia ²MBA Graduate, Graduate School of Management, Universiti Putra Malaysia, Malaysia ³Putra Business School, Universiti Putra Malaysia, Malaysia

ABSTRACT

This paper investigates leader's perceptions of ethics and social responsibility (PRESOR) on organisation's institutional CSR practices. The results indicate that while the managers in this study perceive that ethics and social responsibility play an important role in determining the organisation's long-term and short-term gains, they do not think that ethics and social responsibility are the only important factors in determining firm's profitability and survival, as indicated by the non-significant results of the PRESOR (social responsibility and profitability) dimension. Another objective was to determine the types of leadership style in influencing the adoption and practices of CSR. As oppose to many previous studies, the results indicate that among the leadership styles, transactional leadership influences institutional CSR practices, while transformational leadership does not. This finding implies that for CSR practices to be implemented, leaders need to use rewards, rules and regulations in a Malaysian context. In other words, in order to institutionalise CSR practices in Malaysia, corporations should start by introducing extrinsic incentives.

Keywords: Corporate Social Responsibility, Intuitional Practices, PRESOR, Leadership

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E-mail addresses: ann_hj@upm.edu.my (Ho, J.A.) angyenhui@yahoo.com (Ang, Y.H.) tee@putrabs.edu.my (Tee, K.K.) * Corresponding author INTRODUCTION

Although Corporate Social Responsibility (CSR) is rapidly becoming a worldwide phenomenon, Malaysia-listed corporations are far behind international standards when it comes to implementing CSR practices, with nearly two-thirds of those surveyed

ranked between poor and average (Ng, 2008). Following the definition provided by the World Business Council for Sustainable Development (1998), we define CSR as the commitment of businesses to contribute to sustainable economic development, working with employees, their families, the local community, and society at large, to improve their quality of life. CSR is not new in Malaysia, but more commitment from the majority is needed to achieve a sustainable environment in the near future (Lo & Yap, 2011). The Malaysian government has put much effort into promoting CSR practices. This can be observed through the incorporation of CSR practices under the Transformation Plan for Government Linked Companies (GLC), the 9th Malaysia Plan 2006-2010 and the National Budget. Apart from that, the incorporation of CSR is also integral to achieving the strategic objectives of the National Integrity Plan. Furthermore, the Malaysian Security Commission views CSR as part of corporate governance as CSR will strengthen the framework of good corporate governance (Abdul Hamid & Atan, 2011).

An awareness of CSR is important among corporate leaders. The Malaysian Code on Corporate Governance 2012 (Securities Commission Malaysia, 2012), under Recommendation 1.4, states that the board should ensure that the company's strategies include promoting the sustainability of Environmental, Social, and Governance (ESG). Balancing ESG aspects with the interests of various

stakeholders is essential to enhance investor perception and public trust (Securities Commission Malaysia, 2012). Corporate leaders have to be fully aware of CSR trends and realise the significance of CSR in industry and its influence on their businesses. However, different leadership styles may lead to different CSR practices among organisations.

WHY CSR?

Previous studies have determined the major factors contributing to the increase of CSR reporting. These factors include investors who show their concern over social responsible investment and their influence on corporate behaviour (ACCA Malaysia, 2006; Friedman & Miles, 2001), stakeholders such as employees and customers (Belal & Owen, 2007; Day & Woodward, 2004; Harris, 2007), competitive advantage-base (Finch, 2005) and the intention of enhancing corporate image and reputation, and maintaining their visibility or public profile (Branco & Rodrigues, 2006; Campbell et al., 2006; Leventis & Weetman, 2004). Apart from the drivers mentioned above, very few studies have been conducted to examine how leadership styles contribute to good CSR practices. However, according to a study of Malaysian managers and executives conducted by Abdul Rashid and Ibrahim (2002), on whether an organisation is committing good CSR practice depends on the leaders in that organisation. Leadership styles, as a whole, lead employees to work effectively (Limsila & Ogunlana, 2008) because people respond well to appropriate types of leadership. Hence, the leaders' perception of CSR is important in determining the organisation's CSR practices because leaders play an important role in formulating and implementing CSR initiatives within the organisation.

Leaders are characterised by the leadership styles they possess, which in turn affect their ethical decision-making in formulating and implementing CSR strategic plans. There are very few empirical studies available that have examined how specific ethical values are associated with transformational and transactional leadership styles. Groves and LaRocca (2011) mentioned that leaders showed increasing attention to CSR by way of influencing their followers' perceptions to the importance of ethics and CSR for organisational effectiveness. The same study by Groves and LaRocca (2011) conducted in California, USA, revealed that transformational leadership was associated with followers' belief in the stakeholder's view of CSR. However, no study has been conducted in Malaysia that explores the extent to which leadership styles (transformational transactional leadership) institutional CSR practices. In this study, the term institutional CSR practices refers to a firm's CSR activities in the community and the environment, such as giving back to local communities through education, culture, and incorporating environment concerns within their business decisions (Du et al., 2012).

LEADERSHIP AND CSR

Leadership styles can be divided into transformational and transactional leadership. Transformational leaders are those who seek to satisfy the higher motives of employees and engage the full person in order to elevate them (Bass & Avolio, 2000; Minett et al., 2009) and these leaders stress upon self-sacrifice for the long-term good of the larger group or collective (Bass, 1998). However, a transactional leader is one who exchanges one thing for another (e.g., bonus for work or promotion for satisfactory completion of an assignment) (Bass & Avolio, 2000; Minett et al., 2009). The relationship between transformational leadership and CSR was examined by Luu (2012), Waldman et al. (2006), Egri and Herman (2000), Tongkachok and Chaikeaw (2012), and Shahin and Zairi (2007). All these research findings implicate that transformational leadership is significantly associated with CSR, although Luu (2012) and Waldman et al., (2006) further stated that transformational leaders engaged the firm in strategic rather than social CSR. In addition, previous studies (e.g., Du et al., 2012; Groves & LaRocca, 2011) showed that transformational leadership was associated with altruistic ethics, while transactional leadership was associated with utilitarian ethics. This finding is similar to Luu's (2012) findings, which showed that transactional leadership correlated with legal and economic CSR, i.e., transactional leaders tend to support CSR practices when these practices increase the product quality and safety and when such practices emphasise organization's primary stakeholders. Based on the literature reviewed (e.g., Shahin & Zairi, 2007; Du et al., 2012; Luu, 2012; Egri & Herman, 2000; Waldman, et al., 2006), it can be concluded that leadership styles do play an important role in socially responsible organisations. Hence, understanding the differences between a manager's leadership styles becomes important because such styles can be adopted to encourage organisations to be more socially responsible (Shahin & Zairi, 2007).

An organisation that emphasises a proper conduct of CSR certainly has to get their leaders to align their CSR decisionmaking with the company's values and continually refine this process of purposeseeking. It is quite impossible to have a socially responsible organisation without socially responsible managers who are willing to promote and implement CSR activities for the benefit of the organisation, as well as its stakeholders. In fact, it is the organisation's top managers who will inculcate ethics and social responsibility attitudes and behaviour among their employees and initiate the implementation of CSR practices in organisations. To achieve this, managers and organisation's top management much first perceive ethics and social responsibility important before their behaviours are likely to become more ethical and reflect greater social responsibilities. With this,

managers' perception of the importance of ethics and social responsibility (PRESOR) serves as one of the drivers pushing the implementation of CSR activities in order to increase organisational effectiveness, reputation and long-term profitability. In Malaysia, there are very few studies focusing on the influence of the perceived role of ethics and social responsibility of CSR practices, as compared to the West. The study of manager's perceived role of ethics and social responsibility (PRESOR) towards CSR practices from a non-Western context will add to the literature on individual's perceptions of ethics and social responsibility literature. In order to accomplish this, three Research Questions (RQ) were formulated for the purpose of this study:

- RQ 1: Does transformational leadership affect institutional CSR practices?
- RQ 2: Does transactional leadership affect institutional CSR practices?
- RQ 3: How does the perceived role of ethics and social responsibility affect the organisation's institutional CSR practices?

CONCEPTUAL FRAMEWORK AND HYPOTHESES

The influence of leadership styles (transformational and transactional) and the perceived role of ethics and social responsibility in determining institutional CSR practices are represented in the conceptual framework in Fig. 1 below.

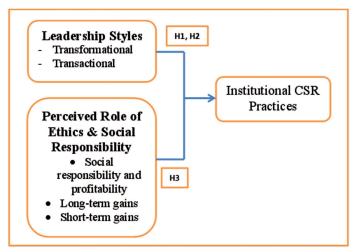


Fig.1: The conceptual framework

The dependent variable of institutional CSR practices is influenced by two independent variables of leadership styles (transformational and transactional) and perceived role of ethics and social responsibility. As mentioned previously, institutional CSR practices refer to a firm's CSR activities in its community and environment domains. These activities include giving back to local communities through education and culture, incorporating environment concerns within its business decisions (Du et al., 2012). A transformational leader is a leader who seeks to satisfy the higher motives of his/ her employees and engages the full person in order to elevate them. Meanwhile, a transactional leader is one who exchanges one thing for another (e.g., bonus for work or promotion for satisfactory completion of an assignment) (Bass & Avolio, 2000; Minett et al., 2009).

Perceived role of ethics and social responsibility (PRESOR), as defined by Vitell *et al.* (2003), is the extent to which one

believes that ethics and social responsibility are important to an organisation's long-term effectiveness. There are three dimensions to PRESOR. The first dimension is "social responsibility and profitability", which describes the importance of ethics and social responsibility in the organisation's profitability and competitiveness. An individual who is high on this dimension tends to believe that ethics and social responsibility play important roles in the firm's profitability and survival. The second dimension, "long-term gains", measures the perceived importance of ethics and social responsibility in relation to long-term gains such as profitability and the overall effectiveness of the firm and employee morale. An individual who scores high on this dimension believes that ethics and social responsibility is important for the long-term success of a firm. The third and final dimension measures "short-term gains", which are the roles of ethics and social responsibility in relation to the efficiency of the firm, stockholders happiness, and making profits by any means. Individuals who score high on this dimension believe that ethics and social responsibility are also important in achieving the firm's short-term gains.

Based on the previous literatures (Luu, 2012; Egri & Herman, 2000; Waldman, et al., 2006; Tongkachok & Chaikeaw, 2012; Shahin & Zairi, 2007), it is expected that transformational leadership will affect institutional CSR practices. Leadership characteristics have been found to be a catalyst in implementing institutional CSR (Du et al., 2012) because transformational leaders have a broader view of an organisation and tend to exhibit higher levels of ethical development (Vera & Crossan, 2004). Hence, they play an important role in facilitating institutional CSR practices. Based on this explanation, it was hypothesised that:

H1: There is a significant relationship between transformational leadership and the implementation of institutional CSR practices.

On contrary, some studies (e.g., Luu, 2012; Szekely & Knirsch, 2005) found that transactional leaders do influence CSR practices. This is because their leadership style often maintains the status quo within an organisation rather than promoting change, as they focus on the present and excel at keeping an organisation running smoothly and efficiently (Daft, 1999). However, when there is a commitment from the management develop sustainability practices, and incentive systems are introduced by the leaders to push for the adoption of such practices (Szekely & Knirsch, 2005), transactional leaders commit to follow the rules and goals set, and demonstrate contingency rewards by clarifying their expectation on their followers and offering recognition of rewards when goals are achieved (Groves & LaRocca, 2011). Hence, the following hypothesis is suggested:

H2: There is a significant relationship between transactional leadership and the implementation of institutional CSR practices.

In this study, it was expected that leaders' or managers' perceived roles of ethics and social responsibility influenced institutional CSR practices (Jung & Pennington-Gray, 2011). This was because managers with higher levels of perception on the importance of ethics and social responsibility would result in more positive attitudes towards such practices, and consequently, such positive attitudes would encourage organisations where these managers were based to execute better institutional CSR practices (Godos-Diez et al., 2011). It would therefore be expected that all three dimensions of PRESOR (i.e., social responsibility and profitability, longterm gains, and short-term gains) would have a positive relationship to institutional CSR practices. With this, the following hypothesis is suggested:

H3: There is a positive relationship between the manager's perception of the roles of ethics and social responsibility (PRESOR) and institutional CSR practices.

METHODOLOGY

This study adopted a positivist paradigm and hence, a deductive approach (quantitative) to assess the role of leadership and the perceived ethical and social responsibility organisational effectiveness on institutional CSR practices. A research questionnaire was designed to capture data on the respondents' leadership styles, their perceived roles of ethics and social responsibility, and the institutional CSR practices carried out by their organisations. questionnaire was divided five sections, whereby the items of the first three sections measured the three variables of this study. The instrument of each variable was developed based on the established measurement scales from the previous studies.

Measurement Scale

Three measurement scales (i.e., Sections A, B, and C) were used to capture the three variables using a 5-point Likert scale. These included: Section A - leadership style by The Multifactor Leadership Questionnaire (MLQ) (Bass & Avolio, 2000), which consisted of 24 questions (16 questions on transformational leadership and 8 questions on transactional leadership); Section B - perceived role of ethics and social responsibility using 16 items in the PRESOR scale by Singhapakdi et al. (1996); Section C - institutional corporate social responsibility practices by a list of 12 items developed by Du et al. (2012); and Section D - the Marlowe-Crowne Social Desirability Scale (MCSD) developed by Crowne and Marlowe (1960). The Marlowe-Crowne Social Desirability Scale (MCSD) was included in this study's questionnaire to assess whether the respondents responded truthfully or provided socially correct responses in order to "look good." Section E contained questions to obtain the respondents' demographic data.

Respondents

Klang Valley was chosen as the research area because Selangor and Kuala Lumpur were the two states that contributed significantly to the Malaysian economy in terms of GDP (Department of Statistics Malaysia, 2012) and because the link between CSR and GDP was firmly established in some previous studies (e.g., Boulouta & Pitelis, 2014; Zadek, 2006). Selangor was the most significant contributor to the nation's GDP with 23.5 percent, followed by the Federal Territory of Kuala Lumpur at 15.2 percent.

The unit of analysis for this study was managers who had worked in their companies for more than six months. This was to ensure that the respondents were generally experienced and familiar with the CSR activities of their present organisations. A list of companies operating in the Klang Valley was obtained from the Companies Commission of Malaysia. The human resource manager for each organisation was contacted and the purpose of the study was explained to them. After obtaining their consent, a questionnaire pack was sent to the respective human resource managers who

distributed them to the managers in their organisations who fulfilled the criteria listed by the researcher. Each questionnaire was attached with a brief introduction of the study to encourage participation and to clarify any doubts. The anonymity of respondents was emphasised to ensure a good response rate and honest responses. Questionnaires were e-mailed to managers who requested a softcopy version of the questionnaire. A total of 150 paper-based and 100 electronic questionnaires were distributed. Meanwhile, 70 (or 46.6 percent) usable paper-based questionnaires were received and 82 (or 82percent) usable email questionnaires were collected after one month of data collection.

DATA ANALYSIS AND RESULTS

This section presents the respondent's demographic profiles, reliability results of the measurement items, and the multiple regression results of the study.

TABLE 1 Respondent's Demographic Profiles (N = 152)

Profile	Frequency	Percentage (%)
Gender		
Male	66	43.4
Female	86	56.6
Age		
20 - 30	86	56.6
31 - 40	52	34.2
41 - 50	10	6.6
>50	4	2.6
Ethnicity		
Malay	15	9.9
Chinese	123	80.9
Indian	12	7.9
Others (Kadazandusun and Iban)	2	1.3

Respondent's Demographic Profiles

The respondents' profiles are shown in Table 1. There were 66 male (43.4 percent) and 86 female respondents (56.6 percent). Eighty six respondents were in the age group of 20-30 (56.6 percent), 52 respondents were in the age group of 31-40 (34.2 percent), 10 respondents were in the age group of 41-50 (6.6 percent), and only 4 respondents were in the age group of above 50 (2.6 percent). In terms of ethnicity, the majority of the respondents are Malaysian-Chinese managers (80.9 percent), followed by Malay managers (9.9 percent), Malaysian-Indian managers (7.9 percent), and 1.3 percent constituted the indigenous Kadazan dusun and Iban managers. In terms of years of working experience, 74.3 percent of the respondents fell into the range of between 1-10, 32 respondents (or 21.1 percent) had between 11-20, and 7 respondents (4.6 percent) had more than 20.

Profile	Frequency	Percentage (%)
Marital Status		
Single	94	61.8
Married	56	36.8
Divorced/Widowed/Separated	2	1.4
Highest education completed		
Secondary School	8	5.3
Certificate/Diploma	12	7.9
Undergraduate degree	72	47.4
Postgraduate degree	60	39.4
rosignatuate degree	00	39.4
Years of working experience		
1 - 10	113	74.3
11 – 20	32	21.1
>20	7	4.6
Years of service at the present organi	sation	
1-5	113	74.3
6-10	26	17.1
$\begin{vmatrix} 0 & 10 \\ 11 - 20 \end{vmatrix}$	8	5.3
>20	5	3.3
Size of Organisation (number of emp	oloyees)	
1 – 50	34	22.4
51 – 100	19	12.5
101 – 200	13	8.6
201 – 300	14	9.1
301 – 400	8	5.3
>400	64	42.1
Level/ Designation		
Manager	135	88.8
Senior Manager	11	7.2
Director	4	2.6
Senior Director	1	0.7
Vice President	1	0.7
Donartment		
Department Human Resources	18	11.8
Finance & Accounts	29	11.8
	11	7.2
Purchasing	22	14.5
Marketing Logistic Management	2	14.3
Others	72	46.1
Onicis	14	40.1

Reliability Results

Cronbach alpha's reliability test was conducted to assess the reliability of the measurement scales used in this study. Cronbach's alpha for all the variables was obtained and are summarised in Table 2. Based on the results, all the variables in this study were considered as

reliable (leadership styles, PRESOR, and institutional CSR practices). The reliability for PRESOR, i.e., the 'social responsibility and profitability' was $\alpha = 0.60$. However, this is still considered as acceptable since it fell into the acceptability range of between 0.60–0.70, as suggested by Hair *et al.* (2003).

TABLE 2 Reliability Results

Variables	Cronbach's alpha	Number of Items	
Leadership Styles			
- Transformational	0.85	16	
- Transactional	0.81	8	
Perceived roles of ethics and social responsibility (PRESOR)			
- Social responsibility & profitability	0.60	3	
- Long-term gains	0.79	7	
- Short-term gains	0.74	6	
Institutional CSR practices	0.86	12	
Social Desirability	0.71	10	

The Findings

Multiple regression analysis was used to test the three hypotheses. Referring to Table 3, the adjusted R square is 0.534. This implies that 53.4 percent of the variance on the institutional CSR practices is explained

by the independent variables of leadership styles (transformational and transactional) and PRESOR. The results in Table 3 also indicate that the model reached statistical significance (F = 29.81, p = 0.00).

TABLE 3 Regression Analysis

Variables	Standardized Coefficients	Significance
Transformational Leadership Style	0.107	0.207
Transactional Leadership Style	0.241	0.011
Social Desirability	0.005	0.924
PRESOR: Social Responsibility Profitability	0.058	0.488
PRESOR: Long-Term Gains	0.226	0.029
PRESOR: Short-Term Gains	0.213	0.031
F	29.81	0.00
Adjusted R Square	0.534	

be seen in Table 3, transactional leadership (Beta = 0.241, p = 0.011), PRESOR (long-term gains) (Beta = 0.226, p = 0.029) and PRESOR (short-term gains) (Beta = 0.213, p = 0.031) significantly influence institutional CSR practices. From the standardised coefficient values, transactional leadership makes the strongest unique contribution in explaining a company's engagement in institutional CSR practices. The p-value for social desirability (p = 0.924) indicates that the respondents did not engage in impression management when answering the questions.

Interestingly, transactional leadership (Beta = 0.241) has a positive influence on the organisation's engagement in intuitional CSR practices; whereas, transformational leadership did not (Beta = 0.107, p = 0.207). Hence, hypothesis H1 was not supported at p < 0.05 level, but hypothesis H2 was. This result contradicts the findings

of some previous studies (e.g., Luu, 2012; Egri & Herman, 2000; Waldman *et al.*, 2006; Tongkachok & Chaikeaw, 2012; Shahin & Zairi, 2007).

Based on the data given in the same table, the p-value of the first dimension of PRESOR (i.e., social responsibility and profitability) is 0.488, indicating that "social responsibility and profitability" is not a significant predictor for institutional CSR practices. It is also clear from the data that only PRESOR (long-term gains) (Beta = 0.226, p = 0.029) and PRESOR (short-term gains) (Beta = 0.213, p = 0.031) significantly affected institutional CSR practices. Hence, hypothesis H3 was partially supported at p < 0.05 level.

Table 4 presents a summary of the study's statistical results. Of the three hypotheses, H1 is not supported, but H2 is supported, while H3 is partially supported since factor 1 is not supported.

TABLE 4 Summary of the Results

	Hypotheses	Beta Value (p-value)	Hypothesis Supported (Yes/ No)
H1:	Transformational leadership would have a positive significant relationship on institutional CSR practices.	0.107 (0.207)	No
H2: There is a significant relationship between transactional leadership and the implementation of institutional CSR practices.		0.241 (0.011)	Yes
H3:	There is a positive relationship between perceived role of ethics and social responsibility (PRESOR) and institutional CSR practices.		
	Factor 1: Social responsibility and profitability	0.058 (0.488)	No
	Factor 2: Long-term gains	0.226 (0.029)	Yes
	Factor 3: Short-term gains	0.213 (0.031)	Yes

DISCUSSION AND IMPLICATIONS OF THE RESEARCH

Managers' perceived ethics and social responsibility is important to the long-term and short-term gains of any organisation. The results of the study showed PRESOR (short-term gains) as a significant predictor of institutional CSR practices. In many studies (e.g., Shafer & Simmons, 2008; Godos-Diez et al., 2011; Singhapakdi et al., 1996), "short-term gains" refer to the stockholders' view. The managers in this study might view that the implementation of CSR practices leads to short-term gains for their firms as it keeps the stockholders happy. It also seems to be very encouraging that the managers in this study perceived ethics and social responsibility as being important to the firm's long-term gains and success, and the overall effectiveness of the firm and employee morale. However, while the results seem to suggest that the managers in this study perceived that ethics and social responsibility play an important role in determining their organisation's long-term and short-term gains, they did not think that ethics and social responsibility were the only important factors in determining their firm's profitability and survival (as indicated by the non-significant results of the PRESOR [social responsibility and profitability] dimension).

Based on the results obtained, one way to encourage Malaysian firms to implement CSR practices is to emphasise the longterm (i.e., the long-term effectiveness and success of a firm with increased employee morale) and the short-term gains (i.e., increasing stockholders' satisfaction over the short-term). Such information can be used by the Malaysian Association of Certified Public Accountants (MACPA), the Malaysian Institute of Accountants (MIA), and the Association of Certified Chartered Accounts (ACCA) in Malaysia to encourage their members to engage in CSR practices. These three institutions have played important roles in promoting **CSR** among Malaysian firms organising the annual National Corporate Social Reporting Awards (NACRA) and the Malaysia Sustainability Reporting Awards (MaSRA) for the last decade. However, more can be done to increase the level of CSR practices among firms in Malaysia. One such way would be for these institutions to explain the short-term and long-term benefits of CSR to their members.

This study also serves as empirical evidence to support the positive relationship between transactional leadership institutional CSR practices. As opposed to many previous studies, this study shows that transactional leadership plays an important role in promoting institutional CSR practices in the Malaysian context. This study contributes to the limited study in measuring and supporting the influence of transactional leadership towards CSR practices (Szekely & Knirsch, 2005; Groves & LaRocca, 2011). Although previous studies such as Luu (2012), Waldman et al. (2006), Egri and Herman (2000), and Tongkachok and Chaikeaw (2012) have shown that transformational leadership has

a significant influence on CSR; the results of this study seem to imply that in order to encourage Malaysian firms to implement CSR practices, managers would need to engage in transactional leadership which emphasises the use of rewards, rules and regulations. Szekely and Knirsch (2005) mentioned that transactional leadership relates to CSR through a 'system of incentives'; where leaders secure the commitment of their firm's management and followers by developing a system of incentives to reward their leaders and followers, at all levels, who develop and push forward for the adoption of sustainability practices. In Malaysia, the relationship between transactional leadership and institutional CSR can be dependent on the degree of transactional leaders utilising a system of incentives; or in other words, to use rewards in promoting institutional CSR practices. Therefore, to encourage firms to engage in CSR practices, managers should design rewards and incentives that are CSR related. For example, salary increments that are based on an individual's participation in CSR performance appraisal activities and measurements that have items tied to CSRbased activities. This supports Aronson's (2001) view that transactional leaders are effective in organisations that are structured around impersonal rules connected to well-delineated tasks and goal setting, and where rewards are dependent upon specific results.

According to Carroll (1979), transactional leadership is a form of leader-member exchange that tends to relate to economic CSR and legal CSR, which requires the organisation and the organisation's members to maximise profitability, as well as observe legal framework. Because transactional leaders tend to focus on the profitability of the organisation, and at the same time, comply with legal requirement (Bass & Avolio, 2000), it would probably be true to say that many Malaysian firms also engage in CSR practices, probably to comply with legal requirements set by various government agencies. In the Malaysian context, Vision 2020 targets Malaysia as a fully developed country with an emphasis on environmental sustainability. In addition, with the implementation and reporting of CSR activities by listed companies in order to comply with the rules and regulations of the Bursa Malaysia Listing Requirement (BMLR), as well as the Malaysian Code on Corporate Governance 2012 (Securities Commission Malaysia, 2012), organisation leaders need to report CSR practices in their annual reports. In this study, the CSR practices include both technical CSR (e.g., enhancements of product quality and safety) and institutional CSR (e.g., community services, proper waste management, and donations). In order to comply with BMLR and MCCG, transactional leaders will need to be committed and follow rules and regulations of BMLR and MCCG in order to ensure compliance and work towards achieving the goals by articulating explicit agreements, by giving rewards and incentives to the organisational members

for their CSR pursuit. In addition, since transactional leaders provide constructive feedback to keep their members on track throughout the execution of institutional CSR practices, by closely monitoring and tracking errors to avoid mistakes (Bass & Avolio, 2000), the criteria used in awards such as the Prime Minister's CSR Award, and the NACRA and MaSRA awards can serve as guidelines to provide feedback to employees and top management regarding their firm's CSR performance and to use the winners of these awards as benchmarks to improve the firm's CSR engagement.

CONCLUSION

In an organisation, managers are largely responsible for CSR practices. This study provides several insights to managers on mapping managerial strategies on how transactional leadership style can further enhance the institutional CSR practices of an organisation. In order to increase the CSR practices of an organisation, transactional leaders should determine and maximise mutual interests between stakeholders and their organisation by making sure that the expected goals are achieved. This study found that transactional leadership style is suited to implementing and deriving business benefits from socially responsible practices.

Furthermore, institutional CSR activities are influenced by long-term and short-term gains; meaning that managers should emphasise how CSR can improve overall organisational effectiveness and employee morale; for instance,

by celebrating the accomplishment of objectives achieved, such as conducting community services like environmental projects to the community. In addition, in terms of short-term gains; managers should emphasise the stockholders' satisfaction in encouraging the organisations' engagement in institutional CSR.

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Linking Servicescape, Tourist Satisfaction and Overall Tour Guiding Experience: The Case of Taman Negara National Park, Malaysia

Tan, S. E.1, Aziz, Y.A.1*, Khairil, W.A.1 and Zaiton, S.2

¹Department of Management and Marketing, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor

ABSTRACT

This study has two key objectives. The first objective is to determine the characteristics of servicescape, while the second is to investigate the impact of servicescape on tourist satisfaction and the overall tour guiding experience. The linkages are attempted on a sample of 385 local and foreign visitors to Taman Negara National Park (TNNP) through the application of exploratory factor analysis and multiple regression. The experimental results show that: (a) there are five characteristics of servicescape in the TNNP, and (b) servicescape has a positive impact on tourist satisfaction and the overall tour guiding experience. The theoretical and managerial consequences of the findings of the study are esented and recommendations have been made for researches in the future.

Keywords: Servicescape, Tour Guide, Satisfaction, Experience, Malaysia.

INTRODUCTION

The service environment is a vital feature that moulds customer experience and

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E-mail addresses: rachel.singee@gmail.com (Tan, S. E.) yuhanis@upm.edu.my (Aziz, Y.A.) khairil@upm.edu.my (Khairil, W.A.) zaisa@upm.edu.my (Zaiton, S.)

* Corresponding author

affects customer satisfaction (Ezeh & Harris, 2007). This important function of the service environment was identified in the Seventies by Kotler (1973), and the term 'servicescape' was later coined in the nineties by Bitner (1992). Namasivayam and Mattila (2007) indicated that the aim of servicescape manipulation is to draw out feelings of contentment that create satisfaction in customers. This is an important aim within the context of

²Department of Recreation and Ecotourism, Faculty of Forestry, Universiti Putra Malaysia, 43400 Serdang, Selangor

tourism because customers spend a lot of time in the neighbourhood or area (Wakefield & Blodgett, 1996). Tourist satisfaction is particularly crucial for those involved in the tourism sector if they hope to survive the competition in a very challenging market (Meng *et al.*, 2008).

According to previous studies into services management and marketing, customer satisfaction is the result of how a customer perceives the value received (Hallowell, 1996); perceived quality and perceived value are regarded as being among the top ranking factors that determine customer satisfaction as a whole (Fornell et al., 1996). In the context of the service environment, particularly in tourism, the perceived quality of servicescape may play a key role in moulding a tourist's experience, which ultimately determines the tourist's satisfaction (Wakefield & Blodgett, 1995). A review of the available literature has revealed that numerous research has been conducted in an effort to understand service-oriented concepts (e.g., quality, value, and satisfaction) in the context of tourism (Hutchinson et al., 2009). However, the concepts and theories on consumer behaviours such as expectancydisconfirmation theory, value creation process and value outcomes need to be enhanced by the introduction of new variables and/or a modified structure (Gummerus, 2013; Oh et al., 2002; Oh & Parks, 1997). As such, it is of crucial importance that the effects of servicescape and customer satisfaction, as well as other service-oriented values such as guiding service and tour guiding experience be investigated to ensure that a consolidated service orientation is able to provide a complete service value to the customer.

According to Kwortnik (2008), research on servicescape has mainly been in the retail industry but seldom in the tourism industry. This is also the opinion of Namasivayam and Mattila (2007). The research on servicescape has helped managers to improve on features that were found to be lacking (Ezeh & Harris, 2007). Wakefield and Blodgett (1996) emphasised that the tourism industry depends heavily on servicescape to evoke the level of arousal or excitement that customers desire to experience. Thus, it is necessary to plan and manage the design of a servicescape properly so as to ensure that tourists have a positive experience. A poor servicescape can negatively affect the disposition of a tourist, which in turn will have an impact on tourist satisfaction, and in the end, the service staff will have to work harder to boost the tourist's mood (Namasivayam & Mattila, 2007).

In tourism, the main benefit that the tourist seeks is a unique experience, while the functional benefits (e.g., food, accommodation, goods) are secondary (Kwortnik, 2008). Thus, it appears that the design of a service environment can determine the kind of experience that the tourists have. Wakefield and Blodgett (1995) discovered experimentally that the quality of servicescape, which

determines the enjoyment derived from watching sports matches, influences a customer's decision to continue visiting a stadium. They learned that a stadium needs to take into account crowding, space and aesthetic variables that have effects on the satisfaction of spectators with regard to the servicescape because these variables influence their enjoyment of the game (Wakefield & Blodgett, 1995). A study by Kwortnik (2008) proved that servicescape can be used in a cruise to determine tourist emotions, experience and behaviour. In addition, the importance of the characteristics and aspects of servicescape obviously differ for each service because of the different target audiences (Ezeh & Harris, 2007). This highlights the need to identify the characteristics in national parks, which are becoming more popular among tourists that have yet to be examined on a wide scale. Moreover, Namasivayam and Mattila (2007) also regretted the fact that there is very little information available on the relationship between servicescape and service encounter satisfaction. Therefore, this study aims to bridge that gap by investigating the impacts of servicescape on tourist satisfaction and the tour guiding experience as a whole.

The Taman Negara National Park (TNNP) is popular with tourists because of its tropical rainforest, which happens to be one of the oldest rainforests in the world. Tourists are generally attracted by the natural scenery and wildlife available in national parks (Okello &

Yerian, 2009). The servicescape is a vital element required by tour guides if they are to provide interpretation services (Yamada, 2011). An appropriate and properly designed servicescape is highly significant and essential for a guided tour experience. This is supported by earlier studies within the context of tour guiding (e.g., Geva & Goldman, 1991; Black et al., 2001; Ruigi & Pritchard, 2009), which confirms that the guiding service can only take place when there is a destination to explain to tourists. More studies must be carried in view of the importance of how visitors perceive TNNP. The likely prospects of this industry should not be overlooked because TNNP is a popular tourist destination and it is the first national park to be set up in Malaysia. Therefore, this study suggests that servicescape is an important factor in determining tourists' satisfaction with tour guiding experience as a whole in TNNP.

Chui et al. (2010) examined the characteristics of tourists' experiences and servicescape in TNNP. The study classified the activities selected according different tourists' features assessed their satisfaction with regard to the servicescape of TNNP. Although their study focused on the aspects that were assessed, it failed to mention the characteristics that were included in the assessment. In addition, the study excluded the flora and fauna from its assessment of the servicescape, although this is the main attraction of the park. Thus, this study examined the elements that should be included when assessing tourist perception concerning the quality of the servicescape of TNNP. By gaining knowledge about the characteristics of servicescape, the management is able to focus on those issues that influence tourists' perception of the park. Tourists' perception is moulded by the service they encounter, ultimately tourists' perception and influences their satisfaction (Chi & Qu, 2008). Therefore, this study is aimed at examining two key objectives, namely, examine the servicescape characteristics at the TNNP, and to explore the relationship between servicescape, tourist satisfaction and the overall tour guiding experience. To be more precise, this study examined: (a) the relationship between servicescape and tourist satisfaction, (b) the relationship servicescape and between tourist satisfaction with tour guiding services, the relationship between servicescape and the overall tour guiding experience.

This paper is arranged into five sections. The next section gives a review of past literature on servicescape, tour guiding and tourist satisfaction. This is followed by a description of the methodology, measures and data analysis employed in this study. The next section presents a discussion of the results and findings. The last section is the conclusion, which is comprised of the theoretical and practical implications, and recommendations for future research.

LITERATURE REVIEW

Servicescape

Servicescape refers to the manipulation of the service environment by service operators to induce customer satisfaction (Bitner, 1992). Rosenbaum and Massiah (2011) believe that Bitner (1992) came up with servicescape aspects that have been among the most extensively applied by researchers. Bitner (1992) emphasised that differences exist in each industry or even between the services inside the same industry because of the various target markets and therefore, the attractions of each servicescape also vary. Thus, it is suggested that researchers have to make suitable changes to those aspects that are considered as appropriate for the industry or services being assessed. However, many researchers regard the aspects developed by Bitner (1992) as the key aspects that can usually be applied to many service settings (Rosenbaum & Massiah, 2011).

The classification of the servicescape characteristics aspects and must incorporate both tangible and intangible components, which are necessary to obtain a satisfactory experience from the services provided (Hoffman & Turley, 2002). The aspects identified for this study are listed in Table 1. Bitner (1992) proposed three aspects of servicescape that are usually applicable across a variety of fields. First, the ambient aspect is comprised of mostly intangible components which are, however, noted in our subconscious; for instance, the playing of music in a café to put customers in a more relaxed mood. Second, the space and function aspect is there to stimulate us visually. For instance, the tables in a restaurant are meticulously arranged so as to enable customers to enjoy some measures of privacy while having their meal. Third, the signs, symbols and artefacts aspect concerns with references or signs provided to explain the functions of or directions to particular sites (Rosenbaum & Massiah, 2011). For instance, a sign that gives the history of a building, a sign that points the direction to the meeting room, or a board listing out the actions that are permitted and those that are prohibited at the site.

Other than the above aspects, this study discovered that another aspect that is highly appreciated in a national park setting

is cleanliness (Chui et al., 2010). This aspect was considered by Wakefield and Blodgett (1994) when they investigated the servicescape of stadiums. The cleanliness of the facilities and surroundings at the park can be easily assessed by visitors and this has an influence on the tourist's perception and satisfaction. In addition, this study also included the wildlife aspect. It has been established that the flora and fauna in national parks are significant attractions that have an effect on tourist satisfaction (Okello & Yerian, 2009; Chui et al., 2010). Plants are also included in the assessment of the aspect because distinctive plants in the park are broadly mentioned in the park leaflets.

TABLE 1 Aspects of Servicescape

References	Servicescape Aspects	Example of Components
Bitner (1992)	Ambience	weather, temperature, air quality, noise, music, odour
	Space and function	layout, equipment, furnishings
	Signs, symbols and artefacts	signage, personal artefacts, style of décor
Wakefield and Blodgett (1996)	Facility cleanliness	clean setting and environment, clean carpets and floors
	Flora and fauna	wildlife, plants

Tour Guides

Tour guides are especially important in national parks because they ensure the safety of tourists while jungle trekking (Yamada, 2011). Tour guides can simultaneously provide a meaningful explanation of the surroundings such as on the beliefs and practices of those living in the jungle, and teach the tourists concerning the plants and animals found there (Randall & Rollins,

2009). Ap and Wong (2001) hypothesised that tour guides have innumerable tasks, which include explaining strange sights, settling problems, ensuring the safety of tourists and building interpersonal ties within a tour group. Other attributes of tour guides that have been determined by research are that they need to be responsible, alert, well-informed and friendly (e.g., Zhang & Chow, 2004; Black

& Weiler, 2005; Yamada, 2011). All these characteristics are factors that contribute to tourists' satisfaction with their tour guides.

Zhang and Chow (2004) mentioned that tour guides are able to provide either a satisfactory or unsatisfactory tour experience, and they also recognised that satisfied tourists eventually attract more tourists but that dissatisfied tourists would make negative comments that could drive tourists away from these destinations. Studies have confirmed that tour guides have positive impacts on tourist satisfaction with guiding experience (Zhang & Chow, 2004; Black & Weiler, 2005; Peake et al., 2009; Huang et al., 2010; Yamada, 2011). Other than the role of tour guides in influencing tourist satisfaction, Bowie and Chang (2005) stated that other variables, namely customer expectation, attitude and behaviour also influenced tourists' satisfaction with regard to the guiding package. What is remarkable is that very few researchers have mentioned the role servicescape plays in influencing tourists' satisfaction with overall tour guiding experience.

Overend (2012) proposed that the design of tourist sites is vital to the creation of a successful tour experience. Tour guides need to work together with the site management to provide a decent tourist experience and consequently a positive tourists' satisfaction. While many studies have been conducted to investigate the impacts of the performance of tour guides on tourists' satisfaction, very few studies have been aimed at assessing the

influence of servicescape on tourists' satisfaction. Furthermore, Yamada (2011) suggested that training should be provided for tour guides to enhance their knowledge about a destination, and this proposal clearly indicates how important a tourist destination is to tour guiding.

Tourist Satisfaction

Tourist satisfaction is defined as the contentment that comes from the pleasure of experiencing a product or service (Zeithaml & Bitner, 2003). Ekinci and Sirakaya (2004) explained that tourist satisfaction is measured by customers according to their experience and expectation of a service. Satisfaction can be aroused by behaviour, emotion and equity (Bowen & Clarke, 2002). Research on customers' satisfaction is essential for service providers because satisfied customers are potentially loyal customers as they will continue patronising the same service operators, or they are great marketing tools for publicising the service by word of mouth (Chi & Qu, 2008). In addition, studies have been carried out to measure tourists' satisfaction with tour packages in order to examine the factors that influence tourists' satisfaction in guided package tours (Bowie & Chang, 2005); to ascertain and compare the satisfaction experienced by tourists from guided and non-guided tours (Poudel & Nyaupane, 2013); and to explore the connection between tour guide performance and tourist satisfaction (Huang et al., 2010), and so on. Despite the various factors that have been studied, only

a few research has examined servicescape as a variable for tourists' satisfaction with the services of tour guides.

The term 'overall satisfaction' is used to assess tourist satisfaction with regard to other services or factors in relation to experiencing a product or service. For instance, McDowall (2010) carried out a study on tourists' satisfaction in terms of tourist visits to Bangkok. They discovered that a number of components within the industry (e.g., hygiene, sightseeing, shopping, price) contribute to the enhancement of tourist satisfaction. There are diverse subsectors in tourism that influence tourist satisfaction with a service or destination. Chi and Ou (2008) discovered that tour operators, transportation and food have an impact on the overall satisfaction with a tour package. This study focused on the servicescape of a national park and its impact on tourist satisfaction with regard to the servicescape, the performance of the tour guide and the overall tour guiding experience.

METHODOLOGY

Sample and Procedure

For this experimental research, the data were collected by means of self-administered questionnaires from visitors to TNNP. TNNP, which is located in Kuala Tahan, Pahang, is one of the most ancient tropical rainforests in the world (WWF Malaysia, 2003). It is a massive park covering an area of 4,343 square kilometres across Pahang, Kelantan and Terengganu. It can be reached by various

modes of transportation, and the park provides accommodation, facilities and amenities for tourists. The targeted site for the study was at the main entrance to TNNP in Kuala Tahan, Pahang, which, according to the statistics on visitors, receives the most number of visitors compared to all the other entrances. In order to obtain a balanced opinion, the targeted population for this study were both local and foreign tourists who had experienced the services of tour guides in TNNP.

Measures

This study made use of multiple item scales obtained from various established sources in the literature. The survey questionnaire was made up of two sections as follows: questions to assess the concepts of servicescape, tourist satisfaction, and the overall tour guiding experience; and the questions that were formulated to elicit information on frequency of tourist visits and demographics. Servicescape was measured in terms of the five aspects stated in the literature review, namely, ambience, space and function, sign, symbol and artefacts (Bitner, 1992), cleanliness (Wakefield & Blodgett, 1994), and flora and fauna. Then, a total of 21 characteristics were categorised according to the aspects concerned. Ten attributes were modified from earlier studies on national parks (Lee & Chen, 2005), tour guide interpretations (Chen et al., 2006), and hot spring recreation areas (Lee, 2010). The rest of the attributes were constructed from the publicity materials and the feedback received from the officers of TNNP. The American Consumer Satisfaction Index (ACSI), which was developed by Fornell et al. (1996), was used to measure tourists' satisfaction. Huang et al. (2010) also employed this model in their study. Tourists' satisfaction with servicescape, tourists' satisfaction with tour guide services, and tourists' satisfaction with the overall tour guiding experience were measured specifically by using 3 items for each of the concepts developed by Fornell et al. (1996) and Huang et al. (2010). However, the items were adapted somewhat to fit the context of the research.

Since it was estimated that there were 41,000 guided tour tourists in TNNP, therefore, according to the calculation of sample size by Krejcie and Morgan (1970), a sample population of 381 people was required for this study. The purposive sampling method was used for this study because only tourists who had employed the services of tour guides were deemed to be appropriate as the respondents. Hence, with the assistance of tour guides and the employees of TNNP, 500 questionnaires were given out to tourists who had experienced the services of tour guides. The data were analysed by using the SPSS, whereby the exploratory factor analysis (EFA) with VARIMAX rotation was used to confirm the servicescape aspects. Then, the research questions with regard to servicescape relations were answered by means of linear regression analysis.

Reliability

A pilot test was carried out at the Kuala Tahan entrance to the national park to ensure the reliability of the measurement and to determine the internal consistency. Forty completed questionnaires were returned. The reliability of the measurements was ascertained by means of a reliability analysis using SPSS. The results indicated that all the concepts were above the proposed value, i.e., > 0.08. Cronbach's alpha values for the factors were high, while the servicescape value was 0.91, satisfaction with guiding service value was 0.95, satisfaction with servicescape value was 0.88, and satisfaction with the overall tour guiding experience value was 0.96.

Data Analysis

A descriptive analysis was performed using SPPS analysis. The reliability of the internal consistency was evaluated according to the reliability analysis using SPSS. Following that, an exploratory factor analysis was performed to ascertain the characteristics of servicescape. Finally, multiple regression was carried out to explore the connections between the concepts being studied.

RESULTS

A total of 385 tourists or roughly 77% of the targeted population took part in this study. According to the results of the descriptive analysis, 54% of them were foreign tourists, while 46% were local tourists, indicating that more foreign tourists, who employed the services of tour guides, were attracted to the park. Almost 57% of the tourists are males and 43% are females, implying that male tourists are more interested in visiting the park. Meanwhile, 40% of the respondents aged between 30 to 49 years, 42% aged below 29 years, and 19% aged above 50 years at the time of the study.

The park attracted more single tourists because according to the data, 66% of the tourists were not married. As mentioned earlier, the reliability coefficients of the measurements for the variables were ascertained by means of Cronbach's alpha calculation in SPSS (DeVellis, 2003). The reliabilities and loadings of the servicescape are given in Table 2.

TABLE 2 Exploratory Factor Analysis of the Servicescape Items (n=385)

Factor/ Item	M^a	SD	Loadings
Sign, symbol and artefacts			
(Cronbach's alpha = 0.95)			
The park has distinctive interpretative signboards.	3.80	0.83	0.94
The park has adequate warning signals.	3.83	0.86	0.92
The park has adequate interpretative signboards.	3.79	0.89	0.91
The park has easily identifiable interpretative signboards.	3.90	0.77	0.87
Cleanliness			
(Cronbach's alpha = 0.86)			
The river in the park is clean.	4.25	0.71	0.84
The facilities in the park are clean.	4.24	0.64	0.81
There are sufficient trash cans in the park.	3.94	1.00	0.81
The trails in the park are clean.	4.23	0.60	0.78
The toilets in the park are clean.	3.97	0.81	0.72
Flora and fauna			
(Cronbach's alpha = 0.87)			
The park has a range of wildlife.	4.48	0.52	0.85
The park has a variety of birds.	4.30	0.51	0.79
The park has a variety of plants.	4.42	0.56	0.79
The park has a variety of insects.	4.45	0.50	0.78
Wildlife can be viewed easily in the park.	4.32	0.50	0.62
Space and function			
(Cronbach's alpha = 0.82)			
The park has scenic trails.	4.21	0.78	0.78
The park has adequate facilities.	4.03	0.95	0.72
The park has adequate trail signs.	3.92	1.03	0.68
The park has adequate recreation facilities. ^b	4.08	0.77	0.46
Ambience			
(Cronbach's alpha = 0.84)			
The park has a pleasant climate.	4.30	0.49	0.85
The park has a well-maintained natural landscape.	4.43	0.49	0.84
The park has good air quality.	4.46	0.49	0.69
Total Cronbach's alpha = 0.88	4.40	0.49	0.09

^aScale: 5 = Strongly Agree, 1 = Strongly Disagree

^bItem removed.

From the table, it can be seen that the aspects of servicescape carried the anticipated alpha values of more than 0.8, which are considered to be good alpha values (George & Mallery, 2003). The characteristics that were distributed appropriately in the various aspects were verified by EFA as being reliable. This also confirmed that the flora and fauna aspect as a critical factor in the TNNP servicescape. One item, (the park has adequate recreational facilities), was excluded from the space and function aspect because its factor loading (0.461) was different from the factor loading of between 0.60 and 0.80 of the other characteristics. Due to variations in the factor loading and the fact that the characteristic could be considered to be the same as the park has adequate facilities, the authors decided to remove the item. The rest of the 20 characteristics in the servicescape revealed that the Cronbach's alpha was 0.89, which showed good reliability and so did all the aspects.

Each aspect was arranged according to the loading of its items to denote the importance of the aspect (Brown, 2009).

TABLE 3 Reliability analysis of Tourists' Satisfaction (n=385)

The priority factor in the list was the *sign*, symbol and artefacts aspect, which could be an indication that the tourists would value a servicescape with good signages for directions and information concerning the park. However, the mean (below 4 = Agree) of the items in this aspect was the lowest among all the aspects, indicating that the tourists did not have favourable opinions of the park with regard to this factor. Then, cleanliness, flora and fauna, and space and function were listed according to their importance in the servicescape of the park. Respondents had average views regarding following the items: 'There are sufficient trash cans in the park', 'The toilets in the park are clean' and 'The park has adequate trail signs'. This shows that the park authorities will need to take steps to improve the cleanliness of the park and the direction signs in the park. Ambience was the least important factor; this perhaps indicates that the tourists are not very concerned about the climate, natural landscape and air quality given the fact that they are in natural surroundings.

Variables	Number of Items	Cronbach's Alpha	M	SD
Satisfaction with Guide Services	3	0.72	4.27	1.31
Satisfaction with Servicescape	3	0.78	4.14	1.51
Satisfaction with the Overall Tour Guiding Experience	3	0.76	4.25	1.23

Table 3 gives the results of the reliability analysis of the measurements on tourists' satisfaction. The measurement

used for the three variables was considered to be reliable, where the alpha value for each variable was above 0.7. Thus, the results shown in Tables 2 and 3 prove that the internal consistency of each concept is supported. The mean of each satisfaction was also found to be more than 4, indicating that the tourists were pleased with their tour guides, the servicescape and their overall tour guiding experience.

TABLE 4 Linear regression analysis of servicescape as the independent variable (n = 385)

	Satisfaction with servicescape	Satisfaction with guiding service	Satisfaction with overall tour guiding experience
Unstandardized coefficients:			
beta			
(Constant)	3.186	7.15	6.445
Servicescape	0.106	0.06	0.072
Unstandardized coefficients:			
std. error			
(Constant)			
Servicescape	0.615	0.606	0.542
Standardized coefficients:	0.007	0.007	0.006
Servicescape			
\overline{F}	0.610	0.432	0.513
p	227.218	88.037	137.038
R^2	0.000	0.000	0.000
	0.372	0.187	0.264

Table 4 presents the findings on the impacts of servicescape on the individual's satisfaction. According to the table, servicescape is an important variable in each of the satisfactions (p < 0.001). The relationship between servicescape and satisfaction with servicescape was found to be positive ($\beta = 0.610$), whereby a higher positive perception of the servicescape resulted in a higher satisfaction with servicescape ($R^2 = 0.372$). As predicted, this is attributed to the direct relationship between the independent and dependent variables. In addition, the servicescape also had a positive impact on satisfaction with the guide services ($\beta = 0.432$) and satisfaction with the overall tour guiding experience ($\beta = 0.513$). It was found to

have a smaller impact on satisfaction with guide services ($R^2 = 0.187$) in contrast to satisfaction with the overall tour guiding experience ($R^2 = 0.264$). Nevertheless, servicescape is a significantly important determinant of tourist satisfaction with guide services. It also plays an important role in moulding and determining tourist satisfaction with regard to the overall tour guiding experience.

CONCLUSION AND IMPLICATIONS

This study experimentally examined the relationship between servicescape and tourists' satisfaction with the overall tour guiding experience at TNNP in Malaysia. Based on the findings, there are five factors or characteristics of the servicescape

quality in TNNP: signs, symbols and artefacts, cleanliness, flora and fauna, space and functions, and ambience. The results have proven that the Flora and Fauna characteristic is definitely an important aspect that demands special attention from the management of TNNP. As such, the verification of the new aspect, flora and fauna, and the positive feedback from the tourists with regard to the characteristics indicate that most tourists focus on this factor and that presently the park is able to meet their expectations. As such, it is up to the authorities to ensure that they are able to maintain the park and protect it from illegal deforestation and hunting because the flora and fauna are vital assets and attractions in the tourism sector. On the other hand, the park authorities need to take measures to improve the management with regard to the cleanliness and put up more signages.

The findings of this study strongly support the concept that servicescape has a direct influence on tourists' satisfaction. The experimental results also verify that servicescape is a factor that affects tourist satisfaction with servicescape, guide services and the overall tour guiding experience, indicating that the impact of servicescape on tourist satisfaction with servicescape is a further acknowledgement of the importance of servicescape in the context of tourism destinations.

The results with regard to the positive relationship between servicescape and tourists' satisfaction with guide services

and the overall the tour guiding experience support the proposal that the servicescape is a crucial factor that influences tourists' satisfaction during the exchange of services (Namasivayam & Mattila, 2007). As mentioned by Reimer and Kuehn (2005), providers of hedonic services should pay more attention to the quality of the servicescape. Tourists generally have a positive opinion of the park except for the issues that are related to the signages in the park and cleanliness. Similarly, Chui et al. (2010) reported poor levels of satisfaction with regard to the hygiene and signages in TNNP. As such, the park authorities must correct these matters and take steps to improve the perception of tourists concerning the park in the future.

Furthermore, suggested as Reimer and Kuehn (2005), servicescape is also an indication of satisfaction with other services. The findings can increase the awareness of tour guides and park authorities on the importance of servicescape with regard to tourists' experience. Although guided tours and other services in relation to a tour guided experience are factors that have impacts satisfaction with guide on tourists' services and the overall tour guiding experience (Huang et al., 2010), the findings prove that servicescape is also a factor that determines satisfaction. Tour guides should not ignore the quality of servicescape when providing their services because tourists may measure the quality of the tour guides according to the conditions in the park. Therefore, tour guides should ensure that the conditions at a particular destination are positive, so that tourists are able to have a pleasurable travel experience as well. Obviously, a pleasurable environment is essential in any travel experience because the quality of the surroundings could ultimately impact tourists' overall experience (Kwortnik, 2008). Finally, the park authorities could use the findings to enhance the quality of their servicescape.

This study had certain constraints; one of which was that the amount of time spent by the respondents with the tour guides in the park was not determined. There might be discrepancies in the satisfactions caused by the length of time spent at the park. Moreover, although the study showed that flora and fauna are important components of the servicescape at the national park, the study was only carried out in one park. Other factors could also possibly influence the quality of the servicescape at other national parks. Thus, it is recommended that studies be carried out in the future to compare the variations in tourists' satisfaction with regard to the different periods of time spent by tourists in the park. Further research should also be carried out at various national parks, such as geoparks or marine parks, in order to discover more servicescape characteristics that have effects on tourists' perception and satisfaction.

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Attributes of Successful Public Participation in Planning for Sustainable Tourism in Protected Areas: A Modified Delphi Study

Arni Abdul Gani^{1,2}, Khairil Wahidin Awang^{1*}, Abdullah Mohamad³ and Zaiton Samdin³

¹Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia ²Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia ³Faculty of Forestry, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

ABSTRACT

Tourism in protected areas has developed and is becoming desirable attractions in many parts of the world. The expanding of the industry into the fragile and sensitive areas necessitates proper planning and management to ensure balance in development and protection of the environment. Sustainable development has become the buzz word in planning. One important principle of sustainable development is to encourage true participation of the public in planning and decision making. In this study, a modified Delphi technique was introduced to determine whether an informed group of experts in protected area management could arrive at a consensus regarding the important attributes of a successful public participation. Three expert groups representing government agencies, nongovernmental agencies, and academics in Malaysia were presented with a questionnaire containing 30 attributes in two dimensions perceived as being the important dimensions in determining a successful public participation. The contributions of individuals via this tool produced group perspective not otherwise attainable. The results from the Delphi rounds confirmed a consensus of opinion between the three categories of experts with an introduction of new attributes deemed important with reference specifically to Malaysia.

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E-mail addresses:

arni@salam.uitm.edu.my (Arni Abdul Gani) khairilawang@yahoo.com (Khairil Wahidin Awang) amohd@gmail.com (Abdullah Mohamad) zaisaika@gmail.com (Zaiton Samdin)

* Corresponding author

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INTRODUCTION

Natural environments such as forests and natural parks are among the most attractive places on earth for their richness in biodiversity. These environments are important to us as they provide sustenance and foundation for social and economic development (World Bank, 2014). A lot of these natural environments have been designated as protected areas.

Protected areas are important for their roles in conserving nature's valuable flora and fauna. Many of these protected areas have also started to welcome visitors and eventually promote tourism. People enjoy the visits to protected areas in many ways including wildlife watching, hiking, and walking on natural trails. Gunn (1979) indicates that engaging in outdoor recreation in natural environment has become major travel purposes for leisure travel.

It is important to note that tourism will be one of the largest industries in the 21st century (Dowling, 2003). Thus, giving great attention in planning and management of natural environments such as these protected areas is now becoming increasingly important. The rapid growth of international travel experienced today has definitely put pressures on the management in coming up with better planning and management actions to meet tourists' expectations and demands.

Increased visitors number would increase requirement for new recreational activities and this necessitates the development of different kinds of services and facilities in the park (Puhakka, 2008). These definitely will require better infrastructure such as trails, bridge, and lodges. In addition, there will also be an

increase in demands for well-managed recreational places and educational programmes. It is argued by McCool (2009) that the increased demand would raise the stakes for decisions on tourism planning in protected areas. Adopting the principle of sustainable development in tourism planning is now the goal for many managements and governments around the world.

SUSTAINABLE TOURISM AND PUBLIC PARTICIPATION

The concept of sustainable development involves the idea that people must live within the capacity of their environment to support them, and this concept is important especially in the tourism industry as the viability of the industry depends upon the maintenance of the environment qualities (Piagram, 2000). Preserving the natural environment has become an international effort, thus the same effort is needed for tourism. It is important for tourism to be developed in a sustainable way, especially after the United Nations Conference in Rio de Janeiro in 1992. In the conference, tourism is identified as one of the five main industries in need of achieving a sustainable development (Pryce, 2001; Theobald, 1998). The Earth Summit in Rio De Janeiro in 1992 marked a history when Agenda 21 was adopted by more than 178 governments. This has led to the commitment of these governments to make travel and tourism a model industry for environmental improvement (Chiesura, 2004; Piagram, 2000).

Sustainable tourism can be regarded as the gentle form of tourism, where it is organised and conducted in a small scale and with sensitivity to the nature (Moisey & McCool, 2008). The concept takes utmost important on tourism impacts towards culture and the environment, as well as pays high attention to involvement of the local community, especially in decision making process. As the concept park protection has undergone significant changes and evolution, the issue of sustainable tourism development needs to be addressed accordingly. Most of the times, in many literatures, sustainable development models often include stakeholder collaboration and in particular, the involvement of local community in the early stages of the development process.

This interest in the collaboration theory could be traced back to 1960s in the work of Arnstein (1969), which looked at typology of citizen participation in an urban planning initiative. Other work includes that of Hunter (1997) that describes typology of sustainable development that ranges from strong resource exploitation to strong resource preservation. He mentioned that the concept of sustainable development should be shaped to fit a range of worldviews and location-specific factors. One way to achieve this is through stakeholder collaboration (Jamal & Getz, 1995; Landorf, 2009) and participation.

Public participation in decision making process is important to allow all the parties involved to give ideas and contribute towards exclusive partnerships to enhance productivity, especially in forest setting (Abdullah et al., 1999) and to ensure a sustainable use of the park and forest. This is ever becoming more important for the natural environments as more parks and protected areas are now allowing public visitation. Many of these parks and protected areas are recognised as must-visit places in travel journals and websites. Thus, the issues in adopting the correct and rightful ways of sustainable practice become crucial. Improper or unplanned development can cause major damages to the environment. Therefore, it is now a major concern for the stakeholders to take up responsibility in engaging proper way to envision sustainability in their development plan.

Previous research and practices on the issues of application and practice of public participation have focused mainly on forest planning and environmental planning scenarios (Charles & Wilson, 2009; McCool & Guthrie, 2001; Shindler & Neburka, 1997; Yaffee et al., 1997). Only limited number of research has given attention to tourism perspectives, and many of them have focused on barriers to successful participation (Aref & Gill, 2009, 2010; Mariana et al., 2008; Marzuki, 2009). There is an obvious gap in investigating the attributes towards promoting successful public participation. In Malaysia, the issue of public participation in decision making has not received much attention, and the application of such practice is still at infancy stage.

Some studies conducted in a local context focussed more on barriers towards public participation. For example, a recent study by Marzuki et al. (2012) examined the shortcomings of public participation in tourism planning in Langkawi. Their study indicated that there were obvious limitations towards successful public participation practice in Malaysia. They concluded that inadequate information, ineffective approach and local people exclusion from participation process were some of the reasons for the failure of the practice. By taking this issue as a motivation, the present research aims to identify and determine the attributes towards enhancing public participation and may eventually result in a successful participation in tourism planning.

These attributes were constructed in two dimensions based on the findings from previous literatures (see McCool & Guthrie, 2001; Shindler & Neburka, 1997; Yaffee et al., 1997). The first dimension is processrelated, which addresses how collaboration is structured and conducted. It is important to recognise collaboration as an on-going process; therefore, the attributes that depict such a process are important to note. Gary (1989) suggested that collaboration is established for resolving existing problems and advancing shared visions. attributes in this dimension would indicate the critical element to ensure a successful outcome from participation leading to successful results.

The second dimension is product dimension, which refers to attributes that

influence the desired outcome of any projects or developments. This dimension is critically important as it addresses how initial plan of any development projects must meet this criterion. McCool and Guthrie (2001) argued that plan must be well-written and that the preparation of the plan should be an important goal of the whole process. It is further argued that good decisions must include careful planning and environmental analysis to ensure that the decisions will lead to success. It is important for the participants to be able to acknowledge that the development plan is not only good for them, but also for their surrounding environment and that the plan is acceptable to all relevant stakeholders.

METHODS

A three-round Delphi study was conducted to assess two types of agreement among the experts in the study. The first assessment measured the extent to which these experts rated their agreement on the importance of the attributes, and they were also encouraged to list any new attributes that they felt need to be introduced in relation to the conditions in Malaysia. The second assessment investigated the extent to which the experts collectively agreed on the importance of the attributes under consideration.

The categories of agreement were referred to as 'consensus' representing the distribution of agreement by all the experts. This distinction was made as the interest of the present research was to identify the attributes that the experts collectively

rated as important for successful public participation in tourism planning in protected areas. Prior to the actual study, the questionnaire was pre-tested before commencement of Round One among the experts in the field of tourism and forestry representing both academicians and industry experts.

First Round: The first round of the research aimed to obtain experts' rating on the attributes representing both processrelated and product dimensions of public participation. While many examples from the Delphi process traditionally begin with open-ended questionnaires (Gordon, 2003), using a structured questionnaire in the first round based on an extensive review of literature is also a common and acceptable modification of the Delphi process (Hsu & Sandford, 2007). This modification is considered as appropriate if basic information concerning the issue on target is available and usable (Kerlinger, 1973). As the issues of successful attributes for public participation in forest planning have been examined in a number of previous research (see McCool & Guthrie, 2001; Shindler & Neburka, 1997; Yaffee, et al., 1997), the same kind of modification was applied in this research.

Majority of the previous research was conducted to understand factors contributing to the success of public participation in forest planning and use, which included timber, grazing, watershed, recreational, tourism, and wildlife values. Thus, the findings of

these extensive researches served as the basic information for the present research. The attributes derived from the previous research were examined carefully, and any redundancies were eliminated and regrouped accordingly. The structured questionnaire for the Delphi study contained 27 attributes in two dimensions. The attributes were presented using fivepoint Likert scale ranging from 1=strongly disagree to 5=strongly agree. However, to allow for new attributes to emerge under study, the experts were also encouraged to identify new attributes for this research. They might also refine the existing ones that they felt relevant to the Malaysian context.

The experts were carefully selected to represent the relevant categories of experts in the field of tourism and forestry. For this purpose, the guidelines for the experts' selection as explained by Schmidt (1997) were followed, with some modifications made to suit the research conditions. The experts in this particular study refer to the people with high ranks in relevant departments in organisations identified to have interests in tourism and protected areas management. They were individuals who would have the ability and capability to affect any decisions pertaining to sustainable development and tourism especially in protected areas in Malaysia. The organisations selected for the study were identified from the analysis of published and unpublished reports and data including government and non-governmental documents, as well as from personal communication with the representative from the Department of Wildlife and National Parks Malaysia. There were 29 experts involved in this research.

The experts were divided into three categories: government agencies officers, members of non-governmental agencies and academics. In addition, these categories of experts were also chosen as they were believed to have important and valuable knowledge in the practice and approach of public participation for tourism planning in Malaysia. These experts were sourced from organisation charts available either online or from informal visits made to the offices. Individuals with high positions in related departments were selected as the potential respondents. For the academics

category, lecturers with related academic background or those who had produced academic papers within the subject scope of this research were selected as the potential respondents. The experts were then contacted either through telephone calls or e-mails. Upon contacting them, they were briefed on the objectives of the research and how their participation could contribute to the findings of the research. Once they had indicated their consent to participate in the study, a set of questionnaire was administered to them via e-mail or by hand. On average, the experts took one month to complete the questionnaire. The questionnaire was then submitted to the researcher for analysis purposes. Table 1 indicates the distribution of the experts based on the categories for the first round of the Delphi study.

TABLE 1 Distribution of the experts

Experts category	No. of experts	Percentage (%)
Government agencies officers	12	41.4
Members of nongovernmental agencies	6	20.7
Academics	11	37.6
Total	29	100

Second Round: In the second round, the same experts were contacted again with the second questionnaire containing the findings from the first round presented to them. They were requested to reassess and re-evaluate their feedbacks in the first round based on the findings presented. They were allowed to retain or change their answers based on their opinions. This round was aimed to ameliorate consensus

among the experts on the attributes under consideration. New attributes from the first round were also presented to the experts for rating. In the second round, however, the number of experts declined to 27. This was as a result from the analyses in the first round. The experts who were considered as outliers were excluded from the second round.

Third Round: The third round was administered to gain a better consensus among the experts. The third questionnaire containing the findings from the second round was presented, and again the experts were requested to re-asses their feedbacks. One of the experts wished not to pursue his participation in the third round due to personal reasons, leaving the number of experts to 26 people.

The data analyses for Delphi studies usually use mean, median, and standard deviation to summarise the first categories of agreement between the experts. Feedbacks from the experts were inscribed and categorised into themes. The

feedbacks describing similar attributes were gathered into one item. The analyses expounded the degree of importance for each attribute towards successful public participation. Kruskal-Wallis' one-way analysis of variance was performed to make comparison for the scores between the experts. Kendall's W (Kendall's coefficient of concordance) was used to assess agreement among the experts. This non-parametric statistic is regarded as the most widely recognised test of agreement for non-parametric rankings (Okoli & Pawlowski, 2004). Table 2 presents the interpretation of Kendall's W values.

TABLE 2

Interpretation of W value

W	Interpretation	Confidence in ranks
.1	Very weak agreement	None
.3	Weak agreement	Low
.5	Moderate agreement	Fair
.7	Strong agreement	High
.9	Unusually strong agreement	Very high

Source: Schmidt (1997)

Using Kendall's W, a realistic determination was performed to identify whether any consensus was achieved or the consensus increased from round 1 to subsequent rounds. Based on the guidelines by Schmidt (1997), once the W value has reached 0.7, a conclusion can be made if a satisfactory agreement has been achieved for the ranking phase to be considered complete.

RESULTS

The mean results for the first round are presented in Table 3. The results from this

round were analysed with the rating value for their agreement ranging from 4.7 for the highest to 3.8 for the lowest. The top three attributes were Clearly explained outcome, Clearly identified objectives, and Agenda not influenced by politician or interest group. The bottom three attributes were All participants share problems, Development plans are politically acceptable, and Use of facilitators during meetings. The mean score of ≥4 points indicated an agreement with the item opinion. These attributes were viewed by the experts to be significantly

important to achieve success in public participation.

In the first round, two attributes scored a 'neutral' agreement among the experts with the mean score of less than 4 points: *All participants share problems* and *Development plans are politically acceptable*. Apparently, the experts felt that sharing of problems among all the participants would not be a defining attribute for success in participation. The same finding was also obtained for ensuring

that development plans are politically acceptable. However, as these were the results from the first round, not much conclusions could be made as changes in ranking were expected in subsequent rounds. The top three attributes ranked highest in agreement indicated how the experts felt that a meeting must be properly defined to make people interested to participate. The end result of such a meeting needs to be clearly identified to keep all the participants on track of what needs to be achieved.

TABLE 3
Mean result for the first round

No.	Attribute	Mean First Round N=29 1=strongly disagree	Std. Dev.
		to 5=strongly agree	
1.	Clearly explained outcome	4.75	0.43
2.	Clearly identified objectives	4.68	0.54
3.	Agenda not influenced by politician or interest group	4.68	0.47
4.	Development plans well-implemented	4.68	0.47
5.	Leadership and dedication	4.65	0.55
6.	Sense of ownership	4.65	0.48
7.	Commitment by participant to achieve success	4.65	0.48
8.	Opportunity to learn	4.62	0.49
9.	Development plans well written	4.62	0.49
10.	Information sharing and joint fact finding	4.58	0.56
11.	Encourage communication	4.58	0.56
12.	Ensure proper concerns being heard	4.58	0.50
13.	Encourage social networking	4.58	0.50
14.	Inclusive problem solving process	4.55	0.50
15.	Ensure proper access for public	4.55	0.50
16.	Ensure inputs are reflected in document	4.55	0.50
17.	Help build relationship	4.48	0.57
18.	Ensure proper interests are represented	4.48	0.63
19.	Available current and reliable information	4.48	0.50
20.	Involved as part of responsibility	4.37	0.49
21.	Fairness to all participants	4.27	0.75
22.	Presence of management/decision maker representative	4.24	0.95
23.	Distribute materials beforehand	4.20	0.49
24.	Good interpersonal skills	4.17	0.75
25.	Use of facilitators during meetings	4.06	0.59
26.	Development plans are politically acceptable	3.96	0.56
27.	All participants share problems	3.89	0.67

The results for the second and third rounds are presented in Table 4. Results from the second round demonstrated an improvement in terms of rating value for 21 attributes. The rating values for their importance ranged between 4.92 for the highest and 3.33 for the lowest. The two top attributes in the first round persisted as the top important attributes in the second round with improvement in the rating values. This indicated that the experts gave the highest priority towards properly defined outcome and objectives to ensure a successful public participation. The third attribute was different in the results of the second round as Agenda not influenced by politician or interest group fell to number four and Fairness to all participants became the third top attributes. Five attributes however indicated a decrease between the first round and the second round. These attributes were Involved as part of responsibility, Presence of management/ decision makers rep, Distribute materials beforehand, Help build relationship and *All participants share problems.* The values for these attributes slightly decreased at

minus 0.09 to 0.5 between the first round and the second round. Moreover, in the second round, the lowest attribute was at 3.33 for *All participants share problems*. This finding explains that the experts felt that problem sharing amongst all the participants was still not a defining attribute for success. One attribute, *Development plans are politically acceptable*, remained same as in the first round.

In the first round, some of the experts suggested new attributes to be considered and introduced as attributes in process dimensions. After discussions and interpretations were performed, three attributes were added to the questionnaire in the second round. These attributes were Opportunity to be present to all, Content of report is easy to understand, and Frequent meetings and dialogue sessions. In Table 4, these new attributes are marked with **. Next, Table 5 indicates the reasons and remarks for additions of the new attributes by the experts. The table indicates that two of the attributes scored high agreement (≥4 points) among the experts, while one attribute scored a neutral agreement.

TABLE 4
Mean results for the second and third rounds

No.	Attribute	Mean Second Round N=27 1=strongly disagree to 5=strongly agree	Std. Dev.	Mean Third Round N=26 1=strongly disagree to 5=strongly agree	Std. Dev.
1.	Clearly explained outcome	4.92	0.26	4.96	0.19
2.	Fairness to all participants	4.88	0.32	4.96	0.19
3.	Clearly identified objectives	4.85	0.36	4.96	0.19
4.	Ensure proper access for public	4.85	0.36	4.92	0.27
5.	Agenda not influenced by politician or interest group	4.81	0.39	4.92	0.27

No.	Attribute	Mean Second Round N=27 1=strongly disagree to 5=strongly agree		Mean Third Round N=26 1=strongly disagree to 5=strongly agree	Std. Dev.
6.	Development plans well- implemented	4.81	0.39	4.92	0.27
7.	Opportunity to learn	4.81	0.39	4.88	0.32
8.	Encourage social networking	4.81	0.39	4.88	0.32
9.	Leadership and dedication	4.77	0.42	4.92	0.27
10.	Sense of ownership	4.77	0.42	4.88	0.32
11.	Encourage communication	4.77	0.42	4.88	0.32
12.	Inclusive problem solving process	4.77	0.42	4.88	0.32
13.	Commitment by participant to achieve success	4.74	0.44	4.84	0.36
14	Available current and reliable info	4.74	0.44	4.84	0.36
15.	Information sharing and joint fact finding	4.70	0.46	4.84	0.36
16.	Ensure proper concerns being heard	4.70	0.46	4.92	0.27
17.	Ensure inputs are reflected in document	4.70	0.46	4.80	0.40
18.	Ensure proper interests are represented	4.70	0.46	4.92	0.27
19.	Development plans are well-written	4.66	0.48	4.92	0.27
20.	Content easy to understand**	4.66	0.48	4.80	0.40
21.	Frequent meetings and dialogue sessions**	4.29	0.46	4.07	0.27
22.	Involved as part of responsibility	4.22	0.42	4.19	0.40
23.	Good interpersonal skills	4.22	0.42	4.15	0.36
24.	Use of facilitators during meetings	4.18	0.39	4.11	0.32
25.	Presence of management/decision maker representative	4.14	0.36	4.11	0.32
26.	Distribute materials beforehand	4.11	0.32	4.07	0.27
27.	Help build relationship	4.07	0.26	4.03	0.19
28.	Development plans are politically acceptable	3.96	0.19	4.07	0.27
29.	Opportunity to be present to all**	3.85	0.66	3.11	0.32
30.	All participants share problems	3.33	0.48	3.03	0.19

The results in the third round further showed an increase in the mean score for 21 attributes and a decrease in 9 attributes. The rating value increased significantly, with 4.96 as the highest mean value. The lowest mean value recorded a decrease from the previous round with 3.03. The

top three attributes from the second round showed an increase in mean, namely, Clearly explained outcome, Clearly identified objectives, and Fairness to all participants. One attribute changed from 'neutral' to 'agree' point after the third round, namely, Development plans are

politically acceptable. The attribute had a mean value of 3.96 in the previous round. The 9 attributes that showed a decrease were All participants share problems, Involved as part of responsibility, Help build relationship, Use of facilitators during meetings, Distribute materials beforehand,

Presence of management or decision maker representatives, Opportunity to be present to all, Good interpersonal skills, and Frequent meetings and dialogue sessions. Two of these attributes were the new attributes suggested in the first round by some of the experts.

TABLE 5
New attributes and remarks for addition into dimension

No.	Attribute	Reasons/remarks for addition
1.	Opportunities to be present to all	Opportunities to be present at planning meetings must be given to everyone and not limited to representatives. Everyone should have equal opportunities.
2.	Content easy to understand	The content of the reports/statements in meetings documents must be written in easy-to-understand language.
3.	Frequent meetings and dialogue sessions	Dialogue sessions must be done from time to time to allow public to express views and not specified to development purposes only.

Kendall's W coefficient of concordance tests were performed after each of the rounds in the Delphi study. There was no agreement between the expert panels in rating for the attributes in the first round. The Kendall W's value of 0.182 ($x^2=142.334$, df=27, p≤0.001) indicated no agreement. However, this was anticipated as it was only the first round, and the experts were yet to arrive at consensus in this stage given the conditions under which the attributes were ranked.

Improved consensus was expected in the second round when the experts were given the opportunity to reassess and reevaluate their score based on the results in the first round. Next, in the second round, the Kendall's W coefficient of concordance improved to 0.448 (x²=350.925, df=29, p≤0.001). The agreement improved from no agreement to weak agreement, based on

the interpretation from Schmidt (1997). As this was the second round, it was expected that there would be an improved consensus among the experts.

In the third round, results from the test further showed an improvement in terms of consensus level among the experts. The Kendall's W coefficient of concordance improved from 0.448 to $0.701 \text{ (x}^2=528.917, df=29, p \le 0.001)}$ in the third round, indicating a strong consensus among the experts. Therefore, the iterative rounds of the Delphi study were considered complete when a strong consensus was finally generated from the test. A Kruskall-Wallis, which is an extension of Mann-Whitney U Test, was also performed to determine any significant differences in the agreement scores of all the attributes for the three categories of experts, namely, government agencies officers, members of nongovernmental agencies, and academics. However, the test revealed that there were no significant differences between the three categories of experts in their agreement scores for all the attributes under these two dimensions

DISCUSSION

This study achieved its first objective to present the extent of how the experts rated their agreement on the attributes for successful public participation. The experts agreed that the 28 attributes were very important attributes for a successful public participation for tourism planning in protected areas in Malaysia. It can be concluded that both of the dimensions were important towards achieving success in public participation.

Only two attributes were found to be not defining attributes towards ensuring success in public participation. After the three rounds, consensus improved tremendously, indicating that by using this Delphi technique, it was possible to reach consensus among the experts. This improvement practically answered the second objective of the research, which was to evaluate the extent of how experts can collectively agree on the rating of the attributes. The research also contributed new findings into the literatures by adding three new attributes, namely, the use of comprehensible language, provision of better participation opportunities, and organising frequent meetings and dialogue sessions. The three new identified attributes would supplement the existing list of attributes used in the study. Even though one of the three attributes scored below 4 points, it remained as an important consideration for managements and stakeholders alike.

The new attributes suggested that it was very important to create awareness among the local communities on the importance of taking part in decision making process. This is probably not an easy task. However, the experts felt that properly scheduled and frequent dialogue sessions could instil interests among the public to participate. It is probably important to get the public to get used into taking part in any sessions to ensure their interests are always at par and they can effectively participate during planning and development meetings.

Another valuable attribute added by the experts namely Content easy to understand was very significant to Malaysian context. The issue with language use in reports by the governments has been found to be a major concern in Malaysia (Mariana et al., 2008). In their study, Mariana et al. (2008) suggested that work must be done to improve the language and communication used in public participation to facilitate better sharing concepts and values. Therefore, the new addition of this attribute that specifically mentions this aspect is seen appropriate. This particular attribute is significant towards enhancing people's awareness to participate and is in accordance with reference to previous research. The main conclusion of the research is that there is an intense need to discover how participation can work under certain measures and in certain conditions.

The results presented here reveal some of the conditions that need to be addressed by the respective stakeholders to ensure true participation among the public. Thus, efforts should focus primarily on increasing level of information, providing and ensuring fairness, and providing local communities with means and proper access to participate. Through such actions, the process of organising a true and authentic public participation may be significantly facilitated and thus would reveal more benefits for the public living in the protected areas.

CONCLUSION

The aim of the Delphi study was to identify the important attributes towards successful public participation. The Delphi technique, which is a qualitative research approach, was used in this exploratory study. Local experts from various disciplines related to tourism planning and park management were identified, and they participated in the three rounds of the Delphi technique. The study had successfully benefited from the effectiveness of the Delphi technique in allowing a set of people, as a group, to address a difficulty, a complicated problem (Linstone & Turoff, 1975), or lack of information about a phenomenon (Adler & Ziglio, 1996) and to finally arrive at an agreement by means of a collective human intelligence process (Linstone & Turoff, 1975). By using the Delphi technique, this research was able to identify the important attributes to be considered in order to achieve successful public participation.

Round one started with the rating procedure. The results yielded a low level value of Kendall's W Coefficient of Concordance (0.182). This value indicated no agreement among the experts towards the attributes. In this round, the experts were encouraged to write any modifications or to even suggest new ideas with regards to the attributes that they regarded as important with reference to the local context. The results for second round showed an improvement in terms of agreement rating among the experts. There were changes in positions; however, overall, majority of the attributes showed improved mean value. The Kendall's W Coefficient of Concordance improved to 0.448. However, this value is not enough to stop the iterative process that needs a degree of consensus among the experts more than 0.7 (Schmidt, 1997). Hence, the process was continued to the third round. In this final round, the result showed an improvement to 0.701. The strong consensus indicated in the third round justified the decision to stop the iterative rounds of the Delphi study.

Overall, the research concludes that both dimensions are equally important in promoting successful public participation in protected areas. These findings are in agreement with those from some previous studies. The selected attributes for the public participation in Malaysia were priority indicators of successful public participation, comprising most of the components suggested by Yaffee *et al.*

(1997) in their summary and analysis of factors that promote bridging in ecosystem management, as well as the components suggested by McCool and Guthrie (2001).

In addition, the new attributes identified in this study are regarded as a very important contribution as these attributes are specifically related to Malaysia. The findings from the analysis are able to point out the attributes that may help relevant stakeholders to plan and execute a successful public participation in tourism planning and to encourage a true and effective public participation process.

While this research is able to identify the experts' opinions on the subject matter and allows for the new attributes to emerge, the findings from the Delphi study will be tested at a chosen protected area site. A questionnaire will be distributed to all the key persons in management, key representatives of the community, as well as the local residents. This exercise is to verify the findings from the Delphi study and to further enhance the findings of the whole research.

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Malaysians' Willingness to Support Japanese Expatriates

Ng, S. I.1*, Ang, S.C.2 and Tee, K.K.3

¹Faculty of Economics and Management, Universiti Putra Malaysia, Malaysia

ABSTRACT

Expatriates' success studies have always focused on the expatriates' home country preparation, cross cultural adjustment ability and host country environment. This study examined the host country nationals' perspective, particularly their willingness to support Japanese expatriates. Malaysians' openness to change, openness to linguistic diversity and perceived reciprocity were found to significantly explain their willingness to support Japanese expatriates. The outcome of this study provided information to companies on strategies they can use in improving host country nationals' willingness to support expatriates.

Keywords: individual values, openness to linguistic diversity, perceived inequity in employment, social capital desirability and willingness to support expatriates

INTRODUCTION

Being an expatriate in a foreign country is not an easy task as one needs a lot of learning and adjustment, perhaps some sacrifices as well. How well an expatriate can cope in his or her international assignment is very likely affected by the host country's infrastructure, political

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E-mail addresses: imm ns@upm.edu.my (Ng, S. I.) angshiaochin@yahoo.com (Ang, S.C.) tee@putrabs.edu.my (Tee, K.K.)

* Corresponding author

condition, economy, and social capital condition (Hill et al., 2012; Hurn, 2007). Expatriates' failure rates are estimated to range from 25% to 70% (McGinley, 2008), and this significantly heightens tangible (e.g. financial) and intangible (e.g. low moral) cost to multinational companies. As a result, expatriate management research continues to receive attention in search for potential solutions (Okpara & Kabongo, 2011). Among the factors that have been reported to be responsible for assignment failures were spouse/partner dissatisfaction, inability to adapt, other family concerns, poor candidate selection,

²Graduate School of Management, Universiti Putra Malaysia, Malaysia

³Putra Business School, Universiti Putra Malaysia, Malaysia

poor job performance and job does not meet expectations (GRT, 2010).

Acceptance from the host country may affect the expatriates emotionally, which may compromise their overall wellbeing in the host country. Coming from a different culture altogether requires the expatriates to adjust to the host country's culture and customs upon arriving in the host country. Adjusting may be learned via cognitive learning, whereby the expatriates would learn about the culture of the foreign country while in their home country and put it into practice while in the host country. Another method of adjustment is via affective learning, whereby the expatriate will experience first-hand the local culture by mixing and mingling with the Host Country Nationals (HCNs). A study in Finland shows that the most crucial area of adjustment is the interaction with the locals (Suutari & Burch, 2001). In the same research, it was found that on average, expatriates perceived the hostcompany support as necessary with regard to issues both outside and at the workplace.

As HCNs are the best source of information for the local norms and culture, it is very important to build a network with the HCNs. Mahajan and De Silva (2012) found that HCNs support is critical and acts as a buffer to reduce the negative impact of unmet role expectations on the expatriate adjustment. In their study, they argued that HCNs can be a useful source of support for expatriates to adjust in the host country and made them more effective in their jobs. Hence, this paper intends to understand the

willingness of HCNs (i.e., Malaysians) in supporting the expatriates. Several factors that might affect HCNs' willingness to support expatriates are individual's values, social capital desirability, openness to linguistic diversity and perceived inequity in employment.

Previous studies expatriates on focused on the perspective provided by expatriates (i.e., adjustment, language and family) (Shay & Baack, 2006; Feldman & Tompson, 1993; Harvey, 1997; Fish & Wood, 1997). To date, only a few studies have been conducted based on HCNs support. First, Varma et al. (2009) identified Chinese (HCNs) support to expatriates in China based on factors such as collectivism, *guanxi* and interpersonal affect. Secondly, Liu and Shaffer (2005) investigated from the social capital perspective, whereby HCNs network density, depth of relationship, and access to information and resources were reported to significantly influence expatriates' success. Two aspects of HCNs ability; HCNs interpersonal skills and HCNs cultural empathy, were strong inputs to expatriates' effectiveness. These researchers showed that HCNs played a significant role in guaranteeing expatriates' success. Thus, there exists a gap in understanding ways to increase HCNs support to expatriates.

Japanese Expatriates in Malaysia

According to Economic Report 2010/2011 (The StarBiz, 2011), as of July 2011, the number of expatriates in Malaysia stood at 31,371. They were mostly employed in the

services (64.8%) and the manufacturing (22.2%) sectors; they came from India (17.8%), China (10.2%), and Japan (7%). Japanese companies such as Matsushita began the electrical and electronics industry of Malaysia in 1965, seeking to supply the domestic market with consumer goods. At present, Japanese companies expanded from manufacturing companies to complete supply chain management. Recently, further expansion of their involvement in Malaysia was made through the setting up of research centres such as Sony Research and Development Centre in Bangi, Selangor, in September 2011 (Harian Metro, 2010).

Such a quick expansion created a void in technological knowledge among the locals and thus the demand to increase technology competency was in dire need. Hence, expatriates from Japan were required to make the knowledge transfer and manage the subsidiaries, while at the same time grow the locals' management skills to take over the subsidiaries at a later date. A sudden influx of expatriates may create uncertainty amongst the HCNs. These uncertainties could cause the HCNs to refrain from supporting the expatriates willingly. Less support from the HCNs negatively affects both the expatriates and HCNs; expatriates may find it difficult to adjust while HCNs may not benefit from the knowledge transfer. Thus, research that looks at ways to increase HCNs' (i.e. Malaysian) support for Japanese is relevant and timely.

International Assignment

When parent company's employees are sent out for international assignments, they are called the expatriates in the host country (Dowling et al., 2008). There are several reasons for the international assignments. Expatriates are meant to fill up senior management roles in the host country, when the host country is lacking of qualified managers to manage and navigate the company's operation (Hocking et al., 2007; Dowling et al., 2008). Foreign direct investment encourages the parent company to diverse their business operation around the world as part of their global expansion (Stanek, 2000). However, to maintain a unified corporate culture, the parent company would send their employees to hold the helm of the overseas subsidiaries in order to have a similar business direction (Hill et al., 2012; Dowling et al., 2008).

Often we would hear expatriates return to their home country prior to their assignment completion. According to Tung (1981), there are several reasons for expatriates to return home early; one is the inability to adjust to the new environment. Besides his or her own adjustment to the new culture, the expatriates' spouse and family adapting to the host country also plays a critical factor in the expatriates' premature return. HCNs play a significant role in the expatriates and their family's adjustment to the host country.

Host Country Nationals

Host country nationals (HCNs) refer to employees who are citizens of the country

in which an organisation's branch or plant is located, but the organisation operates from its head office's home country. HCNs have been substantial in determining expatriates' success. First, Vance and Ensher (2002) found input given by HCNs as instrumental in modifying training materials to expatriates. There are several levels of HCNs workforce, which are operation level, middle management level and upper management level. These different levels of HCNs require different levels of expatriates' knowledge to cope

with their needs and gain their support. Vance and Enshers' (2002) research showed that using HCNs input to create a training scheme for the expatriates their international while undergoing assignment proves to enhance validity of expatriate training and overall expatriates' performance effectiveness. Each of these HCNs categories relates to the specific world view and belief system of the particular HCNs corresponding to an expatriate assignment.

TABLE 1 Levels of HCNs and their input towards an expatriate's training scheme (Vance & Ensher, 2002)

HCW Employee Level	HCW Input Categories
Operative Level	 General HCW management style preference Information about workplace norms and preference specific to the assignment Socioeconomic context
Supervisory & Middle Management	 Critical incidents of past expatriate/HCW interactions Experience-based input for design expatriate training Mentoring as a form of on-the-job coaching
Upper Management	 Experience-based input for design of expatriate training Input for design of diversity and cross-cultural awareness training for parent company (e.g. delivered at MNC headquarters) Integration of parent company strategic planning and goals with needs of host country operation to form more realistic expatriate goals and performance expectations

Note: HCW stands for Host Country Workforce

Second, HCNs' support in terms of informational support and social support have also been reported to influence expatriate success (Mahajan & De Silva, 2012). HCNs' informational support is not well-received by expatriates, as HCNs' credibility in that aspect has not been proven. Despite that, social support by HCNs is well received as they have been in the host country longer than the expatriates.

However, Mahajan and De Silva (2012) investigated HCNs support from an expatriate's perception, overlooking the HCNs' perspective. In fact, HCNs' willingness to support is more directly contributed to expatriates' well-being as they will make expatriates feel welcome. Thus, subsequent reviews focus on the HCNs' willingness to help expatriates and the factors influencing their willingness to help.

Host Country Nationals' Willingness to Support

Expatriates' rate and ease of adjustment in the host country is dependent on how similar or dissimilar the culture is compared to their home country (Selmer, 2007). Host country's human resource department will generally provide some levels of support to help expatriates' adjustment (Dowling et al., 2008; Hill et al., 2012). However, the expatriates' immediate HCNs that have direct contact with expatriates on a daily basis may not be from the human resource department. Thus, the expatriates need support from their direct HCNs to guide them about local living conditions, learn about the working environment and provide other necessary information. These are the social support structures mentioned in Mahajan and De Silva's (2012) research.

However, the role to support expatriates is not part of the direct HCNs' job scope. Therefore, HCNs' support is on a voluntary basis; some of the factors that may motivate higher willingness to help include individual's values (collectivism tendency, openness to change, self-enhancement), social capital desirability (relational investment, perceived reciprocity), openness to language diversity and inequity in employment.

Individual Values

Values are what a group of people believe to be good, right, and desirable. It is an assumption of how things are supposed to be. Norms are the social rules that govern people's actions toward each other.

Different sets of values and norms will affect how people position the importance of work values when working with people of different cultures (Hofstede, 1982). One of Hofstede's (1982) cultural dimensions is Individualism vs. Collectivism. Hofstede defines individualism as the degree to which people in a country prefers to act as an independent individual rather than as a member of groups and the reverse for collectivism. Collectivist society is bound to form their own 'in-group' and often consider their supervisor; in this case, the expatriates, as part of their 'in-group' (Clugston et al., 2000). From Hofstedes' cultural dimensions, Malaysians are found to be at the low end of individualism, which translates into high collectivism (Clugston et al., 2000). Since high collectivist individuals were reported to treat their expatriate supervisor as part of the in-group (Clugston et al., 2000; Wang et al., 2002), HCNs who are high in collectivist tendency are more likely to help their expatriate supervisor. Thus, the first hypothesis was proposed:

Hypothesis 1: There is a positive relationship between collectivist tendency and the willingness to support expatriates.

Schwartz (2007) defines value as what is important to oneself in life in a varying degree of importance, and he mentioned that individual's values influence how people act and react to circumstances. Each of Schwartz's ten values is defined below (Schwartz, 2007):

- (1) Self-Direction. Independent thought and action; choosing, creating, exploring.
- (2) Stimulation. Excitement, novelty, and challenge in life.
- (3) Hedonism. Pleasure and sensuous gratification for oneself.
- (4) Achievement. Personal success through demonstrating competence according to social standards.
- (5) Power. Social status and prestige, control or dominance over people and resources.
- (6) Security. Safety, harmony, and stability of society, of relationships, and of self.
- (7) Conformity. Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.
- (8) Tradition. Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self.

- (9) Benevolence. Preserving and enhancing the welfare of those with whom one is in frequent personal contact (the 'in-group').
- (10) Universalism. Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.

Schwartz's ten values were further divided into 4 major dimensions: (1) self enhancement, (2) openness to change, (3) self transcendence and (4) conservative, as shown in Fig.1. As an employee in any firm and any country in the world, the main objective is to have the opportunity to learn (Chan & Pearson, 2002). Chan and Pearson's research on work goals among Malaysians also found that in parallel to have the opportunity to learn, employees also deemed that the high importance of the job is a requirement in their assignment.



Fig.1: Theoretical model of relations among ten motivational types of value (Schwartz, 2007)

The eagerness to learn when opportunity arises can be related to openness to change as each opportunity may be different from the current work

that the Malaysians are undertaking. HCNs that put priority on self-enhancement and openness to change are likely to view supporting expatriates as a pathway to

gain new learning opportunities or career advancement. Thus, hypothesis 2 and hypothesis 3 were constructed:

Hypothesis 2: There is a positive relationship between openness to change and the willingness to support expatriates.

Hypothesis 3: There is a positive relationship between self-enhancement and the willingness to support expatriates.

Social Capital Desirability Level

Social capital refers to an individual's sacrifices (time, effort, consumption) made in an effort to promote cooperation with others (Oxoby, 2009). The intention to promote cooperation with others, in this context the expatriates, is defined as the desire level. Measurement on social capital, based on the exchange theory by Cheung and Chan (2010), showed that social capital fulfilment has positive relationships towards high morale among Japanese workers. The exchange theory, explained by Cheung and Chan (2010), is when one invests in a social relation and expects to draw benefits from them; this increases the desire level in social capital development within an organisation. Dayton-Johnson (2003) indicated that employees can also invest in social capital by devoting time and energy to building relationships and reputations. The investment they make today in social capital gives them a claim to the future returns resulting from cooperating in those relationships. Reciprocity refers to the expectation of conditional help received from other people, in response to the help provided to them. Thus, HCNs who see the importance of building social capital and understand there might be future return or reciprocity, are likely to support the expatriates. Riding on these findings, hypothesis 4 and hypothesis 5 were built as below:

Hypothesis 4: There is a positive relationship between relational investment level and the willingness to support expatriates.

Hypothesis 5: There is a positive relationship between perceived reciprocity and the willingness to support expatriates.

Openness to Linguistic Diversity

Individuals with openness to linguistic enjoy working with people who speak a different language and will make extra effort to understand them (Lauring & Selmer, 2012). It is unavoidable for Japanese expatriates to use their mother tongue when speaking to their fellow Japanese colleagues. HCNs, with the openness to language diversity, will be more tolerable towards the use of uncommon language at workplace. Also, they are unlikely to perceive language barrier as a hindrance to support expatriates. Thus, hypothesis 6 was built as below:

Hypothesis 6: There is a positive relationship between openness to linguistic diversity and the willingness to support expatriates.

Inequity in Employment

expatriates are Among HCNs, known to be given a better compensation than HCNs. An expatriate receives extra benefits like monthly allowances. relocation allowances. housing allowances and family support allowances (Hill et al., 2012: Dowling et al., 2008). Expatriates' salary is about five times higher when compared to HCNs' salary and this tends to create discontent among the HCNs, where they perceive this as a differential treatment even though both are equivalent in terms of education background and area of expertise (Bates, 2001).

Besides compensation packages, another form of benefits that expatriates obtained is important information crucial to the company's management or operation usually distributed to them primarily. Japanese tend to keep the information a breadth from their HCNs middle manager making them frustrated for courteously being locked out of formal and informal communication circuits (Ybema & Byun, 2009). Thus, those HCNs who perceive they are not fairly treated (inequity in employment) are less likely to support expatriates. Thus, hypothesis 7 was raised, as below.

Hypothesis 7: There is a negative relationship between perceived inequity in the employment and the willingness to support expatriates.

Measurement

Eight variables were measured in this study using the Likert scale, ranging from 1 to 5. First, Collectivist Tendency was measured using a 6-item scale adopted from Clugston, Howell, and Dorfman (2000). Some sample items were "Group welfare is more important than individual rewards", "Group success is more important than individual success" and "Being accepted by members of your work group is very important."

Second, Openness to Change was measured using an 8-item scale adopted from Schwartz (2007). Some sample items were "Thinking up new ideas and being creative is important to me. I like to do things in my own original way" and "I think it is important to do lots of different things in life. I always look for new things to try."

Third, Self Enhancement was measured using a 7-item scale adopted from Schwartz (2007). Some sample items were, "It is important to me to be rich. I want to have a lot of money and expensive things" and "It's very important to me to show my abilities. I want people to admire what I do."

Forth, Relational Investment was measured using an 8-item scale adopted from Cheung and Chan (2010). Some sample items were "I like helping strangers without receiving compensation" and "I like doing volunteering work without receiving compensation."

Fifth, perceived reciprocity was measured using a single-item measure adopted from Cheung and Chan (2010). The item was, "How willing will the Japanese expatriates whom you helped help you in return?"

Sixth, Openness to Language Diversity was measured using a 4-item scale adopted from Lauring and Selmer (2012). Sample items were, "I enjoy doing jobs with people despite of languages barriers" and "I make an extra effort to listen to people speaking different languages."

Seventh, Perceived Inequity in Employment was measured using a 5-item scale of Geurts *et al.* (1999). Sample items were "I invest more in my work than I get out of it" and "I exert myself too much considering what I get back in return."

Finally, Malaysians' willingness to support expatriates was measured using a 4-item scale adapted from Caplan *et al.* (1980) that measure social support. Sample items included "I will help Japanese expatriates when things get tough without being asked" and "I am willing to listen to Japanese expatriates' personal problems if approached".

DATA COLLECTION

A Japanese subsidiary located in Bandar Baru Bangi was chosen as the study site. This Japanese subsidiary was chosen because of the large number of expatriates working in this company. The recent upgrade of the subsidiary's Research and Development

(R&D) facility further increased the intake of Japanese expatriates.

The respondents chosen for this research were the employees working in the R&D sector that has direct contact with Japanese expatriates. As of March 2013, the R&D sector consisted of 557 employees spread across 20 departments. However, only 14 departments have Japanese expatriates. There were a total of 57 Japanese expatriates working in these fourteen departments. Out of this, only departments that have more than 10% Japanese expatriates were chosen as respondents, in which, nine departments fulfilled the criterion. This was conducted under the assumption the employees in departments with a ratio lower than 10% expatriates have less chances of communicating with Japanese expatriates. Thus, the total respondents invited for survey participation were narrowed down to 236 employees. Of these, 170 completed the questionnaires.

Respondents' Profile

A total of 236 questionnaires were distributed and 170 respondents completed the questionnaires. Of these, 91 were males and 78 females (one refused). As for age, majority of them (73%) were 30 years and below. More than half (59%) worked in this company for less than two years. Only 20 (out of 170) respondents held managerial positions. Many respondents were Malays (48%) and Chinese (46%).

TABLE 2 Demographic Profile of the Respondents

Demographic Variables	Frequency (N=170)	Percentage (%)
Gender		
Male	91	53
Female	78	46
Missing	1	1
Age		
21 to 25	56	33
26 to 30	67	40
31 to 35	28	16
36 to 40	15	9
Above 41	4	2
Years Working in the Company		
Below 2	101	59
3 to 5	25	15
6 to 8	8	5
9 to 11	17	10
More than 11	19	11
Position in the Company		
Non-managerial	150	88
Managerial	20	12
Ethnic		
Malay	81	48
Chinese	79	46
Indian	6	3
Others	3	2
Missing	1	1
Total	170	100

Reliability of Constructs

The Cronbach's Alpha Test was used to measure the internal consistency of measures to the degree of the homogeneity of the items to the primary construct. As can be seen from Table 3, all Cronbach's Alphas were more than 0.60, ranging from 0.61 to 0.83. Full items were used to test reliability for collectivism, openness to

change, self-enhancement and relational investment. As for linguistic diversity and inequity in employment, the alphas were 0.31 and 0.10 respectively, when all the items were included. Thus, one item was removed from linguistic diversity and two items were removed from inequity in employment, and alphas improved to 0.74 and 0.61, respectively.

TABLE 3
Reliability, Mean, and Standard Deviation Score

Description	No of Items	Alpha	Mean	Standard Deviation
Collectivism	6	0.69	3.62	0.63
Openness to Change	7	0.82	3.97	0.57
Self-Enhancement	7	0.83	3.56	0.65
Relational Investment	8	0.82	3.74	0.64
Reciprocity	1	-	3.46	0.82
Linguistic Diversity	3	0.74	3.73	0.66
Inequity in Employment	3	0.61	3.40	0.60
Willingness to Support	4	0.72	3.63	0.60

Hypothesis Testing

Regression analysis was used to test the hypotheses in this study. First, the willingness to support expatriate was entered as the dependent variable. Next, the remaining constructs were entered as independent variables. The regression model was significant (p=0.00, F=11.62). The adjusted R² was 0.31, which means 31% of the variance in the willingness to support Japanese expatriates were explained by the combination of all the constructs (see Table 4).

The standardised regression coefficients were used to determine the relative impact each of the independent variables had on the willingness to support Japanese expatriates and allowed a comparison to be made between variables

of differing magnitudes and dispersion. From Table 4, there are three significant variables and four insignificant variables. First, openness to change has a positive coefficient of 0.21, with a significant of level 0.005 (p<0.05), suggesting openness to change has a positive relationship with the willingness to support Japanese expatriates. Thus, H2 is supported. Next, reciprocity has a positive coefficient (0.26), with a significant level of 0.00 (p<0.05), proving that H5 is supported. Lastly, H6, openness to linguistic diversity presented a positive coefficient of 0.33, with a significant level of 0.00 (p<0.05), which is supported as well. Conversely, H1, H3, H4 and H7 produced a significant level that is bigger than 0.05, indicating that these hypotheses are not supported.

TABLE 4 Regression Analysis

Model	Standardized Coefficients	Sig.
H1: Collectivism	049	.487
H2: Openness to Change	.208*	.005
H3: Self Enhancement	038	.591
H4: Relational Investment	.035	.620
H5: Reciprocity	.264*	.000
H6: Linguistic Diversity	.329*	.000
H7: Inequity in Employment	.095	.168
F	11.62	.000
Adjusted R Square	0.31	

^{*} Significant at 0.01

DISCUSSION OF THE SIGNIFICANT RELATIONSHIPS

First, parallel with Schwartz's (2007) value, that openness to change (self-direction, where independent thought and action guide a person to attain the target set; stimulation, excitement, novelty, and embrace challenge in life) drives a person's commitment in work assignment; it was also found to determine a person's willingness to support expatriates. This is consistent with the finding that Malaysians are receptive to the changes in their surroundings, especially when dealing with Japanese expatriates, even though their working styles are different (Ybema & Byun, 2009).

Second, Malaysians (HCNs) who perceive receiving future reciprocity from Japanese expatriates are found more likely to support expatriates. By giving support to expatriates, Malaysians foresee a better work cooperation with the Japanese in the long run, capitalizing on the relationship that has been built. This act is similar to the concept of *guanxi*, which is based on trust, favour, dependence, and adaptation. The result is consistent with the work done by Varma *et al.* (2009), where HCNs in China were reported to support expatriates in order to strengthen the in-group relationship.

Finally, those who are more open to linguistic diversity tend to demonstrate a higher willingness to help expatriates. Malaysians are a multilingual society due to their schooling system. Thus, Malaysians are exposed to several languages from

a young age. Working with Japanese expatriates exposes Malaysians to another language. The close language family tree between the Japanese language and Malaysian language (especially Mandarin) encourages the Malaysians to pick up some simple Japanese words and vice-versa, and this activity reduces the language barrier between the two cultures. This is supported by the findings from Lauring and Selmer (2011), who found that language diversity tendency increases HCNs' communication frequency with expatriates.

DISCUSSION OF THE NON-SIGNIFICANT RESULTS

The relationship between collectivist tendency, self-enhancement, relational investment, and perceived inequity in employment with willingness to support expatriates were found to be insignificant. Those HCNs having high collectivist tendency were not found to demonstrate a higher willingness to support expatriates. This could be due to collectivist HCNs not treating Japanese expatriates as in-group members. Animosity among Malaysian as a result of the Japanese occupation period, in which Japanese army tortured and killed many Malaysians' unnecessarily could probably explain why collectivist HCNs do not include Japanese colleague as ingroup. Animosity refers to hostility towards a country (Riefler & Diamantopoulos, 2007). It has been reported to significantly reduce trust towards products associated with a country that can provoke animosity (Jimenez & Martin, 2010). Similarly,

animosity might negatively affect trust on Japanese colleagues, which led to them being classified as outsider.

Those **HCNs** having selfenhancement value were found to be not willingly contribute to supporting Japanese expatriates. Although Yun et al. (2007) reported that those high in selfenhancement generally are concerned about their career success, in this case however, those aiming high in their career do not think that supporting Japanese expatriates will help them in their career advancement. The company probably used very objective measures when it came to promotion assessment.

Relational investment is one of the components under social capital desirability. The results revealed that those scoring high in social capital desirability are not supporting Japanese more. The literature suggests relational investment in terms of devoting time and energy in the relationship and expects to draw benefits from them in the future (e.g., Dayton-Johnson, 2003; Cheung & Chan, 2010). It is not the case in this study. This could be due to HCNs not thinking about investment in the relationship with Japanese expatriates will help in their career as Japanese expatriates stay only on a short term in Malaysia and may not be around for future return.

Perceived inequity in employment does not affect HCNs' willingness to support Japanese expatriates. Despite the fact that expatriates receive extra benefits like monthly allowances, relocation allowances, housing allowances and family support allowances (Hill *et al.*, 2012: Dowling *et al.*, 2008), this aspect of inequity was found to be not affecting HCN's support for expatriates. This is probably due to Malaysians' high power distance tendency who generally accepts that some people (i.e., expatriates) deserve better treatment (i.e. remuneration) than others. Thus, inequity in employment is seen as normal and does not affect their assistance to expatriates.

THEORETICAL IMPLICATIONS

The findings of this study filled the gaps that existed in the research on how HCNs could contribute to the success or failure of international assignments. Previous studies were more focused on the expatriates themselves (i.e., adjustment, language training, and family) (Tung, 1981; Hill et al., 2012; Mendenhall & Oddou, 1985; Gabel-Shemueli & Dolan, 2011; Bar-On, 1997, 2006). HCNs' support in terms of informational support and social support was reported to influence on expatriates' success (Mahajan & De Silva, 2012). This study extends the work of Varma et al. (2009), which looked at Chinese HCNs' support to expatriates using determinants like collectivism, guanxi and interpersonal effect. This study adds value by providing empirical evidence that openness to reciprocity, change, and linguistic diversity determine HCNs' support to expatriates.

MANAGERIAL IMPLICATIONS

There are three strategies MNC can use to improve Malaysians' willingness to support expatriates. First, since the findings indicate that Malaysians with higher openness to change value are keener to support Japanese expatriates, companies may want to inculcate this value in their organisation. Openness to change refers to prioritising tasks that allows them to explore and learn new things. One way to promote this value is by giving diversified tasks to Malaysians. Routine tasks made Malaysians quick to adapt to the nature of the job and thus reduced the occasion to mingle with the Japanese expatriates. This minimises the chances to support Japanese expatriates in any form. Thus, in order to maintain the relationship, giving a new task or a new challenge to Malaysians may help.

Secondly, the findings of this study also showed that if Malaysians perceived that they receive help in return for the support provided to the Japanese expatriates, they would be more willing to support expatriates. The company may ride on this factor to request the Japanese expatriates for transferring more new knowledge to Malaysian employees. That way, the Malaysian employees will be more willing to support the expatriate in adaptation issues, be it work or personal matters.

Finally, as the findings of this study showed that Malaysians with higher linguistic diversity tendency tend to support expatriates more. Thus, companies are recommended to provide diversified linguistic training for employees to familiarise with the language that the expatriates are likely to use. With this in place, HCNs might have less of a phobia to linguistic differences, which might hinder their support to expatriates.

LIMITATIONS

There are some limitations in this study. First of all, due to time constraint, the respondents participated were from a single Japanese subsidiary. In order to obtain more concrete data representing Malaysians working in a Japanese subsidiary, the respondents should come from various Japanese subsidiaries within Malaysia. Secondly, from the sample collected, it showed that majority (almost 60%) of the respondents had been working less than two years in the company and only 20 out of 170 respondents were from the managerial positions. Thus, the results obtained might be biased due to the respondents' background. Lastly, only 31% of variance in the willingness to support Japanese expatriates were explained by the variables included in this study, suggesting 69% variances were explained by other potential variables.

RECOMMENDATION FOR FUTURE RESEARCH

Besides extending the study to other Japanese subsidiaries with more representative respondent sub-groups in terms of gender and position in the company, future studies may consider other potential

predictor variables like value-fit, goalfit, and personality-fit. Values, goals, and personality congruence reflect the extent of similarity between the person's own values, goals, or personality as compared to the values, goals, and personality of the expatriate. Westerman's (1997) study indicated that value, goals, or personality congruence significantly predicted satisfaction with organisation. Individuals, who have higher fit with the organisation, demonstrate higher satisfaction working in that organisation. Following a similar reasoning, fit dimensions are also likely to explain the extent of help HCNs may extend to expatriates.

CONCLUSION

As a conclusion, this study has shown that Malaysians (HCNs) are generally willing Japanese expatriates. support Malaysians' openness to change and exceldriven attitude (perceived reciprocity) make them more willing to support Japanese expatriates to achieve their personal and career goals. Besides that, Malaysians are multilingual and able to adapt to new languages used by expatriates, thus language barrier does not hamper them from supporting expatriates. With the information on ways to improve HCNs' support to expatriates, multinational corporations in Malaysia are more equipped in developing strategies sustainable for expatriate assignments.

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Developing a Roadmapping System for Knowledge Management in an Organisation

Yee, C.L.* and Teoh, K.G.C.

Department of Management and Marketing, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

ABSTRACT

This study aims to develop a roadmapping system that can be used as a knowledge management tool for any organization. The study employed a structured action research to test the implementation of the proposed roadmapping system in a real industrial environment. An internal facilitator collected data through a clinical inquiry approach. The output is a roadmapping system for knowledge management for an organisation, which enhances strategic capability. It also helps to capture and handle the complexities of business strategies in a simple way or that is easy to understand. The proposed roadmapping system was only tested on one firm. Pending further research, these findings should not be generalised. The proposed roadmapping system improves the capability of an organisation to plan and implement its strategies. The proposed system can be used for strategic planning and knowledge management – it allows managers to "kill two birds with one stone." Unlike conventional technology roadmapping (TRM) research that focuses more on the hard aspects of technical and economic elements, this study explores the soft aspects of knowledge management for improving the strategic capability of an organisation. This research has extended the traditional boundary of TRM to include effective information systems.

Keywords: Action research; Clinical inquiry; Information systems; Knowledge management; Technology roadmapping.

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E-mail addresses:

yee@upm.edu.my (Yee, C.L.) kent@upm.edu.my (Teoh, K.G.C.)

* Corresponding author

INTRODUCTION

While the hard aspects of Technology Road Mapping (TRM) research, such as technical and economic issues, currently dominate the literature, limited attention has been given to its soft aspects such as knowledge

management and information sharing. The technical aspects of TRM mainly address issues, such as the feasibility, usability and utility of the TRM process, the design of its architecture or formats, and the mechanism of how the technique is used. Works that focus on the technical aspects of TRM include the improvements of the TRM process (Fenwick et al., 2009), technique (Fleury et al., 2006), simplified format (Fujii & Ikawa, 2008), practical approach (Lee et al., 2009), and architecture (Phaal & Muller, 2009). The economic aspect deals mainly with an organisation's motivation and rationale of using TRM such as its accompanying benefits and returns. Studies that focus on the economic aspect include how to use TRM to improve business interfaces (Beeton et al., 2005), commercialise innovations (Gehani, 2007), align R&D investments and business needs (Gindy et al., 2008), and integrate business and technology (Groenveld, 2007).

Given that limited attention has been given to the soft aspects of TRM, it is not surprising that its implementation within organisations faces significant challenges that have resulted in failure in many cases. Among the challenges that many organisations face in implementing TRM are the struggle by managers to grasp its fundamental concepts, and the lack of ability to keep abreast of its techniques and development (Phaal *et al.*, 2010). These challenges have prompted many managers to become less motivated to use it. Although TRM has been widely used by many firms from different industries (Barker & Smith,

1995; Gough et al., 2010; Kamtsiou et al., 2006; Lischka & Gemunden, 2008), its success rate of implementation is unknown. According to Phaal et al. (2010), it is the practitioners from companies, government agencies, and consulting firms - instead of academics - who have pushed for its implementation. Consequently, this results in less systematic research; and, owing to the confidential nature of most companies' policies, the success or failure associated with its implementation is difficult to track. Both technical and economic aspects of TRM are unlikely to feature prominently when TRM fails to deliver (as it so often does).

It is believed that a lack of focus and research on the soft aspects of TRM is the reason behind these problems. As such, a roadmapping knowledge management system is proposed as one possible solution towards improving the implementation process. A study was conducted to investigate the proposed system. In this study, a clinical inquiry approach, using the structured action research method, was designed to investigate the soft aspects of implementing TRM. An experiment was conducted to test the proposed process of implementing roadmapping within a firm. This paper, which reports those findings, is organised into six sections. In the first section, the concept of TRM is briefly defined. Then, a roadmapping system is proposed. The methodology used in this research is described in the third section, while the findings of a case study in a manufacturing firm are reported in the fourth section. Next, the feedback and implications of this research are discussed. The paper concludes with the findings, limitations, and recommendations future research directions.

Technology Roadmapping

In general, Technology Roadmapping (TRM) is a structured visual tool that represents a strategy (Phaal *et al.*, 2010; Yee, 2013). Specifically, however, it has been variously defined as:

"... a tool for collaborative strategic planning, that enables us to make strategies and take actions towards the desired future, with special emphasis on anticipating changes in technologies and new business opportunities" (Kamtsiou *et al.*, 2006, p. 164).

- ... a visual tool that describes and identifies a strategic plan that links technology decisions to customer requirement, (Strauss & Radnor, 2004, p. 52).
- ... a plan to determine the evolution of a product by linking a business strategy to product and technology (Albright & Kappel, 2003, p. 31).
- ... forecast technology development by reducing complexities of strategy through the use of refined and synthesized representation of business information (Saritas & Oner, 2004, p. 57).

Overall, a technology roadmap represents a future scenario, objectives that need to be achieved, and strategic plans that help to set priorities of how these objectives could be achieved (Kostoff & Schaller, 2001).

As TRM comes in different forms, it is apparent that managers are sometimes unclear on which formats to use (Phaal et al., 2004). The most common technology roadmap consists of a timeline, multiple layers that show both commercial and technological perspectives, bars, texts, pictorial representations, flowcharts and arrows (Yee, 2007). Among the companies that have successfully developed effective technology roadmaps is Motorola (Willyard & McClees, 1987). According to Willyard and McClees (1987), a roadmap in Motorola was generated by assembling documents, charts, matrices, and graphs that supplied wide-ranging details of product lines from the past, present and future. It was created to support the processes of planning and managing a complex technological environment.

The benefits of TRM include:

- 1. Ensuring that key technologies are ready on time
- 2. Examining changes in opportunities
- Assisting in developing a strategy for technology, monitor markets, products and technology
- 4. Increasing interaction between operational and marketing departments

(Albright & Kappel, 2003; Kamtsiou *et al.*, 2006; Phaal *et al.*, 2010; Saritas & Oner, 2004; Strauss & Radnor, 2004).

The weaknesses of TRM include:

1. The roadmap is not updated on an ongoing basis

- 2. Many users do not know where and how to start the roadmapping process because there are many possible ways and procedures available
- 3. It is difficult to build a comprehensive and robust roadmap
- 4. Roadmaps come in several formats and users do not know which one to choose for their companies; and it is difficult to understand how one format is better than another
- 5. To produce the roadmap, companies need the assistance of well-trained academics or consultants, because managers who employ it are not equipped with the relevant skills and first-hand knowledge
- 6. There is a lack of formal educational opportunities to teach the technique. As a result, managers need time to learn the fundamental concepts of the new knowledge (Phaal *et al.*, 2010; Saritas & Oner, 2004; Strauss & Radnor, 2004; Yee, 2007).

The Proposed Roadmapping System

It is widely accepted that effective knowledge management is essential to the success of firms today (Holste & Fields, 2010). Many firms spend millions of dollars annually to analyse, store, and retrieve knowledge. The effective use of information technology and databases should lead to improved capability to store, retrieve, and share knowledge.

Roadmapping is a strategic planning process. Sound strategic decisions rely on having the right knowledge, in the right place, and at the right time (McKenzie *et al.*, 2011). Incorrect knowledge can be extremely costly; not only to the success of a company, but also to its survival (Yee, 2013). Hence, setting up a database for knowledge storage, without consideration for the useful manipulation of that knowledge, is dangerous.

The need for roadmapping

Far too frequently, top managements spend significant amounts of time developing full strategy reports, with detailed description and figures, which are passed down to managers at the operational level of an organisation for implementation. As these reports may look very complicated, employees may become intimidated and confused, and hence, overlook their priority and urgency. This is understandable because firms today are faced with complexity (Yee, 2013).

Due to the perceived burden of details, many firms today just need the "big picture" for their organisation's strategies. Managers today are quite unwilling to read lengthy reports that normally begin with a full description of the current economic situation, business environment, market competitive analysis — brevity and time are of the essence! This would be followed by multiple recommendations on how to increase sales, capture competitor markets, or new investment plans, which then culminate in the presentation of a full budget with detailed financial analyses, risks analyses and feasibility studies. All these reports have something in common;

they are full of descriptions, figures, graphs, and bullet points. Is it any wonder that only a few strategies actually translate into performance?

Roadmapping aids strategy planning

Given the above scenario, it is easy to see how effective knowledge management is well placed to improve strategic planning and implementation. Managers today always face uncertainty and ambiguity (McKenzie et al., 2011). Providing them with the right knowledge will reduce their uncertainty and ambiguity. This will rely on an effective knowledge management effective knowledge system. An management system should also be able to retain good and useful knowledge (Levy, 2011) because knowledge - i.e., information - is rapidly becoming the main asset of organizations (Levy, 2011).

Traditionally, TRM, which is conducted in a workshop format, is a kind of knowledge generation system. After a workshop, one of the typical applications of roadmapping is the transformation of a roadmap into a computer-generated report that consists of a roadmap, its relevant strategies, and a detailed illustration for future action plans. This computer-generated report forms a knowledge system that can be used within an organization.

However, retaining and sharing the knowledge generated by an organisation is equally important — i.e., time and space utilities, and storage. This could be done by incorporating a knowledge management system into the traditional TRM. Based

on the above discussion, a roadmapping system was proposed to incorporate knowledge generation, knowledge storage, and knowledge sharing into a unified system. Knowledge generation is done through the traditional roadmapping workshop, while knowledge storage is done through the normal application of software to produce computer-generated reports after the roadmapping workshop. Finally, knowledge sharing is done through a total knowledge management system for an organisation. It was proposed that such a total knowledge management system, which generates, stores, and shares knowledge, should be made up of the following five steps:

- Step 1: Roadmapping workshop
- Step 2: Analysing information
- Step 3: Computer-generated roadmap
- Step 4: Action plans
- Step 5: Storage, retrieve, and share

Step 1: Roadmapping workshop

During the first step, a multi-functional team from a firm is formed. Team members should consist of representatives from various functional departments such as marketing, engineering, and product and process technology. The team should also involve top-level managers. At this stage, full support from top management should be obtained. Top management's support and involvement should enhance enthusiasm for attending the workshop, ensure that time and resources are made available, and remove administrative and other barriers.

After the team is formed, a team-building activity will be conducted to improve the relationships of the team's members. The focus is on building teamwork that can reduce human barriers, enhance ownership of the roadmap produced, and reduce usage discontinuity. This is a good solution to organically building the roadmapping system into the current and larger organizational system. It is vital to consider how to integrate the roadmapping system into the people's system.

After the team building activity, the next task is to provide formal training on the theories and concepts of strategic planning, technology management, and technology roadmapping. The purpose is to educate the team about the background knowledge and concepts, as well as details of the process. At the end of this training session, the participating managers should be familiar with the terms used and the steps involved. They will also be able to implement the roadmapping system with confidence

Next, the actual implementation of the roadmapping exercise is carried out. During the mapping exercise, a strategy roadmap is constructed on a sheet of flipchart paper that is attached to the wall. Strategy and business related activities and decisions are written on sticky notes and stuck onto the roadmap at the relevant layer and time period – this will map the company's future strategic plans. This provides an opportunity for the team members to express their opinions and

thoughts on the same platform. During this exercise, the top-level managers should seek to clear any obstacles that may appear such as non-cooperative behaviour from team members. It is believed that top-level managers have the influence and power to remove these obstacles — this is why they are invited into the workshop. Fig.1 shows the activities of the roadmapping workshop.



Fig.1: Roadmapping workshop

Step 2: Analysing the information

During this step, the participants are required to link the information on the roadmap, bringing together the market, product, capability and resources of the business, in order to identify links on a final roadmap. Links between market, product and capability elements are recorded and analysed. The data generated here can be turned into two inter-linking analyses that provide a roadmap layer spanning mechanism. Arrows are used to show the connections between strategies and business related activities and decisions. Fig.2 shows how the strategies are linked to each other.

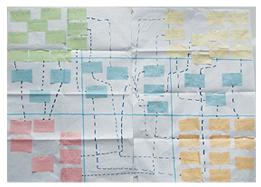


Fig.2: A strategy roadmap

Step 3: Computer generated roadmap

During this step, the roadmap generated from the previous steps is transformed into a computer file. The diagram below shows a sample computer generated roadmap file (see Fig.3).

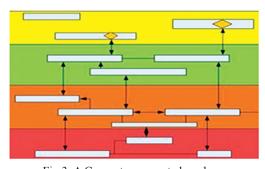


Fig.3: A Computer generated roadmap

Step 4: Action plan

During the fourth step, an action plan is produced based on the discussions made in the workshop. Together with the computer generated roadmap, the action plan forms a roadmapping report that describes the future strategic plan of a company. The report usually consists of (but is not limited to) the following content:

A Executive summary

- Overview
- Vision and mission
- Trend and drivers
- Evaluation criteria

B Detailed roadmap landscape

- Format and structure
- Market, product, capability and resources
- Links

C Roadmap detail content

- Future needs and challenges
- Priorities
- A roadmap to the future

D Summary

- Next steps
- Action plan
- Participants

The roadmapping report will be stored in a computer, in a form of knowledge management system, for future reference purposes.

Step 5: Storage, retrieve, share

The fifth step stores, retrieves and shares the roadmapping report with the related departments (or individuals) from the organisation.

The greatest value of the roadmapping tool is not the immediate output, but rather the activities that follow that retrieve and share the knowledge with other parts of an organisation (users group) in order to communicate the company's plans and coordinate the relevant activities (Fig.4).

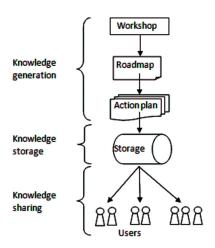


Fig.4: A knowledge management system

In order to avoid a 'one-off' process, the company's management should use the knowledge management system effectively. They should identify the departments (or individuals) that need to be connected and allow them to access the roadmapping report. They should also develop an information sharing system to use the information within the company. Policies should be developed to make systematic use of the information.

Together with the workshop activities and the computerised reports, the knowledge management system can be used to generate, store, and share knowledge among departments and individuals within an organization. The diagram shown in Figure 4 illustrates how this system functions as a knowledge management system (see Figure 4). In order to test the applicability of the proposed system, a research was conducted using an action research methodology within a manufacturing firm.

RESEARCH METHODOLOGY

Structured action research was adopted as the primary research methodology in this research. Susman and Evered (1978) strongly advocate the adoption of action research when conducting an applied research. They believe that action research has a far greater potential than positivist science for understanding and managing the affairs of organizations. In this study, the use of an action research methodology enabled an active intervention into the current company's system, in order to allow managers to use TRM while actively participating in the research. It is called 'structured' because the intervention is organised into a stepby-step process, based on the five steps of the proposed roadmapping system (as explained previously). An experiment was conducted to test this 'structured' process of the proposed roadmapping system. A clinical inquiry approach was used to observe, generate, and record most of the invisible soft aspects of implementation throughout the whole research. Although action research has often been criticised for its lack of replicability, and hence lack of rigor, a growing body of academics recognise and support action research as being a valid research approach (Coghlan, 1994; Eden & Huxham, 1996; Harland et al., 1999, Reason & Bradbury, 2010). Action research is considered ideal in fulfilling the objective of this research because the development of new and useful scientific knowledge depends more on its practical usage in a real world setting. This research method is especially useful in the area of industrial application of strategic management tools (Platts, 1994; Phaal *et al.*, 2010).

The effectiveness of conventional research techniques such as surveys, interviews, or focus groups, in exploring the views and opinions of business executives or managers on company's strategies and performances, is increasingly being called into question. This is possibly because this group of respondents have been approached so often that they hesitate to either complete yet another questionnaire or answer even more questions. Indeed, some might even be totally unwilling to respond at all or others might even resort to answering questions in a frivolous manner. Many have complained of being oversurveyed and obtaining limited benefits from the survey.

Earlier TRM researchers dealt more with the 'action' rather than the 'research' element. That is, they focused more on how to successfully generate a roadmap, being more concerned with how to improve the technical aspects of the TRM process and the format used such as the T-plan (Phaal et al., 2001) and the workshop-based approach (Phaal et al., 2007). This research, however, deals with 'research' rather than 'action'. In this study, the soft aspects of the implementation process play a more critical role. A 'clinical inquiry' approach was adopted in order to explore the human factors of the TRM implementation i.e., knowledge sharing. Clinical inquiry deals with the elicitation, observation and reporting of available data, when the researcher is engaged by an organization to help with or solve problems (Schein, 1995).

According Schein to (1993),clinical inquiry is particularly suited to organisational research on culture. It also enables intervention and inquiry into an organization to take place concurrently. In this research, the participating company appointed its R&D executive as the internal facilitator to coordinate this project. Apart from taking such role, the internal facilitator of the clinical inquiry was also responsible for observing the participants and generating useful information that promotes the successful implementation of TRM.

The use of an internal facilitator is consistent with the action research approach, because it mandates a close involvement between the organisation and the researcher. This deep involvement provides a richness of insight, which could not be gained in other ways (Whyte, 1991). Researchers in an action research act as facilitators, rather than as consultants (Gill & Johnson, 1997). In general, a consultant will independently assess the firm under study and make recommendations based on his or her observations. However, a facilitator will catalyse the process of using the technique within the subject firm; without imposing personal views that may affect the decisions made by the firm. The facilitator will ensure that the personnel within the firm participate fully in the process of using the technique (Platts,

1994). In addition, the internal facilitator will investigate the issues from an insider's perspective. An insider approach provides an opportunity to develop insider's knowledge of an organization (Evered & Louise, 1981).

In this research, the internal facilitator worked with the researcher, who trained the internal facilitator and provided her with the required technical knowledge and support, as well as advice on how to implement the proposed roadmapping system. Data were collected mainly through observations, question and answer sessions, and discussions between the internal facilitator and the participants.

The participants were interviewed before, during and after each of the research sessions. All grievances, comments, and opinions were gathered from each participant. The findings were enriched with additional feedback and insights through team discussions, reflections, and question and answer sessions.

A CASE STUDY

Fuelled by the need to adopt a more suitable and established tool to manage technology planning amid the current global economic uncertainties, a local manufacturing firm [YCL (anonymous name)] boldly adopted the proposed roadmapping system.

Determining the project's aim

The company identified, as its main objective for adopting TRM, the need to

formulate an effective future strategy to optimise the power of technology. In order to fulfil this aim, the company decided to adopt TRM to chart its Research and Development (R&D) strategies for the next five years.

Project team formation

After the formulation of the project aim was completed, the company proceeded to form the team required to implement TRM. The individuals involved in the project were the CEO, R&D manager, business development manager, R&D senior executive, R&D executive, and finance manager.

The critical role of the CEO

The CEO's support and involvement in the project are important to drive the usage of TRM, especially during the early stages of implementation. Not with standing that, the CEO's participation is expected to ensure that resources are made available when needed while involvement among team members can be improved. It is crucial for the CEO to clear any obstacles present during this stage of the project. Challenges such as noncooperative behaviour from participants and other parts of the organisation in providing data to construct a detailed roadmap, are expected to surface during this stage. The CEO's role is also crucial because he/she possesses the power to remove these hurdles. The research also brings together people from different functional areas of the organisation in order to improve coordination between them.

According to the CEO, the firm operates in an ever increasingly competitive environment: and thus. needs an effective yet flexible method to make strategic decisions for technology. The business development manager was quoted as saying that "amid the current global economic uncertainties, the current business environment was challenging." With 160 employees, the company (which does not wish to disclose its identity, in order to protect its competitive interest) is a privately owned medium size business that manufactures consumer goods.

Technology mapping and communication

The R&D manager said "I feel that having a tool for technology strategic planning would be good for our organisation. This is especially true for our R&D department, so that we can plan for our R&D department's direction for the next five years." The R&D manager also said that wrong decisions being made on technology investment could cost the organisation a lot of money. As such, the communication between the business and R&D departments of the company was extremely important.

Technology planning – the process

The whole research process, which is based on a structured action research with a clinical inquiry approach, was conducted over a period of three weeks. The design of the experiment was based on the five-step roadmapping process (as mentioned previously).

In this research, the internal facilitator (i.e., the R&D executive) assisted the participants to use the TRM techniques, in order to generate a roadmap and produce the computer generated roadmapping reports, as well as to formulate the knowledge sharing guidelines within the firm.

After the workshops and the reports were generated, the participants were asked to gather again one month later. During this meeting, the participants were required to draw a plan of how to use the knowledge in future, based on the computer generated roadmaps and reports. The meeting began with a presentation by the internal facilitator on the final roadmap and report. The session was followed by a discussion on how to carry out subsequent works based on all of the strategies identified. After intense deliberation, it was found that not much change was needed, because some of the strategies, such as the R&D project, were currently on-going. Furthermore, the need to initiate a new R&D project and acquire a new resource was being feasibility assessed by management. The company would keep the roadmap for now but plan to further develop it in the near future.

Positive downstream effects accruing to roadmapping

The greatest value of any managerial tool is not confined to the immediate output, but rather the follow-up activities that are built into the existing organisational system. Therefore, in order to avoid a 'one-off' process, all the participants were responsible for selling the outputs to their respective functional areas within the whole organisation. The participants also identified the resources required to improve the use of the knowledge; and, collectively, they formed a new company policy to share that knowledge. As such, employees would have to comply with the policy to further develop roadmaps and those who implement the strategies effectively would be well rewarded. As a result, the participants produced many procedures and policies during the meeting.

DISCUSSION

The application of the roadmapping tool resulted in a number of insights into the aspects of knowledge management, which have added to academic understanding, and could form the basis of further work. The following section discusses the wider implications of the system for both managers and academia.

This research has shown that the implementation of the proposed roadmapping knowledge management system in a manufacturing firm generated useful feedback from all the participants involved. Not only has the study revealed the soft aspect of knowledge management, it has also reflected its economic and technical dimensions.

Similar to the economic aspect, feedback from participants has indicated that TRM is able to help managers generate a roadmap that allows the company to better visualise and plan strategies, achieve better communication and understanding between the business and R&D departments, and obtain new perspectives on future strategies. The participants agree that TRM is useful in helping them to map the company's current resource constraints and generating effective strategies for future growth.

On the technical side, feedback from the participants shows that TRM is easily understood by managers and could well be employed without prior knowledge or special training. There are no sophisticated mathematical formulas or computing software involved. For instance, the R&D manager commented that the process is easy to follow, and that he faced no difficulties in using it. The R&D senior executive also felt that the process was simple and well structured. She said the architecture was easy to understand, and that the technique taught could be mastered within a short period of time. Overall, the findings from the technical and economic aspects of the workshop are consistent with those of previous works by Phaal et al. (2001, 2004, 2010).

Although the underlying theories and practices of roadmapping based on the technical and economic aspects are not entirely new, the application in the form of a *roadmapping system* provides an effectively way to generate, store, and share knowledge among individuals or departments within an organisation. As a knowledge management process, it plays an important role in a firm by providing a practical and usable system for managerial decision-making.

Far too often, managers face information overload within a company. Companies might spend significant time developing a long list of strategies and objectives, which are then passed down to a manager to carry out. As there is a lack of tools to enable managers to generate, store, and share the right information, there is a tendency for them to end up with too many strategies, aims, and objectives. Usually, by way of coping, managers will restrict the boundary of strategic planning to the areas they are familiar with. This is understandable, because in the face of complexity and the need to act quickly, managers will tend to seek the comfort of the known. A formal roadmapping system provides a mechanism for combating this deficiency. In this system, it has been demonstrated that managers can be guided by the five steps of the knowledge generation, storage, and sharing system. The system helps managers to decompose the complexity of understanding and

managing information into smaller, more manageable steps. Furthermore, the developed strategy roadmap assists the managers to better understand their organization's future direction. The value of multiple participations in the workshop was also clearly demonstrated. Group discussion, challenge, and review helped the participants to crystallise their thoughts and reduce inconsistencies each step of the way.

The steps for generating and storing the roadmapping report gave the managers new insights, not just into the way the information was used, but also in the way in which their colleagues shared and perceived similar information using the same platform. These insights are clearly of considerable value.

The system is educative — it encourages learning both at individual and group levels. By iterative modelling and group discussion, managers learned to modify their understanding, ideas, beliefs and thoughts over time. The developed roadmapping report provided a way of recording, storing and disseminating the strategies of an organisation in such a way that could easily be retrieved or accessed. This allows the knowledge management system to be built up over time, and to be revisited and amended as changes occurred. This technique is evidenced to be both robust and dynamic.

One of the most challenging tasks in any company today, is the handling of too much information, i.e. information overload. Too much information generated from a strategic planning workshop, in a practical sense, is very difficult to analyse. This tool is, therefore, concerned with the ways of handling 'messy' information in effective ways. This research proposed a knowledge management system for handling the complex issues associated with complicated business strategies. The system consists of a roadmapping workshop to generate relevant strategies, which are then mapped, i.e. the roadmap is created. This roadmap is then transformed into a data storage system with action plans and reports. The roadmap and reports reduce the complexity of information to a level that can be analysed by managers. This provides managers with a holistic view of their company's strategies and future directions, and helps them to manage their company better.

The main benefit of this knowledge management system is that it results in knowledge that is directly applicable to industry (i.e., in the form of a roadmap and action plan). In this sense, managers can use this knowledge without having to modify it. Furthermore, the documentation within the system allows for its retrieval at any time. Policies and guidelines enable user groups to share relevant knowledge. The advantage of this system over other tools or techniques is clear

In summary, the roadmapping tool can be used as an effective knowledge management system, to generate, store, and share business strategies. The roadmap combines the workshop approach for the whole roadmapping exercise; thus providing a way of generating useful and relevant data from company managers' inputs. It is successful in helping company managers to generate relevant strategic information for analysis. It promotes the integration of company managers' views, allows communications clarification of information, and facilitates the identification of the most important business strategies (having traded-off those that are less important). By using inputs from managers, the system allows the development of strategic roadmaps based on accurate and valid data. This shows that the system provides greater benefits and capabilities than many other strategic planning tools.

The key feature of this system is its ability to continuously generate knowledge, store knowledge, and share knowledge in an organization. Consequently, the organisation can change or modify its strategies in response to environmental dynamics. A system that can be used for strategic planning and knowledge management allows managers to kill two birds with one stone. This kind of combined management technique is rare and unique.

CONCLUSION

Conventional research on TRM has often emphasised the hard aspects of the technical and the economic rather than the soft aspect of knowledge sharing. It is believed that it is the soft aspects that play a pivotal role in determining the successful implementation of TRM within an organization. The lack of understanding of these elements could reduce the effectiveness of using TRM, which will subsequently lead to its abandonment.

Thispaperintroducedanewknowledge management system for generating, storing, and sharing of business strategies. The system was created in order to capture the complexity of business strategies in a simple and easy to understand way. This research promotes the development of a knowledge management system within a wider organisational information system. The paper has revealed and crystallised the roadmapping system into an information system. An effective information system can be critical to company performance. It provides a database that delivers practical guidelines and policies to enhance management's competitiveness. Roadmapping is a form of codified knowledge that improves understanding about business strategy, because it provides information to managers in a more descriptive, structured, and visualised form.

This knowledge management process can assist managers to generate, store, and

share strategies of firms; thus enabling them to make complex business decisions quickly and efficiently. This research indicates that the knowledge management system has high utility and enables managers to visualise and monitor business strategies in an easier way. The storage system provides a platform for managers to retrieve, view, share, and discuss their strategies leading into the future. However, these findings are limited to a single case study; and thus, it cannot (as yet) be generalised to a wider industry context. Further research should be conducted to investigate a wider applicability of this knowledge management system, in a range of companies from different industries.

Overall, this study has broadened the scope of TRM by incorporating knowledge management as one of its key features. By taking into account the non-traditional context of the soft elements of knowledge sharing, this research has extended the scope of the literature work on TRM. However, there is scope to develop a more thorough theoretical framework with regards to TRM in the future.

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Motivational Factors for Academicians in Private Universities to Participate in Knowledge-Sharing Activities

Mansor, Z.D.* and Saparudin, I.N.

Department of Management and Marketing, Faculty of Economics and Management, 43400 Serdang, Malaysia.

ABSTRACT

Everybody can be part of knowledge-sharing activities, and this is especially true if we are referring to Higher Education Institutions (HEIs), where, in many situations, knowledge sharing can be seen to take place via natural activities. However, barriers and problems for knowledge sharing are also common. This is because some people think that their knowledge is valuable and important and are unwilling to share unless there are enough incentives. This study applies the Theory of Planned Behaviour (TPB) to explain knowledge-sharing behaviour among academic staff at selected private HEIs in Malaysia. The main objective of this study is to identify the motivation that influences knowledge-sharing behaviour. A total of 110 respondents participated in answering this study's questionnaire. The findings revealed that knowledge-sharing behaviour among academic staff exists and is affected by different motivational factors such as organisational rewards and reciprocal benefit as extrinsic factors and self efficacy and enjoyment in helping other as intrinsic factors.

Keywords: Knowledge sharing, Motivational factors, Private universities in Malaysia

INTRODUCTION

Promoting knowledge sharing in any organisation is very important. As Dyer

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E-mail addresses: drzurainadm@gmail.com (Mansor, Z.D.)

aina_m@upm.edu.my (Saparudin, I.N.)

* Corresponding author

and Nobeoka (2000) indicated, knowledge sharing can help communities of people to work together, and, by working together, these people can facilitate the exchange of knowledge, enhance organisational learning and increase their ability to achieve both individual and organizational goals. Knowledge sharing can be as simple as communication between two individuals or within a group of people,

and it can involve a practice of seeking and sharing knowledge. This suggests that knowledge sharing can occur at individual, group and organizational levels. At the organisational level, knowledge sharing captures, organises, reuses and transfers experienced-based knowledge that resides within the organisation and has the potential to be used by others. In this situation, the organisation has the potential to increase both the productivity and the retention of intellectual capital, even after employees have left the organisation (Lin, 2007).

Knowledge sharing is vital to the success knowledge management practices in all organisations, including HEIs. According to Kamal et al. (2007), the sharing of knowledge is essential in knowledge-based organisations like HEIs because most of the employees are knowledge workers. Davenport (2005) defines knowledge workers as workers who have high degrees of expertise, education or experience, whose primary job purpose involves creation, distribution or application of knowledge. The implicit knowledge created by academics is embedded in their minds and constitutes the storehouse of an educational institution's intellectual capital. Thus, it is believed that the knowledge residing in academicians is very important and needs to be managed and accessible. As stated by Yang and Ismail (2006), academicians in HEIs are no longer just providing knowledge to the students; they also must be able to manage and blend together their existing knowledge into references for the next generation.

The purpose of this study is to identify the motivational factors influencing the knowledge-sharing activities among academic staff in private HEIs in Malaysia.

KNOWLEDGE SHARING

According to the knowledge-based view of the firm (Grant, 1991, 1996; Spender, 1996), knowledge is the foundation of a firm's competitive advantage and, ultimately, the primary driver of the firm's value. This knowledge, however, resides within individuals (Nonaka & Konno, 1998) or, specifically, within the employees who create, archive, share, transfer and apply it while performing their jobs. Consequently, when there is movement between knowledge or information across individuals, knowledge sharing (KS) will take place.

KS is normally aimed accomplishing something useful with knowledge. The process for KS can be seen in two dimensions: one dimension manages existing knowledge, including the development of knowledge repositories (e.g., memos, reports, articles and reports) and knowledge compilations, the other manages knowledge-specific activities (i.e., knowledge acquisitions, creation. distribution. communication. sharing and application) (Stenmark, 2001).

Fengjie *et al.* (2004) noted that the process of KS normally involves, first, one person contributing a portion of his knowledge so that others can learn or get to know the knowledge, then, all members adding their own understandings and

transforming the knowledge into their own individual knowledge. In this process, the willingness of two or more parties to share their knowledge is required.

KS is important in building knowledge-based competitive advantages within any organisation (Cohen & Levinthal, 1990; Kogut & Zander, 1992). This is based on the notion that knowledge, when residing within an individual, needs to be shared or transferred before it can be reproduced to add value to the receivers of the knowledge.

Even though KS among individuals has been acknowledged as a positive force for the survival of an organisation, the factors that encourage or discourage KS behaviours in the organizational context are poorly understood. Therefore, it is not surprising that individuals are unwilling to share their knowledge with others. It is important to understand when people are willing to share their knowledge and how an organisation can facilitate this type of behaviour from both a research and a practical standpoint. Individuals are not always willing to share their knowledge, and they may not be willing to share as much as an organisation would like them to. In an academic institution, there are groups of experts and knowledge workers comprising of academic staff members who possess tacit knowledge through experience in their respective fields; therefore, it is an excellent place for practicing a knowledge management system.

Factors Contributing to Willingness to Share Knowledge

Many previous studies have used the theory of planned behaviour (TPB) to support research in KS; this is because KS is an intentional behaviour, this study also uses the TPB, in which intentions "are assumed to capture the motivational factors that influence a behavior" (Ajzen, 1991, p. 181). Three factors influence intentions include: (1) attitude toward the behaviour, (2) social norms regarding the behaviour, and (3) beliefs about one's control over the behaviour. Attitude refers to the degree to which one evaluates the behaviour favourably or unfavourably.

Previous studies also suggest that the level of KS can be influenced by several factors. As noted by Davenport and Prusak (1998), extensive KS within organisations is guarded by human tendencies or behaviours. Further, Hoof and Ridder (2004) stated that people would be more willing to share if they were assured that their contributions would be valued, that they would receive recognition and that the knowledge that they shared would be used.

The behaviour of sharing can be influenced by motivational factors. The ease of sharing is also likely to influence people's willingness to share. For example, Gagné (2009) stated that the nature of the knowledge will influence how easily it can be transferred, and its value will influence people's motivations to share. Motivation has been acknowledged as a key determinant of general behaviour. Extrinsic motivation and intrinsic motivation

influence people's attitude and willingness to share knowledge (Lin, 2007). Extrinsic motivation includes personal obligations to reciprocate. Thus far, researchers have studied KS motivation as a function of reciprocity issues, and of the relationship with the recipient and of rewards (Ipe, 2003).

In a study by Susantri and Wood (2011), it was noted that employees have to be encouraged to increase their involvement in KS activity. According to the authors, employees' attitudes and willingness to participate in KS activities are highly dependent upon their assumptions or expectations regarding the profit or loss that will result from their contributions (i.e., the extrinsic value of motivation). Further, in reference to educational psychology perspectives and, specifically, the motivational theories of learning, it is also stated that motivation and willingness to perform any action can be based on an individual's needs, desires and wants (i.e., intrinsic value of motivation). An example of this could be people sharing knowledge in online communities to gain opportunities to help others (Wasko & Faraj, 2005).

Previous studies have also indicated that KS is not free from barriers. As stated by Riege (2005), there are three levels of barriers that can potentially hinder KS. At the individual level, there are barriers such as a lack of communication skills and social networks, differences in national culture, differences in position status, and lack of time and trust. At the organisational level,

barriers include a lack of infrastructure or support environments. At the technological level, barriers are correlated with people's unwillingness to use applications and systems (Riege, 2005).

Thus, this paper's research objective is to examine the role of extrinsic (i.e., expected organisational rewards and reciprocal benefits) and intrinsic (i.e., knowledge self-efficacy and enjoyment in helping others) motivators in explaining lecturers' KS behaviours.

RESEARCH METHODOLOGY

Knowledge is important to both public and private learning institutions, especially when a country seeks to promote a knowledge-based economy. According to a study by Sohail and Daud (2009), the nature of knowledge, working cultures, staff's attitudes, motivations to share and opportunities to share play important roles in enhancing KS among teaching staff in public universities. This research was conducted among academic staff within private universities. In general, it can be said that people within universities do participate in KS activities. However, some earlier research suggested that different cultures of public and private universities impact the enhancement of KS activities. As Tippin (2003) stated, academics involvement in the KS activities could be quite inconsistent due to many of them becoming more individualistic and KS also depend on the university culture. Based on this reason, the study was proposed to see what would be the motivational factors that influence academics within private HEIs in participating with KS activities.

Further, Fullwood *et al.* (2013) noted from their study that universities always have cultures that are regarded as "collegially networked institutions", in which academic departments are idiosyncratic and complex and each department is related to different motives and objectives. Similarly, Taylor (2006) characterised universities as involving too much bureaucracy and being centralised institutions, traditionally run by and for academic communities, with less autonomy.

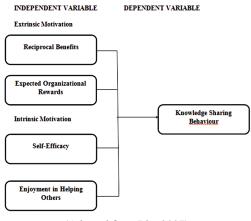
Several other organisational dimensions such as organisation structure, organisational culture and reward systems (Liebowitz & Beckman, 1998) have also been mentioned as impacting and enabling KS. As stated by Collision and Cook (2003), the organizational structures of universities or HEIs could also create barriers for KS, since academics generally have strong potentials to work individually and in isolation from each other.

The respondents within this research study were lecturers from the top four private universities, based on various levels of academics, faculties, working positions and years of service. The study was done to identify the motivating factors contributing to the involvement of academicians in public universities in KS activities. The study also determined the factors (i.e., intrinsic or extrinsic) contributing more to promoting these lecturers' willingness to share

The selection of the top four private universities in Malaysia was based on the survey of Malaysian University Rankings by QS Asian University in 2013. The respondent universities were: the Malaysia Multimedia University (MMU), Cyberjaya Campus; the University Tenaga Nasional (UNITEN), Putrajaya Campus; the Lim Kok Wing Creative Technology; and Universiti Tunku Abdul Rahman (UTAR). These universities were selected based on the idea that different universities would generate a more realistic overview of how the leading private universities in Malaysia applied KS in their institutions. A total of 300 questionnaires were distributed to lecturers through online forms and personal visits.

In order to support the current study, a conceptual framework was developed using Lin's (2007) conceptual model. The framework, however, was modified to suit the current study (see Fig.1).

CONCEPTUAL FRAMEWORK



(Adapted from Lin, 2007) Fig.1: Conceptual Framework

HYPOTHESIS AND RESEARCH MEASUREMENT

Previous research agrees that every individual is intrinsically motivated to share knowledge if he or she believes it is meaningful or interesting with regard to helping others solve exigent problems; this motivation exists in addition to individuals' natural love and enjoyment in helping others (Davenport & Prusak, 1998; Kankanhalli et al., 2005; Lin, 2007; Lin et al., 2008; Olatokun & Nwafor, 2012; Wasko & Faraj, 2005). Specifically, researchers like Bock et al. (2005), Ipe (2003), Kankanhalli et al. (2005), Lin (2007), Lin et al. (2008), Wasko and Faraj (2005) and Olatokun and Nwafor (2012) have stated that reciprocity behaviour is one of the motivational factors that can facilitate KS. Reciprocity behaviour entails a sense of communal indebtedness, through which employees are motivated to transfer personal knowledge if they foresee the extrinsic benefits associated with the information dissemination. Thus. research has suggested its first hypothesis as: H1: Reciprocal benefits have a positive

In their study, Susantri and Wood (2011) indicated that employees need to be encouraged to increase their participation in knowledge sharing activity based on the assumption that they will normally consider what they may gain or lose as a result of this action. Earlier Bock and Kim suggested that in general, people would be willing to involve in KS if they could expect to gain economic benefits such as increased pay, bonuses, job security, or

relationship with KS behaviour.

career advancement. Thus, this research suggested that:

H2: Expected organisational rewards have a positive relationship with KS behaviour.

Bock et al. (2005), Kankanhalli et al. (2005), Wasko and Faraj (2005) and Olatokun and Nwafor (2012) also suggested that self-efficacy could intrinsically motivate and encourage employees to share knowledge at their workplaces. Knowledge self-efficacy refers to individuals' discernment of their own ability to provide knowledge to others en route to the execution of a given task at a designated degree of performance. Individuals who feel confident that their knowledge is significant for organisational performance have a propensity to discharge their intellectual propriety to others, as well as to be actively involved in acquiring new knowledge for future sharing and application. Thus, based on these insights, this research study proposes its third hypothesis, i.e.:

H3: Self-efficacy has a positive relationship with KS behaviour.

In another situation, KS can be motivated by the feeling of enjoying to help others. Earlier research supports that some people can be motivated to contribute their knowledge as they knew they will help other people solve problems (Wasko & Faraj, 2005). Based on this, the research has suggested the following hypothesis:

H4: Enjoyment in helping others has a positive relationship with KS behaviour.

In their study, Susantri and Wood (2011) found that intrinsic motivation as well as extrinsic motivation influence

knowledge sharing attitude. However, they also found that intrinsic motivation plays a bigger role on the willingness to share compared to extrinsic motivation in which they said that intrinsic motivation is able to influence the willingness and eagerness to share. Thus, the research also proposed that: H5: Intrinsic motivation affects KS behaviour more than Extrinsic motivational factors.

Overall, the questionnaire for this research includes 57 items, which are divided into six sections. Section A (Demographic Data) was designed to collect the demographic data of the respondents. Section B (Expected Organisational Rewards) asked the respondents' opinions regarding their expectations of monetary and non-monetary rewards offered by the organisation for KS activities. These questions were adopted from Kankahalli et al. (2005) and Olatokun and Nwafor (2012). Section C (Reciprocal Benefits) sought the opinions of the respondents regarding their expectations of reciprocal benefits. These questions were adopted and modified from Kankahalli et al. (2005) and Olatokun and Nwafor (2012). Section D (Knowledge Self-Efficacy) sought to identify the respondents' opinions regarding the value they placed on the knowledge they shared. The questions were adopted and modified from Kankahalli et al. (2005) and Olatokun and Nwafor (2012). Section E (Enjoyment in Helping Others) collected data on the respondents' opinions regarding whether sharing knowledge is tied to the pleasure of helping people solve problems. These questions were adopted and modified from Kankahalli et al. (2005) and Olatokun and Nwafor (2012). Section F (Behaviour Towards KS) asked questions directed respondents' towards the behaviour towards KS.

All the questions in Sections B, C, D, E and F used a five-point Likert scale, with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree.' The Likert scale presents a measure of attitude ranging from very positive to very negative, which was designed to allow the respondents to indicate how strongly they agree or disagree with the research questionnaire.

A reliability test for all the variables was conducted, and the results showed that all the variables are reliable, as shown in Table 1 below.

TABLE 1 Reliability Statistics

Variable	Cronbach's Alpha (Pilot Study)
Expected Organisational Reward (10 items)	0.934
Reciprocal Relationship (10 items)	0.796
Self-Efficacy (10 items)	0.813
Enjoyment in Helping Others (10 items)	0.794
Knowledge Sharing Behaviour (10 items)	0.913

RESULTS AND DISCUSSION

Based on this research, the following findings were made. The majority of the respondents are female (60.0%), married (70.0%), between 31 years and 35 years of age (29.1%), and in the position of lecturer (62.7%). The majority had

working experiences of between 6 years and 10 years (31.8%), while 38.2% had 6 to 10 years of working experience at their current universities. This suggests that the majority of the lecturers in these private universities are younger academics.

TABLE 2 Respondents' Profile (N=110)

Respondents' Demographic	Categories	Frequency	Percentages (%)
Gender	Male	44	40.0
	Female	66	60.0
Marital Status	Married	77	70.0
	Unmarried	33	30.0
Age	20-25	10	9.1
	26-30	14	12.7
	31-35	32	29.1
	36-40	21	19.1
	41-50	18	16.4
	51 and above	15	13.6
Designation	Tutor	12	10.9
	Assistant Lecturer	12	10.9
	Lecturer	69	62.7
	Associate Professor	11	10.0
	Professor	6	5.5
Working Experience	Less than 6 years	28	25.5
	6-10 years	35	31.8
	11-15 years	19	17.3
	16-20 years	15	13.6
	21 years or more	13	11.8
Years in current	Less than 6 years	41	37.3
organization	6-10 years	42	38.2
	11-15 years	16	14.5
	16-20 years	8	7.3
	21 years or more	3	2.7

A correlation analysis was used to measure the relationships between two or more variables. In this study, correlations were used to examine the relationships and directions of the linear correlations between the expected organisational rewards, reciprocal relationships, self-efficacies and KS behaviours of lecturers from the four selected private universities. A correlation shows whether two variables (e.g., organizational rewards and knowledge sharing behavior) are related

or not, and if yes, how strong. Based on the statistical terms the relationship between variables is denoted by the correlation coefficient, which is a number between 0 and 1.0. Pearson's r is the most common; the main ideas discussed here are similar for all correlation coefficients.

• If there is no relationship between the variables under investigation (or between the predicted values and the actual values), then the correlation coefficient is 0, or non-existent. As the strength of the relationship between the variables increases, so does the value of the correlation coefficient, with a value of 1 showing a perfect relationship (as mentioned, in variables studied in educational research, or generally in social sciences, it is highly unlikely that such perfect correlations are found).

In general, the higher the correlation coefficient, the stronger the relationship. Tables 3 presents some rules of thumb by Hinklen *et al.* (2003).

TABLE 3
Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Size of Correlation	Interpretation
.90 to 1.00 (90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (70 to90)	High positive (negative) correlation
.50 to .70 (50 to70)	Moderate positive (negative) correlation
.30 to .50 (30 to50)	Low positive (negative) correlation
.00 to .30 (.00 to30)	Little if any correlation

Source: Hinkle, Wiersma & Jurs (2003). Applied Statistics for the behavioural Science (5th edition)

The Relationship between Reciprocal Benefits and Knowledge Sharing Behaviour

H1: Reciprocal benefits are positively related to KS behaviours among lecturers.

Table 4 indicates that the correlation between reciprocal benefits and KS behaviours is 0.525 and that the significance level is 0.00. This indicates that the correlation is positive, and according to

the rule of thumb, the relationship shows a moderate relationship. Hence, the research hypothesis is accepted. The result is also supported by some earlier studies by Wasko and Faraj (2005) and Kankanhalli *et al.* (2005). This result suggests that lecturers in private universities enjoy reciprocal benefits such as long-term mutual cooperation and on-going support, which can provide effective motivations to facilitate KS in their daily activities.

TABLE 4
Correlation Analysis between Reciprocal Benefits and KS Behaviour

		Reciprocal Benefits	Knowledge Sharing Behaviour
Reciprocal Benefits	Pearson Correlation	1	.525**
	Sig. (2-tailed)	110	.000
	N		110
Knowledge Sharing	Pearson Correlation	.525**	1
Behaviour	Sig. (2-tailed)	.000	
	N	110	110

^{**.} Correlation is significant at 0.01 level (2-tailed)

The Relationship between Expected Organizational Rewards and Knowledge Sharing Behaviour

H2: Expected organisational rewards have a positive relationship with KS behaviour.

From the findings shown in Table 5, it is evident that the correlation between the expected organisational rewards and KS behaviour is 0.125 and that the significance level is 0.192. The result is in the situation where p> 0.05. This indicates that there is an insignificant correlation between

expected organizational rewards and KS behaviour, and thus, H2 is rejected. This result is consistent with the finding in a study by Sandhu *et al.* (2011) who found an insignificant relationship between expected organisational rewards and KS behaviour. This finding suggests that current organisational rewards, whether monetary incentives (such as increased salaries) or non-monetary incentives (such as promotions or job security), are ineffective in encouraging lecturers in private universities to share their knowledge.

TABLE 5 Correlation Analysis between Expected Organisational Rewards and KS **Behaviour**

		Expected Organizational Rewards	Knowledge Sharing Behaviour
Expected	Pearson Correlation	1	.125
Organizational	Sig. (2-tailed)		.192
Rewards	N	110	110
Knowledge Sharing Behaviour	Pearson Correlation Sig. (2-tailed)	.125 .192	1
	N	110	110

^{**.} Correlation is significant at 0.01 level (2-tailed)

The Relationship between Self-Efficacy and Knowledge Sharing Behaviour

H3: Self-efficacy is positively related to KS behaviours

Table 6 shows that the correlation between self-efficacy and KS behaviours is 0.509 and that the significance level is 0.00. According to the rule of thumb, the result indicates that correlation is positive and the research can accept H3. In terms of the strength of the relationship, again according to the rule of thumb, it is a moderate relationship between self-

efficacy and KS behaviour. This result supports the research hypothesis, and is also consistent with previous study by Lin (2007). Hence it can be concluded that the lecturers believe in their ability to share their knowledge with others. The lecturers also have confidence in their ability to offer valuable knowledge, as well as to achieve good performance with regard to the tasks and responsibilities of lecturers. The lecturers also believe that their knowledge will help them improve their work and solve problems.

TABLE 6
Correlation Analysis between Self-Efficacy and KS Behaviour

		Self-Efficacy	Knowledge Sharing Behaviour
Self-Efficacy	Pearson Correlation	1	.509**
	Sig. (2-tailed)		.000
	N	110	110
Knowledge Sharing	Pearson Correlation	.509**	1
Behaviour	Sig. (2-tailed)	.000	
	N	110	110

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

The Relationship between Enjoyment in Helping Others and Knowledge Sharing Behaviour

H4: Enjoyment in helping others is positively related to KS behaviour among lecturers.

Table 7 indicates that the correlation between enjoyment in helping others and KS behaviour is 0.706 and that the significance level is 0.00. According to correlation rule of thumb, this indicates that the correlation is positive and can be accepted at p < 0.05. In terms of the strength of relationship, according to the rule of thumb, enjoyment of helping others and KS activities are highly related. Hence, the results support the research hypothesis. This result is consistent with the previous study by Olatokun and Nwafor (2012), which suggests that lecturers in private universities enjoy sharing their knowledge with others because they believe that, by sharing their knowledge, they help others solve problems or acquire new knowledge.

TABLE 7 Correlation Analysis between Enjoyment in Helping Others and KS Behaviour

		Enjoyment in Helping Others	Knowledge Sharing Behaviour
Enjoyment in Helping	Pearson Correlation	1	.706**
Others	Sig. (2-tailed)		.000
	N	110	110
Knowledge Sharing	Pearson Correlation	.706**	1
Behaviour	Sig. (2-tailed)	.000	
	N	110	110

^{**.} Correlation is significant at 0.01 level (2-tailed)

The Relationship between Intrinsic Motivation and Knowledge Sharing Behaviour

A regression analysis was used to analyse whether extrinsic motivation (i.e., expected organizational rewards and reciprocal benefits) or intrinsic motivation (i.e., selfefficacy and enjoyment in helping others) have a greater effect on KS behaviour among the academicians in the selected private universities. The results show that the R-value for extrinsic motivation is 0.526, while the R-value for intrinsic motivation is 0.706. This result indicates that intrinsic motivation has a greater effect on KS behaviour, which supports the research hypothesis. This result is consistent with previous studies conducted by Lin (2007) and Wu and Sukoco (2010). The result also implies that the lecturers' willingness to share their knowledge is prompted by internal motivation more than by external rewards. It also suggests that the desire to share knowledge is strongly related to self-efficacy and enjoyment in helping others. This situation supports the notion that 'we get what we give'.

CONCLUSION

This research study investigated the relationship between extrinsic motivation and intrinsic motivation with regard to the KS behaviour of lecturers at four top private universities in Malaysia. KS is an important element in learning institutions, even in private universities.

The research study sought identify what motivates academic staff in the selected private HEIs to share their knowledge. Based on the results, it can be said that in general, academic staff members do have positive attitudes towards KS and have found it to be a useful activity. The motivation to share knowledge is practically supported by the desire to help the organisation reach its goals and to help colleagues, while financial rewards and advancing one's career are seen as less motivating. The study also found that majority of the respondents agreed that they enjoy helping others, especially when they are considered the experts in a particular area. In addition, this variable (i.e.,

enjoyment in helping others) is also suggested as the most important factor prompting KS behaviour for the respondents at the selected private universities. Hence, this paper suggests that management pay attention to opportunities to promote KS behaviour based on this factor.

The study also found that intrinsic motivation influences academic more than extrinsic motivation. Here, the paper again suggests that management should pay attention to providing programmes or avenues for making KS activities common practices that really add value and bring competitiveness to the universities.

The study also revealed that organisational rewards (such as salary incentives, bonuses, and job security) are not a priority or the main reasons that lecturers want to be involved in KS activities. Thus, management should not use extrinsic rewards as a primary KS mechanism since this approach will not be effective. Overall, the findings of this study are supported by previous research findings. For example, previous research has also found that the willingness to share needs to be supported, not only with motivation (Chowdhury, 2005), but also with incentives, the development of a favourable culture and leadership style (Gagné & Forest, 2008), all of which are necessary to enhance KS activities.

RESEARCH LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The knowledge sharing behaviour at the higher learning institution should be an area that needs further attention. This is because the outcome of knowledge sharing will contribute to a greater productivity, reputation and effect, not only to the position of the institutions but also the performance of the lecturers.

The current research has some limitations which could be paid attention in the future research. The first limitation of the study is that the current research only focused on the four top leading private universities and thus, it cannot be generalised to all the private universities in Malaysia. Second, this survey only used two variables, which are intrinsic motivation and extrinsic motivation. Other predictors like attitude and culture were not included in this study.

Based on these limitations, the research suggests that future research include qualitative interviews with the respondents to attain more information such as identify the willingness, readiness and eagerness in participating in KS activities. This is because interviews with respondents, discussion and explanation are more in-depth. This qualitative research also helps to give different perspectives and views and perhaps contributes to new variables to be tested in the quantitative survey.

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Factors Affecting Customer Loyalty in the Telecommunications Industry in the Klang Valley, Malaysia

Wong Foong Yee*, Chew Soo Ling, and Loh Kian Leong

Department of Management and Marketing, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor:

ABSTRACT

A vital factor in the growth and performance of a company in the current highly competitive telecommunications industry is the development and enhancement of customer loyalty. Although several studies in the past have helped explain the influence of some significant variables for loyalty, not many studies have examined the effects of certain factors such as service quality, customer value and corporate image on the loyalty of subscribers of mobile telecommunication companies or providers. Thus, the aim of this study is to explore the critical factors of service quality, customer value, corporate image and customer satisfaction that generate customer loyalty in the mobile communication service markets in the Klang Valley, Malaysia. Furthermore, this study also attempts to validate the connection between these factors and customer loyalty. This study employed the convenience sampling method to select 100 respondents in the Klang Valley, Malaysia, who are mobile phone users. Their personal information was analysed by means of descriptive analysis, while inferential analysis was used to test the hypotheses. All the hypotheses were found to be supported by the findings of the study, which also showed that the tested variables are significantly related to each other. This illustrates that mobile service providers wanting to build and maintain a competitive edge in the mobile service market should make greater efforts to enhance the quality of their service, provide superior customer value, attain higher customer satisfaction and win customer loyalty.

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E-mail addresses:

fywong@upm.edu.my (Wong Foong Yee) kian_leong@live.com (Loh Kian Leong)

* Corresponding author

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INTRODUCTION

In the global and open market of today, quality, productivity and customer satisfaction have proven to be a challenge for the continued existence and development of companies. These demands are made heavier by the need to draw and keep customers who are loyal. Loyalty is defined as the customer's strong intention to once again buy the same products or services from the same company (Eshghi et al., 2007). According to Liu et al. (2011), strong loyalty manages to maintain the repurchasing activities of customers, who then have a tendency to suggest that others purchase of the same services.

Customer loyalty is the basis of a company's continued competitive advantage. It measures customer retention in terms of the number of returning customers, business referrals and word of mouth. Therefore, development and enhancement of loyalty is a critical factor in the growth and performance of a company (Lee & Cunningham, 2001; Liu *et al.*, 2011; Reichheld, 1996).

The telecommunications industry is a highly competitive industry. Rising competition, as well as changing market dynamics, poses fresh challenges and prospects to mobile service providers in both developed and developing countries. A recent report by the Malaysian Communications and Multimedia Commission, SKMM (2013) indicated that by the second quarter of 2013, there were 42.6 million mobile phone subscriptions, including post-paid and prepaid subscriptions in Malaysia. The mobile phone penetration rate in Malaysia rose from only 142.5% in 2012 to 143.4% in the second quarter 2013, clearly indicating that mobile telecommunication services are popular among Malaysians owning multiple subscriptions.

In this competitive market, mobile service providers need to draw new customers in order to obtain a greater share of the market as well as to keep their current customers (Hogan *et al.*, 2003; Lee-Kelly *et al.*, 2003). It is necessary for mobile service providers to discover what influences their customers and potential customers in their choice of a mobile phone service. Once a mobile service provider succeeds in fulfilling the expectations of Malaysian users, it will be easy for it to gain shares in the market and have the advantage over other mobile service providers (Turel & Serenko, 2006).

Although several previous research has helped to shed some light on certain significant variables that affect customer satisfaction such as supporting services and product, while referring to convenience, satisfaction and cost for loyalty, not many studies have examined the influence of such factors as service quality, customer value and corporate image on the loyalty of subscribers of mobile telecommunications firms.

Therefore, this study was done to explore how customers of different mobile service providers assessed three variables of mobile services, namely, service quality, customer value and corporate image that generated customer loyalty in mobile communications service markets. Moreover, this study also measured how strongly each variable is related to

customer loyalty. The results of this study would give some idea of how these factors (determinants) are related to the loyalty of customers to mobile service firms.

RESEARCH HYPOTHESES

According to Liu et al. (2011), service quality, which is a global concept across various fields, is a fundamental requirement by customers. Service quality is regarded as a major factor which determines the financial performance or profitability of a company. Numerous studies have shown that a positive and significant relationship exists between the perception of consumers with regard to service quality and their readiness to buy, their intention to buy again, their positive verbalization of intentions, their promotion of the service to others, and their steadfast loyalty (Bloemer et al., 1998; Parasuraman et al., 1991; Zeithaml et al., 1996). In other words, service quality not only attracts new customers away from rival firms, but also strengthens the customers' tendency to purchase again, to buy more and to tell others of their pleasant experiences (Venetis & Ghauri, 2000). Liu et al. (2011) agreed with this and mentioned that loyalty is a pledge to repurchase a fancied product or service on a regular basis in future.

Bloemer et al. (1998), Aydin and Ozer (2005) and Kuo et al. (2009) pointed out that a positive relationship exists between service quality and customer loyalty. They investigated the connection between service quality and post-purchase intention in the value-added services provided by

mobile companies, and their findings revealed that a positive post-purchase intention could be generated in customers by means of good product service quality. Behavioural intentions such as the intention to repurchase, suggesting a provider's reluctance to switch depends on service quality (Cronin et al., 1997; Cronin et al., 2000; Levesque & McDougall, 1996). This agrees with the findings of Liang et al. (2013) that the most usual reason given for changing service providers is the failure to provide core service. This proves that failure to provide services as promised is the main reason for the switching of services in China. Therefore, it is hypothesised that:

Hypothesis 1: Service quality of mobile services provided has positive relationship with customer loyalty.

A study by Wang et al. (2013) proved that perceived value has a positive impact on purchase intention and the relationship can be further enhanced when consumers possess a high level of ethical self-efficacy. This is supported by the findings of Dodds et al. (1991) that the perceived value of customers greatly influences their decision to purchase. Eggert and Ulaga (2002) also demonstrated that perceived value has a powerful, positive effect on the repurchase intentions and word of mouth intentions of customers. It has been shown that customers' value perceptions serve to increase their readiness to repurchase (Pura, 2005). Furthermore, according to Wang et al. (2004), value can be defined as "utility derived from the perceived

quality and expected performance of the service", which directly influences loyalty and also indirectly affects loyalty through satisfaction.

The intention to repurchase is a manifestation of customer loyalty (Kuo & Wu, 2012), whereby customers are inclined to return to what they experienced dealing with the company. when Wang and Chang (2013) asserted that purchase intentions provide information with regard the effectiveness marketing. of The relationship between perceived value customer loyalty has aroused the interest of service practitioners. Marketing professionals view perceived value as one of the main drivers of customer loyalty. Several researchers have suggested that customer perceived value has a positive impact on customer loyalty (Cronin et al., 2000; Kuo et al., 2009; Lai et al., 2009; Lin & Wang, 2006; Wang et al., 2004). Therefore, it is hypothesised that:

Hypothesis 2: Customer value of mobile services has a positive relationship on customer loyalty.

Image plays a significant role in the formation of perception of satisfaction since it mirrors how an individual views the reputation and corporate identity of the firm (Cleopatra *et al.*, 2004). Nguyen and Leblanc (2001) asserted that corporate image is linked to the physical and behavioural

characteristics of the company such as business name, architecture, range of products/services, and the notion of quality conveyed by each person through interactions with the company's customers. They came to the conclusion that corporate image is positively related to customer loyalty in three areas, namely, telecommunications, education and retailing. In addition, Rowley and Dawes (1999) hypothesised that the image (brand/corporate image) and customers' expectations with regard to the nature and quality of services influence their loyalty.

Therefore, a positive corporate image can have an effect on continued support (Dick & Basu, 1994), and that being an attitude, it will definitely influence behavioral intentions such as customer loyalty (Johnson et al., 2001). According to Lee (2011), strong customer loyalty can successfully maintain the repurchasing activities of customers, who will be inclined to promote the services to others. Customers may remain loyal to a company or a brand because it is perceived as having a positive image among other customers, especially when it is with regard to credence goods, and this alone may instil a degree of unwillingness to switch (Wang, 2010). Therefore, it is hypothesised that:

Hypothesis 3: The corporate image of a mobile service provider has a positive relationship on customer loyalty.

METHODS

Data were collected for this study by means of a questionnaire, which was modified and adopted from Chreang (2007) and Simon and Foresight (2009). The questionnaire was made up of five sections: A, B, C, D and E. Section A was aimed at obtaining information on the demographic and socio-economic status of the respondents. Section B comprised 24 items concerning the perception of the service quality of the service provider. Section C was made up of 14 items on customer value with regard to the mobile service company. Section D contained 8 items on the perception of the corporate image of the mobile service provider. Finally, Section E was made up of 4 items on customer loyalty towards the mobile service company. The questionnaire was pre-tested before it was circulated to 100 respondents in the Klang Valley, Malaysia. The Klang Valley area was selected for this study because it is the commercial centre of Malaysia, and it is equipped with the most up-to-date information technology and a high percentage of its population are Internet users (Euromonitor, 2014; Ministry of Federal Territories, 2014). The target population was the subscribers of the different mobile communication companies in Malaysia. Due to time and financial limitations, the convenience sampling method was employed for this study so as to gather a large amount of data from the target respondents.

The basic characteristics were defined by means of a descriptive analysis. The data from the samples were summed up in a direct and comprehensible manner, and were then analysed according to the demographic profile of the respondents such as gender, age, race, marital status, education level, occupation, personal monthly income, mobile service company subscribed to and types of services subscribed to. The Pearson's Correlation coefficient was used to determine the relationships between the variables so as to test the hypotheses. In the case of this study, it was used to test three independent variables (service quality, customer value and corporate image) that affect dependent variable the (customer loyalty). The variable that best predicted the overall findings obtained from the target respondents was also identified by means of multiple regression analysis.

RESULTS AND DISCUSSION

Demographic Profiles of Respondents

The demographic profiles of the respondents are shown in Table 1. In this study, the statistical data of the respondents were with regard to gender, age, race, marital status, education level, occupation, personal monthly income, as well as the mobile service company subscribed to and types of services subscribed.

TABLE 1 Demographic Profiles of the Respondents

Variables	Values	No. of Respondents	Percentage (%)	
Gender	Male	54	54	
	Female	46	46	
Age	Below 20	9	9	
	21 - 30	46	46	
	31 - 40	25	25	
	Above 40	20	20	
Ethnicity	Malay	30	30	
-	Chinese	47	47	
	Indian	23	23	
Marital status	Single	71	71	
	Married	29	29	
Educational level	Primary	4	4	
	Secondary	17	17	
	Tertiary	39	39	
Occupation	Public Sector	14	14	
	Private Sector	20	20	
	Self-employed	12	12	
	Unemployed	2	2	
	Retirees	5	5	
	Students	47	47	
Personal monthly income	Below RM1000	49	49	
	RM1001-RM2500	14	14	
	RM2501-RM4000	24	24	
	Above RM4000	13	13	
Mobile service company	Maxis	63	63	
subscribed	Digi	35	35	
	Celcom	2	2	
Types of service subscribed	Post-paid	51	51	
	Pre-paid	49	49	

Reliability Test

A reliability test was carried out to measure the reliability and the internal consistency of the results by considering the value of Cronbach's Alpha. According to Nunnally and Bernstein (1994), a Cronbach's Alpha coefficient value of 0.70 is an acceptable reliability score. If the value of the Cronbach's Alpha (α) coefficient is closer to 1, the higher value will be an indication of internal consistency, thus denoting that the items in that particular variable are highly inter-correlated. As can be seen from the results of the reliability test for this study shown in Table 2, the Cronbach's Alpha values varied from between 0.760 to 0.842, indicating that the scales used in this study are reliable and consistent.

TABLE 2 Results of the Reliability Test

Variables	No. of Items	Cronbach's Alpha (α)
Service Quality	24	0.842
Customer Value	14	0.832
Corporate Image	8	0.760
Customer Loyalty	4	0.826

Pearson's Correlation Analysis

The relationships between the independent variables (service quality, customer value and corporate image) and the dependent variable (customer loyalty) are illustrated in Table 3. The use of the Pearson's

Correlation test in this study indicated that there are significant and positive relationships between all the independent variables and dependent variable with regard to the telecommunications industry in Malaysia.

TABLE 3
Results of the Pearson's Correlation test

Variable	Customer Loyalty	Service Quality	Customer Value	Corporate Image
Customer Loyalty	1	0.923 (**)	0.853 (**)	0.861 (**)
Service Quality	0.923 (**)	1		
Customer Value	0.853 (**)		1	
Corporate Image	0.861 (**)			1

Hypothesis 1: Service quality of mobile services provided has positive relationship on customer loyalty.

The p value of 0.0001 obtained indicates that service quality is significantly related to the loyalty of subscribers of telecommunication services in the Klang Valley, since any p value below 0.05 (p<0.05) is an indication of a significant relationship between an independent variable and a dependent variable. A positive Pearson Correlation r value of 0.923 shows that service quality is positively related to customer loyalty. This

suggests that hypothesis 1 is successfully supported since according to Guilford's Rule of Thumb, an r value of 0.923 is an indication of a very high correlation between service quality and customer loyalty.

This finding is backed by the research carried out by Kim and Lee (2010), in which they asserted that the quality of the service provided by mobile telecommunication companies plays a vital role in generating customer loyalty towards service providers. The findings add weight to the results of previous

research which suggested that service quality has a positive effect on customer loyalty in mobile telecommunications markets in China (Lai *et al.*, 2009) and in Turkey (Aydin & Ozer, 2005). Moreover, Lee (2010) also suggested that if customers perceived a mobile phone service to be of superior quality, they would be more inclined to remain with their existing service provider and would promote the service provider to others.

Hypothesis 2: Customer value of mobile services has a positive relationship on customer loyalty.

The p value of 0.0001 obtained indicates that customer value is significantly related to the loyalty of subscribers of the telecommunications industry in the Klang Valley, since any p value that is below 0.05 (p<0.05) is an indication of a significant relationship between an independent variable and a dependent variable. It was noted that a positive relationship existed between customer value and customer loyalty because the positive Pearson Correlation r value obtained was 0.853. This suggests that hypothesis 2 is successfully supported since according to Guilford's Rule of Thumb, an r value of 0.853 is an indication of a high correlation between customer value and customer loyalty.

This finding is supported by and is consistent with the findings of other researchers such as Chreang (2007), Wang *et al.* (2004), Dabholkar *et al.* (2000), and Hong & Goo (2004).

Hypothesis 3: The corporate image of a mobile service provider has a positive relationship on customer loyalty.

The p value of 0.0001 indicates that corporate image is significantly related to the loyalty of subscribers of the telecommunications industry in the Klang Valley, since any p value that is below 0.05 (p<0.05) is an indication of a significant relationship between an independent variable and a dependent variable. A positive Pearson Correlation r value of 0.861 shows that corporate image is positively related to customer loyalty. This suggests that hypothesis 3 is successfully supported since according to Guilford's Rule of Thumb, an r value of 0.861 is an indication of a high correlation between corporate image and customer loyalty.

This is supported by the findings of Kim and Lee (2010), who claimed that the corporate image of mobile service providers play a crucial role in presenting their reputation and stature as a whole. This finding, which is supported by Andreassen and Lindestad (1998), and Kwon and Lennon (2009), shows that corporate image has a positive influence on customer loyalty.

Regression Analysis

In this study, hypotheses 1, 2 and 3 were tested by means of a multiple regression analysis, i.e. the effects of three independent variables (service quality, customer value and corporate image) on a dependent variable (customer loyalty) were examined. In addition, the multiple regression analysis was also employed to

measure and predict the most important and the least important independent variable to the dependent variable. Given below is the multiple regression equation for customer loyalty:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n + e$$

Where: Y = dependent variable (customer loyalty)

A = Y intercept of the regression model

b = slope of the regression model

X = independent variables (service quality, service value and corporate image)

e = error

The model summary of the analysis presented in Table 4 shows that this is an adequately good model as the coefficient of determination (R square) = 0.870, thus indicating that 87.0% of the variation in customer loyalty was due to the independent variables (service quality, customer value and corporate image).

TABLE 4
Model Summary of Multiple Regression Analysis for Independent Variables (Service quality, Customer value and Corporate image) versus Dependent Variable (Customer loyalty)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.933ª	.870	.866	.26623

a. Predictors: (Constant), Corporate image, Customer value, Service quality

It can be observed from Table 5 that a significant F, which is less than 0.05, shows that there is a significant relationship between the independent variables and the dependent variable. An F value of 213.427, with the significant F of 0.0001, is an

indication that a significant relationship exists between the independent variables (service quality, customer value and corporate image) and the dependent variable (customer loyalty), and also that the regression model matches the data.

TABLE 5 ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.382	3	15.127	213.427	$.000^{a}$
	Residual	6.804	96	.071		
	Total	52.187	99			

a. Predictors: (Constant), Corporate image, Customer value, Service quality

Table 6 shows that service quality, customer value and corporate image significantly affect customer loyalty as their *p* values of 0.000, 0.016 and 0.030, respectively, are all below 0.05.

The predicted value of the dependent variable was measured by means of the β coefficient for the regression equation (George & Mallery, 2003), thus indicating the actual impact of these independent

b. Dependent Variable: Customer loyalty

variables (service quality, customer value and corporate image) on customer loyalty. The value of the β coefficient ranged between -1 to +1. The independent variables (service quality, customer value and corporate image) were measured by their Beta weight, which indicates their impact on the dependent variable (customer loyalty). The Beta column under the Standardized Coefficients in Table 6 shows that service quality (0.607)is the independent variable that is the best predictor of customer loyalty, followed by customer value (0.185), and corporate image (0.176).

The matched equation for this model is:

Customer Loyalty = - 0.283 + 0.700

Service Quality + 0.207 Customer Value
+ 0.201 Corporate Image

The equation infers that if service quality were to be increased by 1%, it would result in a 70.0% increase in customer loyalty, with all other variables being constant. If customer value were to be increased by 1%, it would result in a 20.7% increase in customer loyalty, and all other variables being constant. In addition, a 1% increase in corporate image would result in a 20.1% increase in customer loyalty, with all other variables being constant.

TABLE 6 Coefficient Results of Multiple Regressions

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Model	В	Std. Error	Beta		9.
1	(Constant)	283	.156		-1.811	.073
	Service Quality	.700	.110	.607	6.362	.000
	Customer Value	.207	.084	.185	2.463	.016
	Corporate Image	.201	.091	.176	2.207	.030

a. Dependent Variable: Customer Loyalty

CONCLUSION

The rapid advancement of innovative technologies and enhanced customer services, changing customer values and popular corporate images are revolutionising the way people work, learn and interact. These developments are not only transforming the people, but also the way mobile service companies are carrying out their business and relating with their customers. The main objective

of this study was to investigate the effects of service quality, customer value and corporate image on customer loyalty in the telecommunications industry in the Klang Valley, Malaysia. The relationship between service quality, customer value and corporate image with customer loyalty was examined and the findings revealed that all the independent variables had significant positive relationships with customer loyalty. The results showed that

among the three independent variables, service quality turned out to be the most important predictor of customer loyalty, followed by customer value and corporate image.

Hence, the research findings have shed light on why consumers choose a particular mobile service provider and provided information that will help those in the telecommunications industry to enhance the quality of their services, deliver better customer value and reflect a better corporate image to their subscribers. The telecommunication providers can make the best use of the information to find ways to draw new subscribers and keep their existing and loyal subscribers.

LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDIES

Only 100 respondents from the Klang Valley were selected for this study done through the non-probability sampling method. As such, the sample might not be typical of the target population. Although the respondents in this study came from all walks of life including those working in the public and private sectors, the self-employed, unemployed, retirees and students, 47% of them were students. Therefore, there was a limited possibility of generalising the present findings. Nevertheless, the findings of this study may lay the groundwork for future studies involving the use of the probability sampling method for a larger population representing the various types of occupations in Malaysia. In addition, this study did not conduct a normality test and multicollinearity test. Future studies should include a normality test to ascertain whether the data are well-modelled by a normal distribution, and a multicollinearity test to determine whether two or more predictor variables in a multiple regression model are highly correlated.

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Analysing Factors that Influence eBidding Adoption in Malaysian Public Sector

Megat S. Zulkifli¹, Mohd Fuaad Said^{2*}, Han Chun Kwong² and Choo Wei Chong ²

¹Putra Business School, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia ²Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

ABSTRACT

This study analysed the use of eBidding system by Malaysian government agencies, which, despite its obvious benefits in cutting down red-tape and lessening workloads among the agencies officials, is plagued by low usage. As such, the objectives of the study are to examine the factors that affect system utilisation by Malaysian public sector procuring officials and to understand their behavior toward adopting the eBidding system. A self-administrated questionnaire was utilised and responses from 150 officers from various Malaysian government ministries were gathered and evaluated using structural Equation Modelling (SEM). The findings indicate that *performance expectancy*, *effort expectancy*, *social influence*, *facilitating conditions* and *information quality* significantly influence the adoption behaviour toward eBidding. *Satisfaction*, on the other hand, is concluded to have a mediating influence on the relationships between *system quality*, *information quality* and *service quality* with *eBidding adoption*. Given the significant impact of the behavioural factors of officials in eBidding adoption and role satisfaction, organisational administrators and managers can introduce key changes in the workplace to increase satisfaction among those using the eBidding system.

Keywords: eBidding, online procurement, electronic government, technology management, Malaysia.

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E-mail addresses:
megatsz1970@gmail.com (Megat S. Zulkifli)
fuaad@upm.edu.my (Mohd Fuaad Said)
han@upm.edu.my (Han Chun Kwong)
wcchoo@upm.edu.my (Choo Wei Chong)
* Corresponding author

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INTRODUCTION

Online reverse auctions system provides real-time internet transactions between a purchaser and multiple suppliers. In this type of auction, suppliers compete among themselves online using specific software by continuously offering lower-priced bids during a specified transaction cycle (Carter et al., 2004). For a government, the system offers many compelling benefits in terms of cost and time savings and increased offerings from various types of suppliers. These factors contribute to a more effective and transparent procurement process. From the perspective of the suppliers to the government, they can expect to increase market penetration and decrease transaction costs by using the system (Geyskens et al., 2002). Due to its benefits, this system is beginning to replace traditional paper-based and manual transactions, and it is expected to be widely embraced by governments all over the world (Beall et al., 2003; Wyld, 2012).

eBidding is the Malaysian government's version of online procurement reverse auctions system. It is a part of the larger government online procurement system. eBidding allows the suppliers to advertise and offer their goods and services to the public sector by connecting them to the buyer communities (Pekeliling Perbendaharaan, 2009). The system was first introduced in 2006 by the Ministry of Finance (MoF) to improve efficiency in public sector procurements. By 2014, many government agencies have been utilising eBidding for procuring supplies, products and services. These agencies can procure goods and services provided by registered suppliers via the eBidding system. The procuring authority for eBidding is the respective Secretary Generals of the Ministries and Heads of Departments of the agencies, while the monitoring agencies are the Malaysian Administrative Modernisation and Management Planning Unit and the ePerolehan Unit.

The system allows an option for the procuring agencies, either to employ conventional procurement process or to use eBidding as the venue to source for goods and services. eBidding is suitable for agencies procuring goods and services that cost RM50,000 or more, and that need complex technical evaluations. They have the option to buy the goods and services via tender evaluation process, or through eBidding (Pekeliling Perbendaharaan, 2009).

Since its implementation in 2006, the eBidding system is experiencing an issue of low usage among government officials and suppliers (eBidding Transaction Perolehan Malaysia, 2012). This low usage poses serious implications for the continuous utilisation and development of the system. It was reported that the low rate of adoption indicates inherent government officials' problem with eBidding rather than with the suppliers' side (Laporan Audit, 2010). This issue not only can result in the failure to increase efficiency in the government operations, but also can lead to waste of huge IT investment dollars in the system.

Literature on online auction procurement comprises mainly descriptive studies and in the form of cases. These studies focused on usage of online auction and procurement system in the private sector for business purposes, usually at the organisation level of analysis. These include studies conducted by Anthony and Law (2012), Eu-Gene (2010), Kamarulzaman and Rahman (2009), Gan et al. (2009) and Khairul Akmaliah (2007). Only very few studies, like those of Murali et al. (2010) and Settoon and Wyld (2003), have focused on adoption of online auction

and procurement system within the public sector. Moreover, studies that specifically examined online reverse auction system, particularly the eBidding system, are still lacking. Thus, this study attempts to fulfil this gap. Its objectives are to identify variables affecting eBidding adoption by procurement officials in the Malaysian public sector, and to understand the effect of these variables on their behaviour in adopting the system.

RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

This study analysed variables in technology adoption models in the literature, focusing on web-based system, government sector, technology adoption and individual level of analysis. The review concentrates on factors influencing individual users' acceptance and utilisation of information technology. The models that are reviewed include Technology Acceptance Model (TAM), Diffusion of Innovation Theory (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT), and Model of Information System Success (ISSM). Based on the literature, this study selected several variables from the four models,

especially those suggested in UTAUT (Venkatesh *et al.*, 2003) to develop the research framework (Fig.1).

The review of literature identified eight variables that are applicable to this research contexts and incorporated them as the study's framework; seven were recognised as independent variables (performance expectancy, effort expectancy, social influence, facilitating conditions, information quality, system quality and service quality), one as a mediating variable (satisfaction), and another as a dependent variable (eBidding adoption). These variables and their association to each other are explained as follows.

eBidding Adoption

Even though some studies also analysed users' intention toward usage, this study focused solely on actual technology usage. This is because a strong correlation was determined to exist between intention and actual adoption (Sun & Zhang, 2005; Davis, 1992). As such, it is reasonable to test only the actual adoption because of the positive significant relationship between actual adoption and intention toward usage.

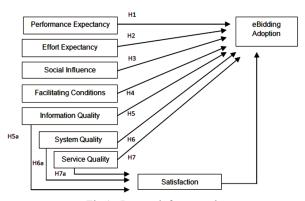


Fig.1: Research framework

Performance Expectancy (PE)

Performance expectancy refers to the notion that users utilise an information system to help them to complete their tasks (Venkatesh et al., 2003). PE was determined to have a significant effect on mobile service users in Lu et al. (2009). It is shown to significantly influence behavioural acceptance both in voluntary and mandatory system adoption situations (Venkatesh et al., 2003). In this study, PE refers to the perception that the procuring officials use eBidding in order to assist them to achieve certain outcomes such as improving job performance productivity in their working environment. When they perceive that using the system help them increase performance, the officials are more likely to have the propensity to utilise the eBidding system. Therefore, it is posited that:

H1: Performance expectancy is significantly related to officials' adoption of eBidding.

Effort Expectancy (EE)

Effort expectancy is described as the degree of the system's ease of usage. It is suggested to be an antecedent of behaviour adoption and use. Carlsson *et al.*'s (2006) findings concluded the existence of relationship between EE and technology adoption. Previous research also concurred to the contention that lesser effort in learning and using a system would ultimately influence its acceptance (Gefen & Straud, 2000). In this study, EE is the belief that

using eBidding assists the procuring officials to gain certain advantages such as improving job performance and increasing productivity in their work environment. As they are increasingly becoming familiar with the use of the technology, less effort is needed in order to use eBidding. In other words, the more they feel that the system is user-friendly and the more skillful they become in using the system, the more inclination they have in using eBidding. Hence, it is put forward that:

H2: Effort expectancy is significantly related to officials' adoption of eBidding.

Social Influence (SI)

The variable is described as the extent a user feels that other significant managers/peers) individuals (senior believe he should employ the innovation. Previous research indicates that peers, superiors and other people who are important to a user often affect the user's behaviour toward adopting a system (Wolin & Korgaonkar, 2003). In the context of this study, SI refers to the extent in which officials' belief that their colleagues and superiors feel they should be utilising eBidding. The study posited that the more they believe the head of departments, superiors and others around them support their use of eBidding, the higher their propensity to use the system. Therefore, it is suggested that:

H3: Social influence is significantly related to officials' adoption of eBidding.

Facilitating Conditions (FC)

Facilitating conditions refer to the extent a user perceives the technical supports provided by the organisation will facilitate a system adoption (Venkatesh et al., 2003). The variable includes characteristics of the technological or organisational conditions (e.g., regulations, incentives and training) that facilitate the use of the system. Prior literature indicates that FC significantly influences system acceptance behaviour (Wu et al., 2007). In this study, FC refers to the perception of the users on the supporting infrastructure that is made available to them in using the information system. Availability of supporting infrastructure is important because without it, the officials may feel that it will be more difficult to conduct the auctioning process. As such, it is posited that:

H4: Facilitating conditions is significantly related to officials' adoption of eBidding.

Information Quality (IQ)

Information quality refers to the user's belief on the quality of output generated by a system (Wixom & Todd, 2005). Nelson *et al.* (2005) describe IQ as information that is accurate, complete, up-to-date, and in the right format based on the user's perspective. Wang (2008) contends that IQ significantly influences users' perception of value, which increases their intention to use an information system. In this study, IQ is defined as the procuring officials' perception that the output generated by eBidding is beneficial. When an official

perceives that the information generated by the eBidding system is useful and accurate, he or she is likely to view the technology usage positively.

Hence, it is recommended that:

H5: Information quality is significantly related to officials' adoption of eBidding.

System Quality (SQ)

System quality is described as the performance quality of the system. Nelson et al. (2005) define system quality as useful system attributes such as, flexible, reliable, responsive, accessible, and integrative. SQ was found to be associated with users' satisfaction of the system (Wixom & Todd, 2005). Lin (2006) concluded that SQ is a factor that affects users' participation in a virtual community, and also found it to significantly influence users' utilisation of online learning (Chiu et al., 2007). In this study, if the officials perceived that the system is flexible, reliable, fast and accessible, the level of satisfaction with the usage of the system would be higher, resulting in higher tendency to use eBidding. Hence, it is posited that:

H6: System quality is significantly related to officials' adoption of eBidding.

Service Quality (SVQ)

Service quality (SVQ) is defined as the quality of support offered by the system provider (DeLone & McLean, 2003), particularly in the dimensions of tangibility, reliability, assurance and empathy provided by the system service providers

(Nelson et al., 2005). SVQ is measured by attributes such as response to queries, problem solving, availability of transaction processes information, or capability to query on tenders (Wu et al., 2007). Cai and Jun (2003) identify four key dimensions of SVQ, namely website design, website content, trustworthiness, promptness, and reliability of service and communication. In this study, SVQ is described as the level of responsiveness and assurance provided by the service providers to the officials in helping to make their tasks completion more effective when using eBidding. The availability of support for the government users is imperative for the success of the eBidding system. The officials will be more inclined to use eBidding if they are satisfied with the service quality which is perceived as fast and with high empathy and supportive service providers on their side. Hence, it is suggested that:

H7: Service quality is significantly related to officials' adoption of eBidding.

Satisfaction

Satisfaction refers to how users feel throughout their transaction experiences with the system (Reichheld & Schefter, 2000). Wixom and Todd (2005) argued that satisfaction has mediating effects on information, system and service qualities, and subsequently affect individual adoption of the system. Satisfaction is a confirmed mediator between perceptions of quality and behavioral intentions (Cronin & Taylor, 1992). In this study, satisfaction is predicted to play a mediating role in the

adoption of eBidding, particularly when the system involves new technology and complex process, which require excellent web design, good services, and technical support. The more the officials believe in the output quality, the more likely they will adopt eBidding due to their higher user satisfaction. Similarly, if the officials have more positive perception of the services provided by the system providers, they will be more inclined to use eBidding due to their increased satisfaction. Moreover, if the officials have positive perception of the quality of eBidding performance, they will be more inclined to adopt the system due to their higher satisfaction. Hence, it is posited that:

H5a: Satisfaction significantly mediates relationship between information quality and eBidding adoption.

H6a: Satisfaction significantly mediates relationship between system quality and eBidding adoption.

H7a: Satisfaction significantly mediates relationship between service quality and eBidding adoption.

RESEARCH METHODOLOGY

The study's population consisted of 1,507 officials from 604 government responsibility centres (RCs) located in Klang Valley and Putrajaya. This population group was selected because the centres are well-equipped with the eBidding systems and have conducted the highest number of procurement transaction activities in the public sector (ePerolehan

PTJ, 2012). The government procuring officials included personnel from grades 27 to 54, who perform various tasks including supervisory, requisition, goods receiving, payment and supporting roles in the RCs. This study utilised self-administered questionnaire. A simple random sampling was conducted as it is deemed appropriate since there was adequate sampling frame and the population was geographically concentrated (Hair et al., 2006). In this study, the minimum sample size was determined to be 112 responses based on the calculation table suggested by Bartlett et al. (2001). A total number of 150 usable questionnaires were gathered and utilised for further analysis using Structural Equation Modelling (SEM) technique.

The instruments were adapted with some modifications made to fit to the context of government sector, based on the studies of DeLone and McLean (2003) and Venkatesh et al. (2003). Table 1 summarises the research instruments according to the variables, number of items of each variable, scale of measurement, and their sources of reference. Items for PE, EE, SI, and FC were drawn from user behavior studies by Venkatesh et al. (2003), while the items for SQ, IQ, SVQ and satisfaction were adapted from DeLone and McLean (2003) with some adjustments made to reflect the specific target behaviour of eBidding adoption/actual use. Measurement items of satisfaction were adapted from the work of Wixom and Todd (2005). Except for the demographic section, the items were processed utilising a sevenpoint Likert scale.

TABLE 1 Description of Research Instruments

No	Variables	No. of items	Scale of Measurement	References
1	Performance expectancy (PE)	7	Interval	Venkatesh et al. (2003)
2	Effort expectancy (EE)	7	Interval	Venkatesh et al. (2003)
3	Social influence (SI)	7	Interval	Venkatesh et al. (2003)
4	Facilitating conditions (FC)	7	Interval	Venkatesh et al. (2003)
5	System quality (SQ)	7	Interval	Delone and Mclean (2003)
6	Information quality (IQ)	7	Interval	Delone and Mclean (2003)
7	Service quality (SVQ)	7	Interval	Delone and Mclean (2003)
8	Satisfaction	7	Interval	Wixom and Todd (2005)
9	Actual Use	4	Interval Nominal	Venkatesh et al. (2003)
10	Respondent's profile			

FINDINGS

Reliability and Validity

In this study, Cronbach's alpha was utilised to measure the reliability between

the items. The value of 0.5 and higher is considered as sufficient in determining their reliability (Sekaran, 2003). Other than this test, confirmatory factor analysis

(CFA), average variance extracted results (AVE), and composite reliability tests were also performed in this study. Average variance extracted (AVE) value, which is higher than 0.5, indicates the presence of convergent validity, while AVE variance from 0 to 1 refers to the ratio of the total variance. Composite reliability measures the overall reliability of the whole scale. The recommended value for the composite reliability test is above 0.7, and more than 0.50 for AVE (Hair *et al.*, 2006).

The results presented in Table 2 indicate that all factor loadings for the study constructs are significant and surpass the 0.5 value suggested by Hair *et al.* (2006). All the constructs variance extracted estimates surpass the minimum suggested value. The composite reliability values are also higher than 0.6, ranging from 0.82 to 0.94. In short, these constructs are proven to have adequate convergent reliability.

TABLE 2 Result on Reliability and Validity Tests

No	Construct	Factor loading	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
1.	Performance Expectancy (PE)		.75	.92	.929
	PE1	.888			
	PE2	.949			
	PE3	.831			
	PE4	.798			
2.	Effort Expectancy (EE)		.79	.94	.932
	EE4	.948			
	EE5	.974			
	EE6	.897			
	EE7	.703			
3.	Social Influence (SI)		.7	.9	.908
	SI 1	.873			
	SI 3	.879			
	SI 5	.686			
	SI 7	.888			
4.	Facilitating Conditions (FC)		.66	.88	.886
	FC2	.787			
	FC 4	.763			
	FC 5	.733			
	FC 7	.95			
5.	Information Quality (IQ)		.7	.9	.891
	IQ2	.822			
	IQ4	.803			
	IQ5	.735			
	IQ6	.957			
6.	System Quality (SYQ)		.72	.91	.891

No	Construct	Factor loading	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
	SYQ3	.568			
	SYQ5	.906			
	SYQ6	.899			
	SYQ7	.969			
7.	Service Quality (SVQ)		.65	.88	.878
	SVQ1	.803			
	SVQ3	.883			
	SVQ5	.78			
	SVQ6	.754			
8.	Actual Use (USE)		.67	.89	.892
	USE1	.756			
	USE2	.934			
	USE3	.911			
	USE 4	.638			
9.	Satisfaction		.53	.82	.818
	Satisfaction1	.76			
	Satisfaction2	.66			
	Satisfaction3	.69			
	Satisfaction4	.80			

Discriminant Validity

Discriminant validity measures whether one variable is internally correlated, unique and distinct from other variables (Tong, 2007). In this study, correlation tests were used to examine this type of validity to determine the directions in the correlation relationships (Hair et al., 2006). A correlation value of 0.5 shows a distinct concept, whereas a correlation value of 0.8 and higher shows a lower distinct concept.

TABLE 3 Results of the Discriminant Validity Test

Variable	X1	X2	X3	X4	X5	X6	X7	X8	X9
PE (X1)	1								
Adoption/Use (X2)	.660**	1							
EE (X3)	.643**	.771**	1						
SI (X4)	.462**	.809**	.605**	1					
FC (X5)	.129	.406**	.242**	.622**	1				
SQ (X6)	.683**	.542**	.425**	.379**	.039	1			
IQ (X7)	.423**	.698**	.513**	.798**	.785**	.328**	1		
SVQ (X8)	.437**	.721**	.543**	.723**	.561**	.358**	.675**	1	
Satisfaction (X9)	.710**	.815**	.696**	.570**	.191*	.557**	.482**	.522**	1
** Correlation is sig	nificant at	0.01 level	(2-tailed)		•	•	•	•	

Correlation is significant at 0.01 level (2-tailed)

^{*.} Correlation is significant at 0.05 level (2-tailed)

Table 3 shows that the values of all the variables are below 0.8, denoting the presence of discriminant validity. There are two correlations which display the value of Pearson's Correlation greater than 0.8, which are 0.809 (Social influence and Adoption of e-Bidding) and 0.815 (Satisfaction and Adoption). However, these values are considered as low and acceptable. Therefore, the results of the analysis indicate that the scales developed

for this study have a good discriminant validity.

Revised Measurement Model

Confirmatory factor analysis (CFA) is used to improve the Goodness-of-fit (GOF) indices of the model. After re-specification, the overall fit for the revised model were examined based on the obtained output. Table 4 provides a summary of the results of this model.

TABLE 4
Results of the Goodness-of-fit Tests for the Revised Model

GOF Indices	Value
CMIN	788.38
CMIN/DF(1)	1.91
GFI	.80
CFI	.93
NFI	.87
TLI	.92
RMSEA	.08

The test of fitness produces a χ^2 value of 788.38 while the CMIN/DF is reported to be 1.919. Other indices were also used as indicators to determine the fitness level of the study's model. The TLI (0.92) and GFI (0.8) values are within desirable ranges, which suggest that the model is a fit one. CFI and NFI show reasonable values of 0.93 and 0.87 (close to 1), which also indicate that the model and the data are harmonious with one another. Additionally, the RMSEA value is 0.08, which is within the desirable range for model's fit. In other

words, the re-specification process has improved the model's fit.

The revised model is shown to have a good fit, and thus, it was used to examine the proposed hypotheses in this research. The relationships between the independent variable and eBidding adoption were analysed by identifying the strength of the path coefficients in the model. Then, the data were analysed to determine the effect of the mediating variable. The results for the independent and mediating variables are shown in Tables 5, 6, 7 and 8.

TABLE 5
The SEM Output for Hypotheses Testing

	Para	meter	Estimate	S.E.	C.R.	P
PE	→	eBidding adoption	.106	.04	2.64	.008
EE	→	eBidding adoption	.407	.097	4.212	***
SI	→	eBidding adoption	.307	.086	3.57	***
FC	→	eBidding adoption	606	.163	-3.715	***
IQ	→	eBidding adoption	1.069	.332	3.217	.001
SQ	→	eBidding adoption	044	.037	-1.176	.239
SVQ	→	eBidding adoption	.106	.06	1.768	.077

Note: Significance level is at 0.05

TABLE 6
The Hypotheses Testing of the Mediating Effects
(Satisfaction on Information Quality-Adoption Relationship)

	S	step		Estimate	SC	C.R./t	Results	
1	Adoption	<	IQ	.73	.553	7.658	Significant	
2	Satisfaction	<	IQ	.666	.664	7.099	Significant	
3	Adoption	<	Satisfaction	.494	.375	4.62	Significant	
	Direct effect			.553				
	Indirect effect				.24	19		

TABLE 7
The Hypotheses Testing of the Mediating Effects
(Satisfaction on the System Quality-Adoption Relationship)

	Ste	p		Estimate	SC	C.R./t	Results	
1	Adoption	<	SQ	.069	.039	.642	Not Significant	
2	Satisfaction	<	SQ	.638	.57	6.044	Significant	
3	Adoption	<	Satisfaction	1.464	0.918	9.771	Significant	
	Direct effect				.039			
	Indirect effect				.52326			

TABLE 8
The Hypotheses Testing on the Mediating Effects
(Satisfaction on the Service Quality-Adoption Relationship)

	Step			Estimate	SC	C.R./t	Results	
1	Adoption	<	SVQ	.462	.272	3.02	Significant	
2	Satisfaction	<	SVQ	.943	.735	7.935	Significant	
3	Adoption	<	Satisfaction	.952	.719	6.266	Significant	
	Direct effect			.272				
	Indirect effect			.528				

The results indicate performance expectancy (hypothesis H1, with $\beta = 0.106$, p=0.008effort < 0.05),expectancy (hypothesis H2, with β =0.407, p=0.00<0.05), social influence (hypothesis $\beta = 0.307$, p=0.000<0.05), H3, with facilitating conditions (hypothesis H4, with β =-0.606, p=-3.715<0.05) and information quality (hypothesis H5, and β =1.609, p0.001<0.05) have strong and positive relationships with eBidding adoption.

However, for the next two hypotheses, the results prove to be contrary to the previous findings. Hypotheses H6 and H7 are not validated, with *system quality* (with β =-0.044, p=0.239>0.05) and *service quality* (with β =0.106, p=0.077>0.05) found to have insignificant correlation with the dependent variable. These suggest that both are not significant predictors of *eBidding adoption*.

The findings also show *information* quality influences both *eBidding* adoption (with β =0.73, p<0.05) and *satisfaction* (with β =0.66, p<0.05), while *satisfaction* has a strong influence on *eBidding* adoption (β =0.494, p<0.05). Direct effect is reported to be a value of 0.553 versus indirect effect of 0.249. Therefore, it can be concluded that satisfaction becomes a partial mediator between *information* quality and *eBidding* adoption, and thus, hypothesis H5a is supported.

As shown in Table 7, the results on system quality reveal that it has a minor effect on eBidding adoption (with β =0.069, p>0.05), but a significant influence on satisfaction (with β =0.638, p<0.05). A

significant relationship is also determined between *satisfaction* and *eBidding adoption* (with β =1.464, p<0.05), with a direct effect reported as 0.039, while an indirect one as 0.523. Hence, it can be concluded that *satisfaction* fully mediates the relationship between *system quality* and *eBidding adoption*. These findings validate hypothesis H6a.

The results also show the strong relationships between *service quality* and both *eBidding adoption* (with β =0.462, p<0.05) and *satisfaction* (with β =0.943, p<0.05), while *satisfaction* is proven to be significantly related to *eBidding adoption* (with β =0.952, p<0.05). Their direct effect is reported at 0.272, while the indirect effect is recorded as 0.528. Therefore, *satisfaction* is determined to act as a partial mediator in the relationship between *service quality* and *eBidding adoption*.

In summary, the results of this study have shown that performance expectancy, expectancy, social influence, facilitating conditions, and information quality significantly affect the adoption behaviour of eBidding system by the procurement officials. On the other hand, system quality and service quality are proven to have insignificant associations with the system adoption. The mediation results verify that satisfaction has a full mediating effect on system quality and eBidding adoption, partial mediating effect on information quality and eBidding adoption, and partial mediating effect on service quality and eBidding adoption.

DISCUSSION

The findings of this study provide several implications for the success of e-government implementation, such as the Malaysian government's online auction system. This study is one of the few studies that applied a combined research framework in exploring adoption behaviour and system factors from the government side of the system adoption, especially one that focuses on online reverse option system.

With regard to theoretical contribution, the study introduced and subsequently validated four variables from the UTAUT model (performance expectancy, effort expectancy, social influence, and facilitating conditions); one variable (information quality) from the updated DeLone and McLean (2003) and another (satisfaction) from the ISSM model. Some previous studies have examined the links between them and the adoption behaviour of users, and the findings of this study reveal similar results to theirs (Venkatesh et al., 2003; Lu et al., 2009; Carlsson et al., 2006; Wolin & Korgaonker, 2003; Wu et al., 2007; Wixom & Todd, 2005; Reichheld & Schefter, 2000).

Practically, the results of the study provide beneficial information to the public sector stakeholders, particularly e-government planners and administrators, for future improvement of online reverse auction system. The findings indicate performance expectancy, effort expectancy, facilitating conditions and information quality have significant influences on

eBidding adoption. This information can be utilised by the e-government planners and administrators in improving the usage level by these officials.

Some of the strategies that can be implemented include increasing efforts to improve the officials' perception on the system's capability in supporting their work-related productivity and reducing barriers on how to use the system. For this purpose, training and communication programmes by The Malaysian Administrative Modernisation Management Planning Unit (MAMPU) or the Ministry of Finance can be positioned to assist the users, especially newly appointed officials, to gain familiarity with the information provided by, types of supports provided for, and various system features of the eBidding system.

Another approach that can be utilised by the e-government system administrators is to improve the facilitating conditions for the eBidding system. One suggestion for improvement is to have a designated 24-hour technical support group or help desk that can assist the procuring officials in time of need. Another recommendation is to enhance eBidding system's ability to provide quality information that is timely, accurate, complete, and in the right format (Nelson *et al.*, 2005). These changes can support the officials in adopting the system.

The study confirms the argument by Venkatesh *et al.* (2003) that social influence significantly affects system usage. Thus, programme managers and the early adopters of the eBidding system who support its

utilization need to be encouraged to inform their peers about the benefits of using the system, which will likely influence others to adopt it, too. In addition, the outcome of this study can be used to evaluate the positional influence of head departments on their staff in using technologies. The outcome of this evaluation will aid in the design, evaluation and implementation of future procurement auction system.

The results have shown satisfaction to have a positive mediating impact on the use of eBidding system. Therefore, Malaysian e-government system administrators can devise improvements to the online auction system by taking into consideration several approaches to improve satisfaction level of the procuring officials when using the technology. In this case, providing easy-to-use web design (system quality), timely and accurate system output (information quality), and reliable technical support (service quality) will likely help to intensify the officials' satisfaction toward using the system.

The findings also have some policy implications. The results indirectly assert that a majority of the procuring officials consider eBidding as a reliable and productive system. However, the study found that the manual system, i.e., quotation system, is more preferable due to the attributes of product specifications, competitiveness, price transaction value and human interactions with the suppliers. This finding can be utilised by policy makers in devising relevant e-government procurement IT policy that is in line with the national-level accountancy and transparency policies.

CONCLUSION

The study began with the objectives of determining the factors that affect system utilisation by the Malaysian public sector procuring officials. The study's research framework comprises eight variables: performance expectancy, expectancy, social influence. facilitating conditions, information quality, system quality and service quality as the independent variables, satisfaction as the mediating variable, and eBidding adoption as the dependent variable. The results also confirm the findings of the earlier research, and validate the model fit. This finding, which contributes to further understanding of the procuring officials' behaviour in adopting the eBidding system, enriches the literature on technology acceptance in organisations. This understanding supports improvement efforts technology in implementation within the government sector.

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Capitalising on Income Approach as Trademark Valuation for Entrepreneurs

Zahira Mohd Ishan^{1*} and Norrezan Noordin²

¹Department of Management and Marketing, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia. ²Putra Business School, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.

ABSTRACT

The various valuation approaches that have been developed are meant for tangible assets valuation and are carried out by expert valuers. For intangible assets including trademarks, the international standards propose three main valuation approaches with the aim, among others, of better transparency and wider interest groups. These are the cost, market and income approaches. This paper suggests that the valuation of trademarks helps to reassure entrepreneurs that their trademarks are valuable assets. The entrepreneurs' competitiveness in the market is reassured when the trademarks are disclosed at fair value in the financial statements. This paper highlights the benefits of adopting the income approach for entrepreneurs, particularly the profit split method, by referring to several leulation methodologies as guidance for entrepreneurs in the valuation of trademarks.

Keywords: valuation, trademark, intellectual property, entrepreneur, financial statement

INTRODUCTION

The number of intellectual property valuation experts in Malaysia is still small and the fees charged for their expert services may be burdensome to entrepreneurs.

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E-mail addresses:
mizahira@upm.edu.my / zahiramail@gmail.com
(Zahira Mohd Ishan)
norrezan5157@yahoo.com (Norrezan Noordin)
* Corresponding author

Trademark valuation is actually more complex than the valuation of tangible assets because of the intangible nature of the trademark itself (Allen & Rigby, 2003). The valuation of trademarks also requires a different set of information from other intellectual property rights such as patents, industrial designs and copyrights.

There are various valuation approaches and interestingly, there is no single approach that can come out with a correct answer for the valuation

of intangible assets. For trademarks, the international valuation standards propose three main valuation approaches with the aim, among others, of better transparency and wider interest groups. The three main valuation approaches are the cost, market and income approaches. In 2013, the Malaysian Government supported the Intellectual Property Corporation of Malaysia (MyIPO) for intellectual property valuation training programmes. One of the outcomes of the programme would be an IP Valuation Model. Nonetheless, there can still be a suitable valuation approach, which can assist entrepreneurs to know the value of their trademarks after they have created successful branding and trademark strategies. Knowledge of the trademark valuation is an important extension to knowledge for exploiting a trademark.

IMPORTANCE OF TRADEMARK VALUATION TO ENTREPRENEURS

A strong trademark is a promise of quality and satisfaction, and these are linked to the good image that consumers want to be associated with. Entrepreneurs use trademarks as tools to enhance their marketing strategy (Goodman *et al.*, 2008) and to build their reputations (Menapace & Moschini, 2011). In the 21st century, entrepreneurs are becoming increasingly dependent on their trademarks (Mard *et al.*, 2000) compared to other intellectual properties (WIPO, 2013; MyIPO, 2013). The dependence of entrepreneurs on trademarks in business is evident from the number of trademark applications for

registration. In 2012, global trademark applications totalled 6.58 million compared to 2.35 million patent applications and 1.22 million industrial design applications (WIPO, 2013). The total Malaysian trademark applications in 2013 was 14,705, of which 9,777 were registered (MyIPO, 2013).

According to Smith and Richey (2013), the value of a trademark depends on its exploitation in the market. When the trademark gains a reputation in the market, as long as it does not become a generic trademark, it could be as valuable as, or more valuable than, the entrepreneur's tangible assets. Trademark valuation can benefit the entrepreneur in his business strategy planning when the focus is on trademark exploitation. For example, the entrepreneur can forecast the worth of a new venture and decide on the cost of licensing the use of the trademark or the licensing strategy or use it as security for loans. The intellectual property monetisation strategy means a greater importance is given to its valuation aspect.

The trademark becomes a prospective investment when its rate of return is greater than the weighted average cost of the capital used to finance it (Hagelin, 2002). Once the trademark is successful and strong, it will help the entrepreneur to build strong commercialisation, in addition to its potential use with other goods or in other industries (Cohen, 1986; Carter, 1990; Smith, 1997; Flignor & Orozco, 2006). Flignor and Orozco (2006) stated that commercialisation strategies for

trademarks include acquisitions, sales, licensing, franchising or merchandising. A trademark, like other intellectual property rights, could also become a collateral, either as part of other existing assets or as a standalone asset for a specific duration. The growing role of the trademark as a commercialised asset has given rise to significant challenges, even for the estimation of the trademark value (Pro Inno Europe, 2008).

Previous studies in the area of trademark valuation covered the importance, methods and purpose of valuation (Smith, 1997; Pavri, 1999; Anson, 2002; Flignor & Orozco, 2006; Zapata, 2009), but were lacking with regard to the unique worth of trademark valuation for entrepreneurs.

Gream (2004) noted that trademarks need to be correctly valued. According to Ernst & Young (2000), trademark valuation first rose to prominence in the late 1980s. Trademark valuations gradually developed based on fair value (Ashley, 1909; Mill, 1909; Moore, 2004; Fishman et al., 2007), which consists of five different features, namely loyalty, awareness, perceived quality, associations and other proprietary assets that underlie trademarks (Tuominen, 1999). Entrepreneurs used these fair values to simplify the decision-making process for the exploitation of trademarks (Anson, 2002; Reilly, 2010), which can be in a variety of ways such as licensing and franchising (Martensen, 2007); taxation and transfer (Basset et al., 2010); raising funds and securing financing (The Clorox Company v Chemical Bank, 1996; Haymaker Sports Inc. v Tunan, 1978); profit sharing for multiple trademark owners (Bryer & Asbel, 2008); financial reporting (Whitwell, 2005); transfer pricing (McClure, 2009); restructuring or liquidation procedures (Torres, 2007); driving the market value of shares (Greenhalgh & Rogers, 2005); and damages for infringement (Ross, 2006).

DETERMINING SUITABLE TRADEMARK VALUATION METHODS

Although several valuation methods were developed in the 1980s (Chaplinsky & Payne, 2002; Keller, 2008), all these methods yield significantly different results (Prashar & Aggarwal, 2009) and have been categorised into three main approaches viz. cost approach, market approach, and income approach (Catty, 2010; Salinas, 2011). The three approaches are mentioned in the ISO 10668 (2010) and the Guidance on the Valuation of Intangible Assets - IVS 210, 2011. The ISO 10668 is the first international standard that deals exclusively with brands and is targeted at a broader audience than the valuation community. The IVS 210, 2011, with an effective date of 1 January 2012, is a standard specifically developed by the International Valuation Standards Council (IVSC) for intangible assets valuation.1

The cost method is a value indication of an individual asset by quantifying the

¹Malaysia is yet to adopt the ISO 10668 and IVS 210. Currently Malaysia, via the Malaysian Intellectual Property Office (MyIPO), is guided by the IP Valuation Model launched in 2013.

amount of money required to replace or produce it in future. The market approach indicates the value of a trademark in comparison to a similar trademark, which has been sold. The income approach indicates a trademark value that converts anticipated economic benefits into a present single amount.

Each valuation method has strengths and weaknesses that depend on the available data in relation to market factors such as historical results, industry trends, and the competitive environment, as well as the specific characteristics of the trademark being valued and the degree to which the trademark is being exploited. The income approach is the most common approach compared to the other two valuation approaches (Smith & Parr, 2005; Hagelin, 2002; Brauner, 2008; Zapata, 2009; Catty, 2010; Rachael, 2011). For that reason, this paper discusses only the income approach.

The Income Approach

Generally, scholars agree that the income approach is the most accurate approach for valuing trademarks (Razgaitis, 1999; Smith & Parr, 2000; Anson, 2002; Hagelin, 2002; Anson *et al.*, 2005; Smith & Richey, 2013). The income approach measures future economic benefits or net future cash flows discounted to a present value that is based on the determination of future cash flows (Smith & Parr, 2000; Sharma, 2007; Prashar & Aggarwal, 2009; Mard, 2011). When an entrepreneur effectively uses the trademark, a value is created and reflected in the entrepreneur's cash flow (Hagelin, 2002).

The income approach is the most widely used approach because the information is

usually relatively accurate and is often readily available within the entrepreneur's control (Flignor & Orozco, 2006). The information required for the income approach includes an expected increase or decrease in the entrepreneur's income, the duration of the income, the income associated with the use of the trademark, the returns for other assets, the discounted factor, and the risks associated with the generation of the estimates of income (Mard et al., 2000; Smith & Parr, 2005; Zapata, 2009; Catty, 2010). This information is based on observations of relevant markets, including size, growth trends, market share dynamics among participants, overall market risk characteristics, duration and the growth rate of cash flow increases.

The income approach depends heavily on economic income, which relies on prospective financial information that includes the forecast of revenue, gross profit, operating profit and net profit, profit before and after tax, cash flow before and after tax, and the estimated remaining useful life (Pareja & Tham, 2009). An understanding of compound interest is at the core of the income approach, which involves estimating a reasonable amount of future economic benefit from the trademark.

There are various methods under the income approach; these include reasonable relief from royalty method, price premium method, volume premium method, incremental cash flow method, and profit split methods (excess earning method and residual earnings method). These methods may be grouped into two main categories of income approach to calculate the future economic benefit, namely, the direct capitalisation and discounted future economic benefits. Various methods under the income approach may

be grouped into two categories, namely, the direct capitalisation and discounted future economic benefits. Direct capitalisation analysis estimates the appropriate trademark revenue for one period based on the valuation date and divides that revenue by an appropriate investment rate of return. The capitalisation rate may be derived for a perpetual period of time or for a specified finite period of time, depending upon the expectations for the duration of the income.

In discounted future economic benefits, projections of appropriate future revenue for several discrete time periods are needed. Discounted cash flow is projected. Such a plan must account for trademark strength and its effect upon the competitive environment. Discounted future economic benefits are used to determine the present value of income earned in future years. Future value can be derived by forecasting the revenue and determining the required rate of return to be associated with the trademark.

Among the various methods under the income approach, the profit split methods (residual earning method and excess earning

TABLE 1 Estimated Returns Required by Assets method) are widely used to determine the profits of the different types of assets for entrepreneurs to value their trademarks. Even if the other valuation methods provide an analysis of future benefits in order to estimate the future economic benefits of the trademark, the profit split method is able to differentiate between profits in different markets or business areas, and in this way, it represents the most recent stage in the development of valuation techniques (Vögele *et al.*, 2012).

Profit Split – Residual Earnings Method

In every business enterprise, assets are comprised of monetary assets, tangible assets, intangible assets and intellectual property. Therefore, in order to use the profit split residual earnings method, all information related to each asset value, returns required and amount of returns are required. This information is needed to calculate the market value of the entrepreneurship. Table 1 gives an example of the estimated returns required by assets, which are usually derived from a company's balance sheet:

	ASSET VALUE	RETURNS REQUIRED	AMOUNT OF RETURNS
ASSET CATEGORY	(\$ 000's)		(\$ 000's)
Net working capital	3,830	2.70%	103
Tangible assets	13,600	5.70%	775
Intangible assets	5,000	12.00%	600
Intellectual property	15,080	18.00%	2,714
Total	37,510	11.20%	4,193
Technology IP	5,000	25.00%	1,250
Trade marks	10,800	14.50%	1,462
	15,800	18.00%	2,712

Source: Smith and Richey (2013)

Table 1 shows the asset value, percentage of returns required and amount of returns for each asset. The total amount of returns of \$4,193,000 is the result of the asset value multiplied by the percentage of returns required. The lowest percentage of returns required is from the net working capital (2.7%), while the highest percentage of returns required is from the Technology IP (25.0%). The amount of returns from trademarks, which is equivalent to \$1,462,000, is obtained by multiplying the trademark value (\$10,080 million) by the percentage of returns required (14.5%).

Table 2 provides data on the income after tax for the year 2015 to an indefinite year using the residual earnings valuation method. The calculation of the income after the tax deduction on the total returns required from each asset (except trademark) is based on the percentage given in Table 1. The excess income after deduction is the residual earnings attributed to the trademark. The residual earnings or the amount of returns is the value of the trademark at the time of the valuation.

TABLE 2 Profit Split - Residual Earnings Valuation Method

	2015	2016	2017	2018	2019	Terminal
Income After Tax	5,510	5,675	5,846	6,021	6,202	6,388
Present Value Factor	0.91	0.83	0.75	0.68	0.62	
Terminal Factor						14
Entity Value of Business	5,014	4,710	4,385	4,094	3,845	89,432
Less Return Required on other	assets					
Net Working Capital	135	127	118	111	104	2,415
Tangible Assets	286	268	250	233	219	5,098
Intangible Assets	602	565	526	491	461	10,732
Technology IP	1,254	1,178	1,096	1,024	961	22,358
Total	2,276	2,138	1,991	1,859	1,746	40,602
Residual Earnings	2,738	2,572	2,394	2,235	2,100	48,830
Residual Value	60,868					

i. The discounted rate is 10%

The terminal growth rate is a multiple that is used to derive the terminal value. It is assumed in Table 2 that the discounted rate is no longer necessary after the fifth year (post-2015) as the calculation is then based on the terminal growth rate. Selected multiples commonly use the median multiple of the total invested capital to earnings before interest, tax, depreciation and

amortization (EBITDA) of comparable companies selected in a comparable public company analysis. The formula for the terminal value = 1/(r-g), where:

g = growth rate

r = present value rate (WACC rate)

Hence, the same trademark of the same company (shown in Table 1 and Table 2) had different values although it was calculated at the same time using a

ii. TGR = The terminal growth rate is 3% for income and assets

different method. Table 1 provides the value of the trademark as \$10,800,000, while Table 2, using the residual earnings method, provides the value of the trademark as \$60,868,000.

Profit Split - Excess Earnings Method

The excess earnings method is a combination of cost and income approach (Anson *et al.*, 2005; Brauner, 2008; Haigh, 2010). A trademark value constitutes the entire excess earnings, depending on the particular facts and circumstances of any inquiry. This method involves allocating cash flows to groups of tangible assets and intangible assets, which contribute to cash flow generation. The excess earnings method may be used as a starting point for determining a royalty rate. The format for the calculation of the excess earnings is as follows:

- Calculate the earnings attributable to the tangible assets. The calculation is the market value of the net tangible assets multiplied by the rate of return appropriate to these assets;
- ii. Add all the earnings attributable to the tangible assets and intangible assets;
- iii. Minus the total earnings attributable to the tangible assets from that of the

intangible assets. The balance is excess earnings.

Five steps must be followed in order to value the trademark using the return of assets rate. For example, a company has two different trademarks for a product. One is the "DREAM" trademark and the other is a less popular trademark, referred to here as the "company's own trademark." The steps are as follows:

- i. Project revenues for both trademarks;
- ii. Compute the apportionment of assets employed to the "DREAM" trade mark and the company's own trademark projection;
- iii. Compute the return (%) on the company's own trademark;
- iv. Compute the excess return of the company to the "DREAM" trade mark; and
- v. Compute the net present value of the "DREAM" trademark.

i. Step 1 - Project Revenues for Both Trademarks

Table 3 gives the projected revenue for the "DREAM" trademark for the year ended 31 Mac 2013 to 2018. Table 4 gives the projected revenue for the company's own trademark for the year ended 31 Mac 2013 to 2018.

TABLE 3
Projected Revenue for "DREAM" Trademark 2013- 2018

Year ended 31 March	2013	Projection					
Tear ended 31 March	(Actual)	2014	2015	2016	2017	2018	
DREAM trade mark (RM000)							
Sales revenue	20,200	21,008	21,638	22,287	22,956	23,645	
Production costs	6,060	6,302	6,491	6,686	6,887	7,093	
Marketing costs	2,400	2,448	2,497	2,547	2,598	2,650	

TABLE 4
Projected Revenue for the Company's Own Trademark 2013-2018

		Projection					
Year ended 31 March	2013 (Actual)	2014	2015	2016	2017	2018	
Company's Own mark (RM000)							
Sales revenue	3,565	3,636	3,709	3,783	3,859	3,936	
Production costs	3,030	3,091	3,152	3,215	3,280	3,345	

ii. Step 2 - Compute the Apportionment of Assets Employed to the "DREAM" Trademark and the Company's Own Trademark Projection

In Table 5, the total for the assets is given as RM 10,000 for the year 2014 and it increased at an annual rate of 2% for the year 2015. The percentages of the total assets attributed to "DREAM" and the company's own trademark are segregated by using the

cost of production for each trademark. For the year 2014, the percentage allocated to "DREAM" is 6,302/9,393 (67.1%) and to the company's own trademark is 3,091/9,303 (32.9%). For the year 2010, the apportionment of the asset costs allocated to "DREAM" is RM6,710 and to the company's own trademark is RM3,290. The assets calculation formula is the same as in Table 5 below:

TABLE 5 Apportionment of the Total Assets to the "Dream" Trademark and to the Company's Own Trademark

	2014	2015	2016	2017	2018	Terminal
Cost inccured (RM000)						
Production cost - DREAM	6,302	6,491	6,686	6,887	7,093	7,235
Production cost - company's own						
mark	3,091	3,153	3,216	3,280	3,346	3,413
Total cost inccured (RM000)	9,393	9,643	9,901	10,167	10,438	10,647
% of asset employed						
% DREAM trade mark	67.10%	67.30%	67.50%	67.70%	68.00%	68.00%
% company's own mark	32.90%	32.70%	32.50%	32.30%	32.00%	32.00%
Total Assets (RM000)	10,000	10,200	10,404	10,612	10,824	11,041
Apportion to DREAM	6,710	6,865	7,023	7,184	7,360	7,508
Apportion to company's own mark	3,290	3,335	3,381	3,428	3,464	3,533

iii. Step 3 - Compute the Return (%) on the Company's Own Trademark

In the year 2014, the company's own trademark sales revenue was RM3,636.

The sales revenue minus the production cost (RM 3,091) gave the gross margin (RM 545). Assuming the return of assets was 8% (RM3,290), the charge of the

assets for the company's own trademark was RM263 (RM3,290 X 8%). The return after the asset charge for the company's own trademark is RM157 (4.31%). The

computation for the return of the company's own trademark projection for the year 2015 and subsequently is illustrated in Table 6 below:

TABLE 6 Computed % Returns on Company's Own Trademark

Return of company's own mark (RM0)	00)					
	2014	2015	2016	2017	2018	Terminal
Sales revenue	3,636	3,709	3,783	3,859	3,936	4,014
Production costs	3,091	3,152	3,215	3,280	3,345	3,412
Gross margin	545	556	567	579	590	602
Tax	125	128	131	133	136	139
After tax projected cash flow	420	428	437	446	455	464
Charge for use of assets (8%)	263	267	270	274	278	283
Return after asset charge	157	162	167	172	177	181
Company's own mark, % of sales	4.31%	4.36%	4.40%	4.45%	4.50%	4.50%

iv. Step 4 - Compute the Excess Return of the Company's Trademark to the "DREAM" Trademark

In order to compute the excess return of the "DREAM" trademark, use the formula in Table 6. This formula is used for the "DREAM" data on the trademark sales, production costs, marketing costs, and charges for use of the assets. After the return of the assets charge is calculated, the next step is to deduct the return on the company's own trademark (% calculated in Table 6 multiplied with the sales of the "DREAM" trademark). Table 7 provides the computed excess returns of the company's own trademark to the "DREAM" trademark.

TABLE 7
Computed Excess Returns of Company's Own Trademark to "DREAM" Trademark

	2014	2015	2016	2017	2018	Terminal
Sales revenue	21,008	21,638	22,287	22,956	23,645	24,118
Production cost	6,302	6,491	6,686	6,887	7,093	7,235
Gross margin	14,706	15,147	15,601	16,069	16,552	16,883
Marketing	2,448	2,497	2,547	2,598	2,650	2,703
Cash flows (pre-tax)	12,258	12,650	13,054	13,471	13,902	14,180
Tax	3,065	3,163	3,264	3,368	3,476	3,545
After-tax cash flow	9,439	9,741	10,052	10,373	10,705	10,919
Charge for use of assets	537	549	562	575	589	601
Return after asset charge	8,902	9,192	9,490	9,798	10,116	10,318
Return on company's own mark	905	943	982	1,022	1,064	1,085
Excess return on DREAM trade mark	7,997	8,249	8,508	8,776	9,052	9,233

v. Step 5 - Compute the Net Present Value of the "DREAM" Trade Mark

All the excess returns calculated in Table 7 are then calculated by weighted average cost of capital (WACC) to get the present value of the "DREAM" trademark. All the present values are added to get the

net present value or the value of the "DREAM" trademark. Table 8 illustrates the computation of the net present value of the "DREAM" trademark. From the computation below, the value of the trademark is RM 159,138,000.

TABLE 8
Computation of the Net Present Value of the "DREAM" Trademark

	2014	2015	2016	2017	2018	Terminal
Excess return on DREAM	7 007	0.240	0 500	0 776	0.052	0.222
trade mark (RM'000)	7,997	8,249	8,508	8,776	9,052	9,233
Terminal Multiple						14
Terminal Value						128,154
Discount rate	13.90%	13.90%	13.90%	13.90%	13.90%	
Time	0.5	1.5	2.5	3.5	4.5	
Discounted factor	1.07	1.22	1.38	1.58	1.80	
Discounted returns	7,474	6,761	6,165	5,554	5,029	128,154
DREAM trade value	159,138					

It is worth noting that the assumptions used in the valuation of the "DREAM" trademark (Step 1 to Step 5 above) by using the Profit Split - Excess Earnings Method are as follows:

- i. Inflation/Terminal growth rate is 2%;
- ii. Tax rate is 25%;
- iii. Assets employed in the company is RM 10,000;
- iv. Return on assets is 8%;
- v. Discount rate is 13.9%;
- vi. Valuation date is 1 July 2014.

LIMITATIONS OF THE INCOME APPROACH

The income approach captures the value of relatively stable trademarks by means

of a predictable cash flow. Although this method is the most accurate method for the valuation of trademarks, the stability of the earnings is never guaranteed. This method assumes that the cash flow is irreversible and is irrespective of future circumstances. The cash flow of future earnings is developed using the weighted average cost of capital (WACC), which is merely a mechanical valuation tool. All the risks are lumped together and assumed to be appropriately adjusted for the discounted rate and the probability of success. The use of WACC, subject to changes in inputs, would result in large changes in the value of the trademark. Hence, the trademark value may change over time, leading to uncertainty.

The Financial Reporting Standard (Para 63, FRS 138, 2006) does not allow internally generated trademarks to be recognised as intangible assets in financial statements. In a company's financial statement, the trademark is only recognised as the amount of cash or cash equivalents paid or the fair value of other considerations given to acquire an asset at the time of its acquisition or construction (Para 8, FRS 138, 2006). Therefore, the value of the trademark is hidden in the presentation of a statement on the financial position. The valuation done by an entrepreneur cannot be used due to constraints in the standard.

The information needed for valuation comes from an entrepreneur's accounting records and is identified internally. If entrepreneurs do not have internal experts in this area, there are experts available who are highly experienced in analysing financial data including revenues, profits, return on assets, and the apportionment of trademark value among other contributory assets.

CONCLUSION

The valuation of trademarks for entrepreneurs is vital for a number of reasons. First, it greatly strengthens the perception of the importance of trademarks in the business environment. Second, the trademark lends as much credibility to the entrepreneur as any other property. The trademark valuation clearly provides unambiguous signals to a third party of its value and the effects of damaging the entrepreneur's rights. Apart from the

above reasons, valuation has become important because it helps entrepreneurs exploit their trademark through licensing and other means of trading, such as issuing securities, increasing asset value, obtaining financing and making informed investment and other business decisions. Entrepreneurs are guided to use the valuation format for the profit split-residual earnings valuation method under the income approach. Nevertheless, the profit split-residual earnings valuation method is not an answer for all valuation problems. Valuers still face difficulties in estimating the income attributable to the trademark, namely its economic life, appropriate discount rate or cost of capital and discount rate. Hence, fair market valuation is only an estimate, and it will not be accurate until the actual transactions occur such as damage decisions, sales and purchases. These transactions occur at specific times and require that certain decisions be made. Furthermore, even the trademark values in financial statements is questionable because they are not challenged.

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Understanding the Individual Values of Working and Non-Working Wives in Malaysia

Dahlia Zawawi* and Samsinar Md Sidin

Faculty of Economics and Management, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.

ABSTRACT

Changes in the socio-cultural environment such as the emergence of dual career for women are seen to be an influence to the values of the specified gender. Malaysian society differs from the West in terms of family composition and structure, values, norms and behaviour, which affect the role of wives. This study is considered preliminary and investigates the values of women, specifically the wives, across various areas in Peninsular Malaysia in an effort to further understand the uniqueness of this group. The methodology entails a survey approach using structured questionnaires on a sample of 1252 wives throughout Malaysia. Quota sampling was used to ensure representativeness of the Malaysian household's social diversity. Findings revealed a few similarities and also differences in terms of values between wives across the various locations and levels of education.

Keywords: Values, Malaysia, working and non-working wives

INTRODUCTION

Malaysia was inaugurated on 16 September 1963. By then, the country already had an influx of people of various origins, cultures, languages and religions. Now,

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E-mail addresses: dahlia@upm.edu.my (Dahlia Zawawi) sms@upm.edu.my (Samsinar Md Sidin)

* Corresponding author

Malaysia has grown to become a country with a population of more than 29 million people (The Star Online, 2014). The paper also quoted that according to the Malaysia Statistics Department's population projections, the figure will reach 38.5 million by the year 2040, comprising 19.6 million males and 19 million females.

In the past, studies done on the values in Malaysia focused mostly on the differences that might exist across countries, races, religions and genders. In

regards to the latter issue, psychologists are still baffled over the similarities and differences that exist between men and women (Hare-Mustin & Marecek, 1986; Unger, 1992). Regardless, Prince-Gibson and Schwartz (1998) continued to further understand the issue by probing into the value priorities of each gender and the definition put on the values by each gender. However, not many studies surfaced to highlight gender differences in values in detail

In a multiracial country like Malaysia and others with similar diverse population, understanding this particular issue of values is deemed to be crucial and never ending. As such, a study should not be conducted to only see the variations across gender, but also the differences that might exist within one particular gender.

RESEARCH OBJECTIVES

This study focused on investigating the impact of several demographic variables (specifically location of residence, monthly income and level of education) on the values among wives in various regions in Malaysia. Specifically, the study aimed to determine whether there are any significant differences in the values of the wives based on the selected demographic factors – location of residence and education. The study also compared the selected group in the context of working and non-working. It is hoped to be able to provide a better understanding on the issue of values in the context of women, in this case, the

working and non-working wives across various settings and locations.

MAIN STUDIES ON CULTURE

When discussing culture in the context of Malaysia, a few major international studies that stand out include Harris and Moran (1979), Hofstede (1991), Trompenaars (1993), and the Global Leadership and Organisational Behaviour Effectiveness (GLOBE) Study reported in Kennedy (2002). Harris and Moran (1979) intended to provide maps for geographic areas and create profiles of countries within a region. A few representative samples were chosen to explain culture specifics in terms of six major regions: North America, Latin America, Asia, Europe, the Middle East and Africa. Ten categories of cultures were identified - sense of self and space, communication and language, dress and appearance, food and eating habits, time and time consciousness, relationships, values and norms, beliefs and attitudes, mental process and learning, and work habits and practices. The study focused mainly on Malays described as not valuing the pursuit of wealth, placing more emphasis, instead, on relationships with friends and families, being hardworking and reliable. In 1980, Hofstede's emerged with his classic study of a survey conducted within 72 national subsidiaries of IBM, present in 40 countries. Carried out twice, around 1968 and 1972, the survey produced a total of 116,000 completed questionnaires. The four main dimensions revealed were power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. The results showed that Malaysians were very unequal in terms of power sharing, very flexible about the future compared to others, more focused on group relationships, and were neither tough nor soft in terms of their emotional and social roles.

Another study that utilised vast global sample was carried out by Trompenaars (1993). The data included some 50,000 cases from over 100 countries, highlighting seven fundamental dimensions of culture: relationships and rules specifying universalism/ particularism, collectivism/individualism, neutral/affective, diffuse/specific, achievement/ascription; attitudes to time; and attitudes to the environment. Overall, Trompenaars suggested that Malaysia was more universalistic in its system, collectivist, affective and diffused, and that it had an ascription-oriented culture. most recent large-scale project was conducted by GLOBE (Global Leadership and Organisational Behaviour Effectiveness) (House et al., 2004). GLOBE's analysis of culture expanded Hofstede's (2001) five dimensions to nine societal culture dimensions. The study provided a general world map of which leadership and organisational practices matter the most and where they matter. Malaysia was also included in this study.

VALUES AMONG WOMEN

The study of values was initially sparked by the notion that an individual's personal value system would influence the person's behaviour. Values, in relation to the individuals, are often considered as 'causing' observed behaviours (Hitlin & Piliavin, 2004, p. 359). The root of value is valour (strength), which is said to be the basis of people taking action. England (1967, p. 54) defined the personal values system as a 'relatively permanent perceptual framework which shapes and influences the general nature of an individual's behaviour. Values are similar to attitudes, but are more ingrained, permanent and stable in nature.' Similarly, Rokeach (1973, p. 5 & 12) defined the system as 'an enduring organization of beliefs' that are 'general plans employed to resolve conflicts and to make decisions.'

The most extensive study so far on the main races in Malaysia regarding values was the one conducted by Abdullah (2001). Abdullah used findings obtained from a series of conferences, workshops and seminars conducted in 1990-1992 by the Malaysian Institute of Management (with sponsorship from the Konrad Adenauer Foundation) to come up with a list of ethnic values in Malaysia. The qualitative approach in this case produced a list of ethnic values specifics for the three main races – the Malays, Chinese and Indians. Based on the research, the study claimed that Malaysians can be generally described collective (more group-oriented), and tended to put more importance on maintaining good relationships rather than completing satisfactory tasks (relationshiporiented). All of the three main ethnic

groups showed respect to their elders through their speech and manners (respect for elders). Malaysians were, at the same time, considered very loyal with respect for their elders and managers (loyalty), and were very conscious of the social hierarchy in their society (hierarchical). They were religious, believed in religious and spiritual pursuits (religious), they had high needs to sustain some level of peace in any situation (harmony) and to preserve face whenever possible (face-saving).

When looking at gender, the research by Rokeach (1973) involved a representative of an American sample, where men and women were found to rank the same values as the most and least important. However, the results also revealed significant gender differences in value importance. As time passed, the study of values across gender marked a few inconsistencies. For instance, Bond (1988) discovered both the consistent and inconsistent effects of gender for the two survey instruments incorporated. In addition, gender was found to have very low correlations, indicating its minimal impact through studies done by Sagie, Kantor, Elizur and Barhoum (2005), while in the past, Beutel and Marini (1995) found evidence of important gender differences in US adolescents' value orientations. Interestingly, Fiorentine (1988) observed that men's and women's value systems appeared to be convergent at times. In contrast, a research by Zawawi (2007) highlighted that the values of the employees in a multinational organization were not seen to be merging. Instead, the female employees continued to stick to their feminine types of values, which involved caring for humans, while the males preferred more masculine values that exhibited protection of all people and nature.

VARIATIONS OF VALUES ACROSS WIVES

Studies done on gender differences were largely waived in the past. Most studies either did not consider gender as a variable of interest or excluded female subjects in the framework. The later years reported a lesser number of studies identifying the differences among gender across values. In addition, studies done on wives were also found to be guite scarce. The current research done on wives seemed to focus on other management issues apart from values such as decision making (e.g., De & Moharana, 2010), family contributions (e.g., Tao, 2013; Zhang & Tsang, 2012), and work life balance (e.g., Aryee et al., 2005). In terms of values, very few studies looked specifically on the issues of wives. A study by Jalilvand (2000) indicated that lower income husbands tended to allow a higher proportion of wives in the labour force. The reason for this was due to them not being able to provide fully for the family. This particular study had proposed that working women appeared to have a personal value structure different from that of non-working women. Spranger's (1928) classification of six major groups of value orientations was tested, i.e.: i) the theoretical; ii) the economic; iii) the aesthetic; iv) the social; v) the political; and vi) the religious. He discovered that the working and non-working wives had similar rankings of personal values, except that the aesthetic and social values were discovered to be inverted between the two groups. In addition, the relative importance of the above highlighted six personal values was also discovered to differ significantly for both groups of wives (Spranger, 1928). To the author's knowledge, there are not many recent studies conducted to look into the variations across gender in relation to values, and even lesser in terms of the segmentation of each gender.

HYPOTHESES DEVELOPMENT

Past studies looked at the differences between genders, while some had moved further to investigate the issues of personal values among women only (e.g., Jalilvand, 2000; Sagie *et al.*, 2005; Zawawi, 2007). This study therefore intended to understand the latter issues better by testing various demographic impacts on both the working and non-working wives specifically by location of residence and level of education. Based on the main objective of this study, the following hypotheses were proposed and tested.

 H_{i} : Values differed based on demographic differences.

 H_{la} : Values differed based on location of residence of the wives.

 H_{lb} : Values differed based on education of the wives.

The sample covered 1252 working and non-working wives of Malaysian families.

METHODOLOGY

This study adopted a quantitative method where five major cities in Malaysia were selected as the study locations, representing a number of regions in Malaysia. A total of 1252 wives participated in the study, residing in the five major urban cities of Kuala Lumpur, Kuantan, Johor Bahru, Penang and Kota Kinabalu. The first four cities were chosen to represent the west, east, south, and north areas of Peninsular Malaysia, while Kota Kinabalu was meant to represent the East Malaysia. The urban cities were selected as they represented the selected regions in Malaysia with ethnic, income and social composition diversities. Quota sampling is a non-probability sampling technique wherein the assembled sample has the same proportions of individuals as the entire population with respect to known characteristics, traits or focused phenomenon. This method of sampling was adopted on the basis of ethnicity, region and occupation (working and nonworking wives) to ensure the representativeness of the Malaysian household's social diversity in an urban setting.

One of the most replicated questionnaires adopted on values was developed by Rokeach (1967; 1973) called the Rokeach Value Survey (RVS). The RVS contains two sets of values: goals (terminal values) and modes of conducts (instrumental values). Other than the RVS, a series of large scale studies of values undertaken by Schwartz (1992, 1994)

proposed ten motivational individuallevel value types, which were Power, Hedonism. Achievement. Stimulation. Self-direction, Universalism, Benevolence, Tradition, Conformity and Security. Later, Schwartz also proposed several culturallevel value types which are Conservatism versus Intellectual and Affective Autonomy; Hierarchy versus Egalitarianism; Mastery versus Harmony. National cultures were able to be compared by the poles of this theory. For this particular research, the Values Survey (Schwartz, 1992) was applied. The instrument comprises of questions general enough to be understood by ordinary people and to cover a wide range of values. Ten individual values were derived from these requirements: Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, Benevolence, Tradition, Conformity and Security. The

explanations of the individual values are stated in Table 1. Examples of the list of values are 'self-respect (belief in one's own worth),' and 'daring (seeking adventure, risk).' A 9-point Likert scale ranging from -1 (opposed to my values) to 7 (of supreme importance) was used in the study. The scale of -1 was used due to the understanding that the respondents might be opposed of a value instead of merely not adopting it. The questionnaire was obtained directly from the authors, along with the instructions and explanations. The measurement was chosen due to its wide compilations of values that might be relevant to the respondents. The questionnaire had been translated into English and then translated back to the Malay language to maximise the understanding of the items by the respondents. The pretesting recorded the instrument to have an alpha of 0.967, indicating that it is reliable.

TABLE 1

Definitions of Schwartz's Individual Values

INDIVIDUAL VALUE TYPES

POWER: Social status and prestige, control or dominance over people and resources (Social Power, Authority, Wealth).

ACHIEVEMENT: Personal success through demonstrating competence according to social standards (Successful, Capable, Ambitious, Influential).

HEDONISM: Pleasure and sensuous gratification for oneself (Pleasure, Enjoying Life).

STIMULATION: Excitement, novelty and challenge in life (Daring, a Varied Life, an Exciting Life).

SELF-DIRECTION: Independent thought and action-choosing, creating, exploring (Creativity, Freedom, Independent, Curious, Choosing own Goals).

UNIVERSALISM: Understanding, appreciation, tolerance and protection for the welfare of all people and for nature (Broadminded, Wisdom, Social Justice, Equality, A World at Peace, a World of Beauty, Unity with Nature, Protecting the Environment).

BENEVOLENCE: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (Helpful, Honest, Forgiving, Loyal, Responsible).

TRADITION: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provides (Humble, Accepting my Portion in Life, Devout, Respect for Tradition, Moderate).

CONFORMITY: Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms (Politeness, Obedient, Self-discipline, Honouring Parents and Elders).

SECURITY: Safety, harmony and stability of society, of relationships, and of self (Family Security, National Security, Social Order, Clean, Reciprocation of Favours).

Sources: Schwartz, S. 1994. Are there Universal Aspects in the Structure and Contents of Human Values? *Journal of Social Issues*, 50(4), 19-45.

ANALYSIS AND FINDINGS

The demographic profile of the respondents is shown in Table 2. In terms of the age, 67 per cent were above 40 years of age, while another 21 per cent were between 41-50 years of age. Only 12 per cent have reached the age of 51 years and above. In terms of the respondents' racial background, 59 per cent are Malays, 27 per cent Chinese, and 10 per cent Indians. Consistent with the race allocations, 62 per cent of the respondents are Muslims, 21 per cent are Buddhists, another 9 percent Christians, and the remaining 7 per cent Hindus. Out of the total respondents, 43.6 per cent are non-working wives, 54 per cent are considered to be working wives. In addition, 0.7 per cent and 1.7 percent

were in the group of students and retirees, respectively. Almost similarly, 40.4 per cent were reported to earn no income with the rest of the respondents stating otherwise. All of the respondents have received a certain level of education in the past, where 42.3 per cent have an education of SPM and equivalent; 12 per cent with STPM qualification and equivalent; 20.6 per cent have a Diploma and equivalent; 16.2 per cent have a Bachelor degree and equivalent; 3.1 per cent have a Masters or PhD; and 5.8 per cent stated Others. Finally, the majority used the Malay language as the language spoken at home (61 per cent), while 11.3 per cent highlighted English as the main language spoken at home.

TABLE 2 Profile of the respondents

Demographic Vari	able	Frequency	Percent
	21-30 years	376	30
	31-40 years	460	37
Age	41-50 years	262	21
	51-60 years	145	11
	More than 60 years	7	1
	Malay	734	59
Ethnicity	Chinese	338	27
Ethnicity	Indian	123	10
	Others	56	4
	Islam	777	62
	Buddhism	256	21
Religion	Christianity	112	9
	Hinduism	92	7
	Others	14	1

	Management	155	12.4
	Professional	145	11.6
	Clerical	233	18.6
	Entrepreneur	56	4.5
Occupation	Retired	21	1.7
	Housewife	546	43.6
	Student	9	0.7
	Others	86	6.9
	No income	506	40.4
	Less than RM1000	100	8
Manthly Income	RM1001-RM5000	531	42.4
Monthly Income	RM5001-RM10000	98	7.8
	RM10001-RM15000	13	1
	More than RM20000	4	0.4
	SPM or equivalent	527	42.3
	STPM or equivalent	150	12
Education	Diploma or equivalent	256	20.6
Education	Bachelor degree or equivalent	202	16.2
	Masters or PhD	39	3.1
	Others	72	5.8
	Malay	754	61
	Chinese	248	20.1
Spoken Language at Home	Tamil	83	6.7
	English	139	11.3
	Others	11	0.9

Schwartz's Values and Location of Residence

To determine if there are significant differences between individual Schwartz's values and the location of residence, ANOVA was performed wherein, each of the 10 individual levels of Schwartz's values served as the dependent variable

and "area" served as the factor variable. Each individual level value was computed as a sum of each respondent's total score. The ANOVA result is shown in Table 3 and the subsequent post-hoc analysis in Table 4. The mean values based on the location of residence are shown in Table 5 and the mean plots from Figures 1 to

10. The results of the ANOVA analysis in Table 3 indicates that there are significant differences for each of the 10 individual Schwartz's values (p < 0.001) based on the location of residence.

The post-hoc analysis in Table 4 shows that significant differences exist between the respondents in the five different areas of data collection for each individual Schwartz's value. These differences are further discussed in conjunction with Table 5 and Figures 1 to 10. Table 5, which gives the mean of Schwartz's values based on the location of residence and the mean plots from Figures 1 to 10, provides the structure or nature of the differences that exists between the ten individual Schwartz's values.

TABLE 3
The ANOVA results of Schwartz's values by location of residence

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	592.918	4	148.230	32.567	.000
Conformity	Within Groups	5675.775	1247	4.552		
	Total	6268.693	1251			
	Between Groups	542.346	4	135.586	17.680	.000
Tradition	Within Groups	9563.146	1247	7.669		
	Total	10105.491	1251			
	Between Groups	747.746	4	186.937	24.420	.000
Benevolence	Within Groups	9545.692	1247	7.655		
	Total	10293.438	1251			
	Between Groups	1738.304	4	434.576	20.544	.000
Universalism	Within Groups	26377.715	1247	21.153		
	Total	28116.019	1251			
	Between Groups	415.460	4	103.865	12.408	.000
Self-Direction	Within Groups	10438.054	1247	8.371		
	Total	10853.514	1251			
	Between Groups	468.981	4	117.245	27.489	.000
Stimulation	Within Groups	5318.655	1247	4.265		
	Total	5787.636	1251			
	Between Groups	217.149	4	54.287	12.678	.000
Hedonism	Within Groups	5339.620	1247	4.282		
	Total	5556.769	1251			
	Between Groups	508.089	4	127.022	22.563	.000
Achievement	Within Groups	7020.320	1247	5.630		
	Total	7528.409	1251			
	Between Groups	467.307	4	116.827	21.965	.000
Power	Within Groups	6632.441	1247	5.319		
	Total	7099.748	1251			
	Between Groups	767.862	4	191.966	28.461	.000
Security	Within Groups	8410.956	1247	6.745		
	Total	9178.818	1251			

TABLE 4
The post-hoc analysis of Schwartz's values by location of residence

Dependent	(I) Location of	(J) Location	Mean	Std.		95% Confidence Interval	
Variable	residence	of residence	Difference (I-J)	Error	Sig.	Lower Bound	Upper Bound
		Johor Bahru	-1.34821*	.19063	.000	-1.8690	8274
Conformit	Klang Valley	Penang	62421*	.19063	.010	-1.1450	1034
	Klang valley	Kuantan	-1.58676*	.19082	.000	-2.1080	-1.0655
		Kota Kinabalu	-1.89265*	.19025	.000	-2.4124	-1.3729
Conformity		Johor Bahru	72400*	.19082	.001	-1.2453	2027
	Penang	Kuantan	96255*	.19101	.000	-1.4844	4408
		Kota Kinabalu	-1.26844*	.19044	.000	-1.7887	7482
	Kota Kinabalu	Johor Bahru	.54444*	.19044	.035	.0242	1.0647
		Johor Bahru	-1.47939*	.24745	.000	-2.1554	8034
	Klang Valley	Kuantan	72168*	.24769	.030	-1.3983	0450
		Kota Kinabalu	-1.78235*	.24695	.000	-2.4570	-1.1077
Tradition	Johor Bahru	Penang	1.03200*	.24769	.000	.3554	1.7086
		Kuantan	.75772*	.24794	.019	.0804	1.4350
	Kota Kinabalu	Penang	1.33495*	.24720	.000	.6597	2.0102
		Kuantan	1.06067*	.24745	.000	.3847	1.7366
		Johor Bahru	-1.43477*	.24722	.000	-2.1101	7594
		Penang	70277*	.24722	.037	-1.3781	0274
	Klang Valley	Kuantan	-1.57183*	.24747	.000	-2.2479	8958
D 1		Kota Kinabalu	-2.24725*	.24673	.000	-2.9213	-1.5732
Benevolence		Johor Bahru	73200*	.24747	.026	-1.4080	0560
	Penang	Kuantan	86906*	.24771	.004	-1.5458	1924
		Kota Kinabalu	-1.54448*	.24697	.000	-2.2192	8698
	Kota Kinabalu	Kuantan	.67542*	.24722	.050	.0001	1.3508
		Johor Bahru	-3.29606*	.41096	.000	-4.4187	-2.1734
TT : 1:	771 77.11	Penang	-2.56806*	.41096	.000	-3.6907	-1.4454
Universalism	Klang Valley	Kuantan	-2.17282*	.41137	.000	-3.2966	-1.0490
		Kota Kinabalu	-3.06740*	.41014	.000	-4.1878	-1.9470
		Johor Bahru	-1.31713*	.25852	.000	-2.0233	6109
	Klang Valley	Penang	-1.22113*	.25852	.000	-1.9273	5149
Self-		Kota Kinabalu	-1.51872*	.25800	.000	-2.2235	8139
Direction		Johor Bahru	84900*	.25903	.009	-1.5566	1414
	Kuantan	Penang	75300*	.25903	.030	-1.4606	0454
		Kota Kinabalu	-1.05058*	.25852	.000	-1.7568	3444

Dependent	(I) Location of			Std.	Cia	95% Cor Inte	
Variable	residence	residence	Difference (I-J)	Error	Sig.	Lower Bound	Upper Bound
		Johor Bahru	-1.64163*	.18454	.000	-2.1457	-1.1375
	Klang Valley	Penang	-1.18163*	.18454	.000	-1.6857	6775
Stimulation		Kota Kinabalu	-1.34363*	.18417	.000	-1.8467	8405
Sumulation		Johor Bahru	-1.22872*	.18490	.000	-1.7338	7236
	Kuantan	Penang	76872*	.18490	.000	-1.2738	2636
		Kota Kinabalu	93072*	.18454	.000	-1.4348	4266
		Klang Valley	1.00285*	.18490	.000	.4978	1.5080
	Ishan Dahas	Penang	.56400*	.18508	.020	.0584	1.0696
Hedonism	Johor Bahru	Kuantan	1.21801*	.18527	.000	.7119	1.7241
		Kota Kinabalu	.72790*	.18472	.001	.2233	1.2325
	Penang	Kuantan	.65401*	.18527	.004	.1479	1.1601
	Klang Valley	Johor Bahru	-1.56112*	.21201	.000	-2.1403	9820
		Penang	94112*	.21201	.000	-1.5203	3620
		Kuantan	94602*	.21222	.000	-1.5258	3663
A -1-1		Kota Kinabalu	-1.84810*	.21159	.000	-2.4261	-1.2701
Achievement		Penang	.62000*	.21222	.029	.0403	1.1997
	Johor Bahru	Kuantan	.61510*	.21243	.031	.0348	1.1954
	Water Wingshall	Penang	.90698*	.21180	.000	.3284	1.4856
	Kota Kinabalu	Kuantan	.90208*	.21201	.000	.3229	1.4813
		Johor Bahru	-1.604159*	.206070	.000	-2.16710	-1.04122
	Klang Valley	Penang	-1.148159*	.206070	.000	-1.71110	58522
		Kota Kinabalu	983969*	.205660	.000	-1.54579	42215
Power	Johor Bahru	Kota Kinabalu	.620190*	.205866	.022	.05781	1.18257
		Johor Bahru	-1.459261*	.206483	.000	-2.02333	89520
	Kuantan	Penang	-1.003261*	.206483	.000	-1.56733	43920
		Kota Kinabalu	839071*	.206074	.000	-1.40202	27612
		Johor Bahru	-2.15645*	.23206	.000	-2.7904	-1.5225
g :	171 1711	Penang	-1.68845*	.23206	.000	-2.3224	-1.0545
Security	Klang Valley	Kuantan	-1.77198*	.23229	.000	-2.4066	-1.1374
		Kota Kinabalu	-2.02337*	.23160	.000	-2.6560	-1.3907

TABLE 5
The mean values of Schwartz's values based on location of residence

	Klang Valley	Johor Bahru	Penang	Kuantan	Kota Kinabalu
Conformity	16.05	17.40	16.68	17.64	17.94
Tradition	18.85	20.33	19.30	19.57	20.63
Benevolence	19.69	21.13	20.40	21.27	21.94
Universalism	30.02	33.31	32.58	32.19	33.08
Self-Direction	19.28	20.60	20.50	19.75	20.80
Stimulation	10.41	12.05	11.59	10.82	11.75
Hedonism	10.71	11.72	11.15	10.50	10.99
Achievement	15.28	16.84	16.22	16.22	17.13
Power	56.04	57.64	57.19	56.18	57.02
Security	19.11	21.27	20.80	20.88	21.13

The mean values of Conformity by location in Table 5 show that the respondents in Kota Kinabalu scored the highest (17.94), whilst those in the Klang valley scored the lowest (16.05). The post-hoc analysis in Table 4 indicates that significant differences exist between the respondents in the Klang Valley and the respondents from the other areas of data collection; the respondents in Johor Bahru have significant differences with those in Kota Kinabalu; and the Penang respondents also have significant differences with the respondents from Johor Bahru, Kuantan and Kota Kinabalu.

The information in Table 5 regarding Tradition shows that once again, the respondents in the Klang Valley scored the lowest (18.85), whilst those in Kota Kinabalu scored the highest (20.63). The post-hoc analysis in Table 4 reveals that the respondents in the Klang Valley have significant differences with the respondents from Johor Bahru, Kuantan and Kota Kinabalu; the respondents in

Johor Bahru have significant differences with those from Penang and Kuantan; and the respondents in Kota Kinabalu have significant differences with those from Penang and Kuantan.

The data in Table 5 show that the respondents in the Klang Valley scored the lowest (19.69) and those in Kota Kinabalu scored the highest (21.94) in terms of Benevolence. The post-hoc analysis in Table 4 shows that significant differences exist between the respondents in the Klang Valley and the respondents from the other locations of the data collection; the respondents in Penang and those from Johor Bahru, Kuantan and Kota Kinabalu and the respondents in Kota Kinabalu have significant differences with those from Kuantan.

The mean values in Table 5 show that for Universalism, respondents in Johor Bahru have the highest (33.31) scores and those in the Klang Valley have the lowest (30.02) scores. The post-hoc analysis in Table 4 reveals that significant differences

exist between the respondents in the Klang Valley and the other four locations of the data collection.

With regards to Self-Direction, the information in Table 5 shows that the respondents in the Klang Valley scored the lowest (19.28) whilst those from Kota Kinabalu scored the highest (20.80). The post hoc results in Table 4 show that there are significant differences between the respondents in the Klang Valley and those from Johor Bahru, Penang and Kota Kinabalu. Likewise, there are significant differences between the respondents in Kuantan and those from Johor Bahru, Penang and Kota Kinabalu.

In the case of the Stimulation aspect of Schwartz's values, the mean values in Table 5 show that the Johor Bahru respondents have the highest (12.05) score and the Klang Valley respondents have the lowest (10.41) score. The post-hoc analysis shown in Table 4 reveals that the respondents in the Klang Valley have significant differences with the respondents from Johor Bahru, Penang and Kota Kinabalu. Similarly, the respondents in Kuantan have significant differences with the respondents from Johor Bahru, Penang and Kota Kinabalu.

As for the Hedonism aspect of Schwartz's values, the information in Table 5 shows that the Kuantan respondents have the lowest (10.50) score and the Johor Bahru respondents have the highest (11.72) score. Meanwhile, the post-hoc analysis in Table 4 indicates that the respondents in Johor Bahru have significant differences

with the respondents from the other four areas of the data collection. It is also shown that there are significant differences between the respondents from Penang and Kuantan.

The information in Table 5 shows that the respondents in Kota Kinabalu scored the highest (17.13) and those in the Klang Valley scored the lowest (15.28) in term of Achievement. The post-hoc results in Table 4 show that the respondents in the Klang valley have significant differences with the respondents from the other four areas of the data collection; the Johor Bahru respondents have significant differences with the respondents from Penang and Kuantan; and the respondents in Kota Kinabalu have significant differences with the respondents from Penang and Kuantan.

The mean values in Table 5 show that for the Power aspect of Schwartz's values, the Johor Bahru respondents scored the highest (57.64) scores and those in the Klang Valley the lowest (56.04). The post-hoc results in Table 4 show that the Klang valley respondents have significant differences with those in Johor Bahru, Penang and Kota Kinabalu; there are significant differences between the respondents in Johor Bahru and those in Kota Kinabalu, and there are significant differences between the respondents in Kuantan and those from Johor Bahru, Penang and Kota Kinabalu.

In terms of Security, the mean values in Table 5 show that the Klang Valley respondents have the lowest (19.11) score and those in Johor Bahru scored the highest

(21.27). The post-hoc analysis in Table 4 indicates that the respondents in the Klang Valley have significant differences with the respondents from the other four areas of the data collection.

Schwartz's Values and Educational Level of Respondents

ANOVA was conducted to identify any significant differences in the individual

Schwartz's values based on the level of education of the respondents. The ANOVA results shown in Table 6 indicate that only Hedonism (p=0.005) has significant differences based on the respondents' level of education. The post-hoc analysis is shown in Table 7, and the mean values in Table 8.

TABLE 6
The ANOVA result of Schwartz's values based on the respondents' level of education

		Sum of Squares	df	Mean Square	F	Sig.
Conformity	Between Groups Within Groups Total	26.579 6235.277 6261.856	5 1240 1245	5.316 5.028	1.057	.383
Tradition	Between Groups Within Groups Total	74.901 10005.103 10080.004	5 1240 1245	14.980 8.069	1.857	.099
Benevolence	Between Groups Within Groups Total	18.917 10270.441 10289.358	5 1240 1245	3.783 8.283	.457	.809
Universalism	Between Groups Within Groups Total	59.220 27947.133 28006.353	5 1240 1245	11.844 22.538	.526	.757
Self-Direction	Between Groups Within Groups Total	42.858 10784.686 10827.544	5 1240 1245	8.572 8.697	.986	.425
Stimulation	Between Groups Within Groups Total	46.963 5717.181 5764.144	5 1240 1245	9.393 4.611	2.037	.071
Hedonism	Between Groups Within Groups Total	75.263 5462.477 5537.740	5 1240 1245	15.053 4.405	3.417	.005
Achievement	Between Groups Within Groups Total	18.699 7466.698 7485.397	5 1240 1245	3.740 6.022	.621	.684
Power	Between Groups Within Groups Total	42.800 7019.121 7061.921	5 1240 1245	8.560 5.661	1.512	.183
Security	Between Groups Within Groups Total	27.057 9116.975 9144.032	5 1240 1245	5.411 7.352	.736	.596

TABLE 7
The post-hoc analysis of Schwartz's values based on the respondents' level of education

Dependent	(I) Education	(J)	Mean Difference	Std.	ean Difference Std. Sig.	g:		Confidence terval
variable	I Education I		(I-J)	Error	Sig.	Lower Bound	Upper Bound	
Hedonism	STPM or equivalent	Diploma or equivalent	79021*	.216	.0036	-1.4062	-0.1742348	

TABLE 8
The mean values based on the respondents' level of education

	SPM or equivalent	STPM or equivalent	Diploma or equivalent	Bachelor degree or equivalent	Masters or PhD	Others
Conformity	17.22	17.11	17.11	16.95	17.74	16.99
Tradition	19.97	19.56	19.53	19.42	20.26	19.72
Benevolence	20.99	20.83	20.73	20.82	21.26	20.78
Universalism	32.37	31.93	32.29	32.01	32.85	31.86
Self-Direction	20.16	20.15	20.23	20.16	21.10	19.83
Stimulation	11.43	11.11	11.36	11.10	12.03	11.04
Hedonism	10.96	10.51	11.30	11.11	11.56	10.89
Achievement	16.35	16.39	16.41	16.29	16.62	15.90
Power	56.87	56.71	56.95	56.74	57.05	56.15
Security	20.61	20.65	20.70	20.59	21.36	20.38

The mean values in Table 8 show that the respondents with Masters or PhD qualifications scored the highest (11.56), while thosewith STPM or equivalent qualification scored the lowest (10.51). The post-hoc results in Table 7 reveal that there are significant differences between the respondents with STPM or equivalent qualifications and the respondents with Diploma or equivalent qualifications.

Schwartz Values and Working and Nonworking Wives

The ANOVA analysis of the Schwartz values by wives' working status shown in Table 9 indicates that Tradition is the only significant individual Schwartz value with regards to the respondent's status as a housewife or not. The mean values are shown in Table 10.

TABLE 9
The ANOVA result of Schwartz's values by wives' working status

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	4.365	1	4.365	.872	.351
Conformity	Within Groups	6254.447	1249	5.008		
	Total	6258.812	1250			
	Between Groups	65.610	1	65.610	8.180	.004
Tradition	Within Groups	10017.437	1249	8.020		
	Total	10083.047	1250			
	Between Groups	6.106	1	6.106	.744	.389
Benevolence	Within Groups	10252.671	1249	8.209		
	Total	10258.777	1250			
	Between Groups	4.626	1	4.626	.206	.650
Universalism	Within Groups	28093.432	1249	22.493		
	Total	28098.058	1250			
	Between Groups	1.510	1	1.510	.174	.677
Self-Direction	Within Groups	10841.830	1249	8.680		
	Total	10843.340	1250			
	Between Groups	.986	1	.986	.213	.644
Stimulation	Within Groups	5775.600	1249	4.624		
	Total	5776.587	1250			
	Between Groups	15.415	1	15.415	3.475	.063
Hedonism	Within Groups	5540.326	1249	4.436		
	Total	5555.741	1250			
	Between Groups	.539	1	.539	.090	.765
Achievement	Within Groups	7509.031	1249	6.012		
	Total	7509.570	1250			
	Between Groups	.217	1	.217	.038	.845
Power	Within Groups	7084.955	1249	5.673		
	Total	7085.172	1250			
	Between Groups	20.279	1	20.279	2.770	.096
Security	Within Groups	9145.286	1249	7.322		
	Total	9165.565	1250			

TABLE 10
The mean values by wives' working status

	Housewife	Non-Housewife
Conformity	17.08	17.20
Tradition	19.99	19.53
Benevolence	20.81	20.95
Universalism	32.17	32.29
Self-Direction	20.15	20.22
Stimulation	11.36	11.30
Hedonism	10.89	11.11
Achievement	16.32	16.36
Power	56.80	56.83
Security	20.50	20.76

The mean values in Table 10 show that the non-working wives have the highest (19.99) score.

DISCUSSION AND CONCLUSION

As stated in the beginning, this study is still in its preliminary stage. Knowing that similarities or differences exist among wives should open other opportunities for future research. Based on the results discussed previously, the findings of this study can be summarised as below:

- 1. There is a significant difference in the personal values of wives based on the different locations of residence in Malaysia.
- There is a significant difference in personal values of wives based on the education level.
- 3. Personal values are different between working and non-working wives.

The major findings of this study highlighted the impact of location to the values possessed by the working and nonworking wives in Malaysia. For example, the respondents in Kota Kinabalu seemed to value Conformity (politeness, obedience, self-discipline, honouring parents and elders) as opposed to the ones in the Klang Valley. Similar situations are apparent for the values of Tradition (humble, accepting portion of life, devout, respect for tradition, Benevolence moderate), (helpful, honest, forgiving, loyal, responsible), Self-Direction (creativity, freedom, independence, curiosity, choosing own goals), and Achievement (successful, capable, ambitious, influential). On the other hand, the respondents from Johor Bahru scored the highest in the values of Universalism (broadmindedness, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment), Stimulation (daring, a varied and exciting life), Power (social power, authority, wealth),

and Security (family security, national security, social order, clean, reciprocation of favours). As for the value of Hedonism (pleasure, enjoying life), the highest score was obtained by the respondents from Johor Bahru, but the lowest score went to the respondents from Kuantan. These findings highlighted that the respondents living in the Klang Valley seemed to be lowest in almost all the values, except for Hedonism. The situation may reflect the fact that many residents in the Klang Valley are from other parts of the country and this might therefore cause a dilution on the values held by them.

In addition, the relationship between Schwartz's values and the level of education is only significant for the value of Hedonism. Here, the respondents with Masters or PhD qualifications scored the highest, while the respondents with STPM or equivalent qualifications scored the lowest. Hedonism highlighted the fact that the former group seems to be more prone to pleasure and enjoyment of life.

Apart from the above findings, the working and non-working wives were found to be significantly different in the values of Tradition, where the latter reported the higher score. Non-working wives are seen to be more prone to being humble and devout, moderate, have more respect for traditions, and are more receptive of their lifestyle.

Overall, this study found that the values of working and non-working wives vary with certain demographic variables, especially the location of residence and the

level of education. However, the findings should be interpreted with caution as the sample was taken from urban settings, and may not be reflective of the population in Malaysia in general. Future research is recommended to investigate the variations of values involving working and non-working wives from the other regions of Malaysia, and to include substantial respondents from the non-urban setting.

In conclusion, this study has shown that certain demographic variables, specifically the location of residence and the education level, are able to influence the type of values held by the working and non-working wives. Thus, the study has extended the understanding on past literatures (e.g., Jalilvand, 2000; Spranger, 1928) on these two groups, and further highlighted the differences of values that exist among women.

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Supply Chain Intelligence in Business Organisations: A Malaysian Perspective

Nor Siah Jaharuddin^{1*}, Zainal Abidin Mohamed², and Murali Sambasivan³

ABSTRACT

The business environment has become more competitive due to advancements in technology and globalisation. Emphasising intelligence as a means for dealing with such circumstances, this study examined the role of supply chain intelligence (SCI), which embraces the process of competitive intelligence (CI) in the operations of a supply chain management (SCM). The integration is needed to ensure that this actionable information from CI has a 360-degree view of business activities amongst supply chains. What exactly is supply chain intelligence? How does supply chain intelligence influence business competitiveness in Malaysia? How does supply chain intelligence help businesses to achieve competitive advantages? This paper examined the contribution of supply chain intelligence on business competitiveness by: a) identifying and validating the dimension of supply chain intelligence components, and b) examining the levels of supply chain intelligence usage by businesses. A focus group was employed as a preliminary study to validate the supply chain intelligence components, and subsequently, for the development of the questionnaire for the survey in the study. The results contribute to the literature by emphasising the use of systematic intelligence in supply chain integration to improve business competitiveness.

Keywords: Competitive Intelligence, Supply Chain Management, Supply Chain Intelligence, Competitive Advantage

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E-mail addresses:

norsiahj@econ.upm.edu.my (Nor Siah Jaharuddin) laniaz@usim.edu.my (Zainal Abidin Mohamed) sambasivan@hotmail.com (Murali Sambasivan)

* Corresponding author

INTRODUCTION

The application of Competitive Intelligence (CI) grew in the 1990s and has prompted many countries to use it on a global scale to improve their competitive edge. A large body of evidence

¹Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

²Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia

³Taylor's University, 47500 Subang Jaya, Selangor, Malaysia

has shown that intelligence assists top management's overall decisions towards business competitiveness (Calof, 1999; Wright et al., 1999, 2002; Badr, 2003; Stefanikova & Masarova, 2014). Due to the continuous demand from customers for variety, lower cost, better quality and more responsiveness for goods and services, the perspective of competition among the firms has also changed and shifted to the supply chain level (Christopher, 1992; Bechtel & Jayaram, 1997; Tan, 2001; Mentzer et al., 2001; Agarwal et al., 2006; Stefanovic & Stefanovic, 2009). In this study, the scope of intelligence functions has been extended by integrating it to supply chain management (SCM), and this perspective is called supply chain intelligence (SCI). While the term "SCI" has been applied in some studies of IT technical aspects dealing with data warehousing systems to store and exchange information across value chains and supply chains (Stefanovic et al., 2007; Stefanovic & Stefanovic, 2009), studies addressing human potential such as skills, experience and instinct in analysing and transforming raw data into actionable intelligence in formulating strategic decisions are still lacking (Gilad & Herring, 2001; Wilkins, 2007; Stefanikova & Masarova, 2014).

In addressing the critical area of intelligence, very few studies have discussed how to operationalise the construct of the SCI components and align them with a firm's practice. Most past studies centred on the acquisition and employment of intelligence by the

organisations, but not many provided details about the intelligence components that firms collected (Cartwright et al., 1995; Rouach & Santi, 2001; Wright et al., 2002; Wright & Calof, 2006). Intelligence information is often treated as exclusive property to the firms, which remains private and confidential due to its link to strategy, and it is thus considered as a taboo subject. Hence, the intelligence components of the supplier, customer and competitors are covered only at the surface level (as a separate entity), without looking at their relationship as supply chain networks. Knowing what kinds of specific SCI components are collected by firms and categorising them into specific dimensions could offer an interesting pattern because different industries might gather different information. Thus, this study focused on the SCI components employed by the manufacturing industry, since it has more extensive global supply chain networks than other industries.

Understanding and managing SCI is crucial for the future business performance as a factor influencing a firm's competitiveness and as a source for developing appropriate strategy. This is especially important in Malaysia which is progressing from an industrial economy to a K-economy country (Worldbank, 2014). Entry into this knowledge economy requires the value of human potential that is closely related with knowledge and information as the primary resource for firms and the economy in rapidly changing markets, technology and products. An effective SCI serves a critical

function, especially because about 99.2% of total business establishments in Malaysia are small and medium enterprises (SMEs), which directly benefits the country in economic growth (SME Directory, 2014). In relation to that, SCI may assist the supply chain process of businesses, as it was one of the main agenda items in the 10th Malaysian Plan (2011 – 2015) to improve and to become strategically competitive in any industry. SCI is a strategic tool for firms, especially SMEs, to remain informed about their competitive environment in order to stay ahead of competition and face myriad global challenges. SCI may provide a solid basis as a tool of competitiveness for businesses to increase performance and achieve a higher economic status for Malaysia.

Therefore, the general objectives of this study are to identify and validate the supply chain intelligence components and examine the organisational characteristics (e.g., size, ownership and manufacturing sectors) that influence SCI usage in companies. In more specific, by focusing on manufacturing firms in Malaysia, this study brings a new perspective about SCI that will enable companies to have a 360-degree view of their businesses for new opportunities to increase revenue, to cut costs and enhance customer satisfaction (Haydock, 2003; Viswanathan & Sadlovska, 2010).

LITERATURE REVIEW

Supply Chain Intelligence

Even though competitive intelligence (CI) takes a comprehensive view of the internal

and external environment (Academy of Competitive Intelligence, 2014), it has a limited role to play in operational aspects of SCM. CI is centred on evaluating information of individual stakeholders and internal operations without emphasising links and interaction (the harmony of the relationship) between supply chain parties (i.e., open communication, knowledge sharing, participation, trust, mutual goals, commitment, integration, etc.). SCI is therefore considered to be a "sub-set" of CI. SCI perspectives are highly valuable in analysis, not only as isolated effects for stakeholders, but also in the harmony of the relationship between supply chain partners or networks. SCI covers both CI and SCM concepts. The volumes of data SCI analysts must utilise means they must have good CI and SCM systems. SCI is a unique systematic process that involves people's capability to transform raw data into actionable intelligence, focusing on the integration of the supply chain between supply chain partners, while creating value and proving a sustainable competitive advantage for the firm (Porter, 1980; Kahaner, 1997; Wilkins, 2007; Stefanovic et al., 2007, 2009).

According to Wilding and Humphries (2006) and Sambasivan *et al.* (2013), collaboration by working together in the supply chain is essential to achieve effective operations that are in harmony with the strategies and objectives of the parties involved, thus resulting in mutual benefit. Based on various definitions of CI (Calof & Wright, 2008; SCIP, 2014)

and SCM (Chopra & Meindl, 2001; Viswanathan & Sadlovska, 2010) from the previous literature, the term SCI in this study is best described as a set of systematic intelligence process about opportunities or developments that have the potential to affect individual firms and their supply chain network as a whole towards improving long-term performance.

SCI is a source of competitive advantage because it utilises both CI and SCM views. According to the resourcebased perspective (RBV), the existence of the SCI function itself can be justified for its rent-generating capabilities, due to its unique disciplinary expertise and skills developed over time by SCI personnel about the environment, supply chain network and competitors, expertise and skills which are difficult for other firms to imitate or replicate (Barney, 1986, 1991; Prahalad & Hamel, 1990; Hughes, 2005). Since SCI processes involve data gathering, data analysis and data dissemination, the probability of effectively replicating these routines is highly unlikely in a short time due to extreme tacitness of these processes, especially in understanding a supply chain's multiple link activities and processes (Porter, 1995; Du Toit, 2003; Hughes, 2005). In other words, the concept of SCI is strongly related as a source of competitive advantage and tacit knowledge for the firm and provides a useful paradigm for analysing the link between SCI as a firm resource and performance.

Components of Supply Chain Intelligence Intelligence components reflect organisation's own strategic position and the competitive advantage it maintains in a particular marketplace. Even though academic literature in this area is increasing in quantity, none of the studies has focused primarily on intelligence components. Most of the studies discussed the subject either generally or not at all. Hence, little consistency found in past studies in term of component measurement that needs to be gathered, evaluated and included as critical intelligent constructs of the organisation's competitiveness (Wright & Calof, 2006). Many businesses were found to undertake intelligence, but it was generally quite rudimentary in nature, of limited scope and on an adhoc basis. Many past studies deployed the ideas of business gurus such as Porter's five forces (1985, 1995) to provide a useful model in which competitors can be viewed in terms of strength, competitive position and competitive strategies. A study by Fleisher (2004) suggested that organisational members could assess key trends, emerging discontinuities, the evolution of industry structure and the capabilities and behaviours of current and potential competitors to assist in or develop a competitive advantage. Calof and Wright (2008) stated that the Competitive Intelligence Foundation, commissioned in 2006, found that the respondent firms focused on various components such as company profiles, competitive benchmarking, early warning alerts, market or industry trends, customer

or supplier profiles, technology assessment, economic/political analysis and executive profiles. In sum, intelligence can help business executives make better decisions than their competitors by gathering the required components of intelligence for strategic planning.

Meanwhile, intelligence on supply chain components was examined as a separate entity without looking at the harmony of the relationship and its unique integration between supply chain partners. According to a study by Quayle (2003) on the supply chain practices among SMEs in the UK, there are 18 different components including supplier development, e-commerce, new technology, time-tomarket, staff development, leadership, strategy, team working and waste reduction. All these components are

essential to improve the competitive position of a company. Subsequently, the study conducted by Tan *et al.* (2002) is more comprehensive because they have considered more supply chain components such as collaboration, trust, ethical practices, continuous improvement efforts and infrastructure drivers. Similarly, Hua (2002), in a survey among 143 SMEs in Malaysia, found that only 28% of them practice SCM for competitive position in their organisations.

Based on the previous studies of CI and SCM, Table 1 provides lists of SCI components. All of these components are summarised and divided into several categories. Finally, based on the characteristics of the intelligence components, eight dimensions were identified in this study.

TABLE 1 SCI

SCI DIMENSIONS	SCI COMPONENTS	CI LITERATURE	SCM LITERATURE
Uncontrollable environment (external Issue)	Global economy, market and industry structure, political, social, government policy, and substitute product.	Prescott & Gibbons (1993); Porter (1995); Johnson & Scholes (2002); APQC (2003); Fleisher (2004); Priporas et al. (2005); Pelsmacker et al. (2005); Badr et al. (2006); Brouard, (2006); Wright & Calof (2006); Miree et al. (2007); Pirttimaki (2007); Calof & Wright (2008)	
Competitive activities	Capacity expansion, mergers and acquisitions, potential strategic partnersand benchmarking.	Fleisher (2004); Pelsmacker et al. (2005); Badr et al. (2006); Brouard (2006); Miree et al. (2007); Wilkins (2007); Calof & Wright (2008)	Lamming (1993); Monczka et al. (1998); Chandra and Kumar (2000); Mentzer et al. (2001); Gunasekaran et al. (2001); Childerhouse&Towill (2002); Tan et al. (2002); Sambasivan & Jacobs (2008)

SCM activities	Agility, cost efficiency, information sharing, logistics, communication, commitment, response time and product development.	Wilkins (2007)	Monczka et al. (1998); Chandra and Kumar (2000); Mentzer et al. (2001); Gunasekaran et al. (2001); Tan et al. (2002); Childerhouse & Towill (2002); Wilkins (2007); Sambasivan & Jacobs (2008); Stefanovic & Stefanovic (2009)
Customer/ supplier activities	Bargaining power, relationship, delivery flexibility and capability, quantity delivered, product prices, procurement system, technical expertise and on-time delivery.	Porter (1995); Johnson & Scholes (2002); APQC (2003); Fleisher (2004); Pelsmacker <i>et al.</i> (2005); Brouard (2006); Wright & Calof (2006); Pirttimaki (2007); Miree <i>et al.</i> (2007); Calof & Wright (2008)	Lamming et al. (1996); Monczka et al. (1998); Tan et al. (1998); Narasimhan & Das (2001); Gunasekaran et al. (2001); Tan et al. (2002); Chopra & Meindl (2004); Sambasivan & Jacob (2008)
Research and Technology initiatives	Product innovation, RMD planning & investments, technology capability and expertise.	Teo & Choo (2001); Chen et al. (2002); Fleisher (2004); Thomas & Tryfonas (2005); Priporas et al. (2005); Badr et al. (2006); Brouard (2006); Wright & Calof (2006); Pirttimaki (2007); Calof & Wright (2008); Dishman & Calof (2008)	Stuart & McCutcheon (2000); Kuei & Madu (2001); Kuei et al. (2002); Min & Zhou (2002); Vickery et al. (2003); Kemppainen & Vepsalainen (2003); Stefanovic et al. (2007); Stefanovic & Stefanovic (2009)
Marketing planning	Product developments & enhancements, pricing strategy, market focus, cost structure, branding and positioning, product quality, customer service and complaints and substitute product.	Prescott & Gibbons (1993); Porter (1995); Johnson & Scholes (2002); APQC (2003); Fleisher (2004); Badr et al. (2006); Miree et al. (2007); Wilkins (2007)	Slater & Narver (2000); Stuart & McCutcheon (2000); Frohlich & Westbrook (2001); Kuei & Madu (2001); Min & Zhou (2002); Vickery et al. (2003); Kemppainen and Vepsalainen (2003); Green et al. (2006)
Strategic planning	Organisation and supply chain goal, competitive strategy and scope of activity.	Calof & Miller (1998); Du Toit (2003); Fleisher (2004); Hodges (2005); Badr <i>et al.</i> (2006); Miree et al. (2007); Wilkins (2007)	Chandra and Kumar (2000); Mentzer et al. (2001); Gunasekaran et al. (2001); Tan et al. (2002); Childerhouse & Towill (2002); Sambasivan & Jacobs (2008); Wilkins (2007)
Organisational resources	Culture, reward, structure, policy, top management, financial, employees, training, reputation, trust, communication, knowledge sharing lifelong learning, and lead time.	Prescott & Gibbons (1993); APQC (2003); Thomas &Tryfonas (2005); Priporas et al. (2005); Marson (2006); Miree et al. (2007); Calof & Wright (2008)	Monczka et al. (1998); Chandra and Kumar (2000); Mentzer et al. (2001); Slater and Narver (2000); Gunasekaran et al. (2001); Tan et al. (2002); Childerhouse & Towill (2002); Sambasivan & Jacobs (2008)

While many past studies have focused on varieties of SCM components, they are almost similar in nature, that is, to improve and satisfy their supply chain integrations between trading partners. Mentzer *et al.* (2001) proposed that the most basic SCM flow involves three parties: supplier, internal process and customer. Thus, the SCI components derived from past CI and SCM studies need to be examined across four supply chain elements: (1) selecting

and maintaining suppliers, (2) making internal processes effective, (3) retaining and expanding customer base, and (4) obtaining information on competitor activities. A set of SCI components for each supply chain elements (supplier, internal process, customer and competitor) needs to be conclusively established as a guideline by the organisation in order to remain competitive, as shown in Table 2.

TABLE 2
The Supply Chain Intelligence (SCI) Components

SCI	COMPONENTS				
SCI COMI ONENTS		Supplier	Internal Process	Customer	Competitor
1.	Uncontrollable environment				
2.	Competitive activities				
3.	SCM activities				
4.	Supplier/buyer activities				
5.	Technology initiatives				
6.	Marketing activities				
7.	Strategic planning				
8.	Resources and capabilities				

RESEARCH METHODOLOGY

Developing the SCI components requires several critical stages. First, components are gathered, collated and consolidated from CI and SCM empirical research, and the final products are called SCI components (see Table 1). This is followed by focus group discussion with ten experts from different industrial backgrounds such as food process, electric and electronics, rubber and liquid. A draft of the compilation of the SCI components from past empirical literature and related

sources were given to participants before the meeting. The discussion focused on arrangement of the components into their respective dimensions. Most components were retained, and a few suggestions such as adding new product enhancement and rebranding in sales and marketing were made to strengthen the matrix. This draft was then used for questionnaire development. From pilot a conducted on 25 companies, minor changes were made before the actual distribution process.

Questionnaires were distributed the survey to the population, which included the managers or executives who are familiar with supply chain areas of the company, as the respondents of this study. The Federation of Malaysian Manufacturers (FMM) book is used as the sample framework because it is recognised in Malaysia (Haslinda et al., 2011; Sambasivan et al., 2013) and represents about 2135 leading manufacturing and industrial service companies of varying sizes. By eliminating the industrial service sector and several small companies (fewer than 50 employees), the actual population of study consisting of 1430 manufacturing companies was used as the samples. Afterwards, the questionnaire was sent to 1430 companies, from which 174 feedback responses were received and used for the analysis.

The study focused on two sectors of the manufacturing industry. The first sector is electrical and electronics because this sector represents the supply chain market in which Malaysia is one of its important hubs in Asia. The second sector consists of other relevant support sectors in manufacturing. All the research questions and objectives were answered by performing appropriate descriptive and inferential statistical analyses such as independent sample t-test and ANOVA.

FINDINGS AND DISCUSSION

A considerable effort has been given to define the unique context of SCI (see Table 1) based on empirical data. This process has led to the development of about 78 first-order measurement scales of SCI, which were then viewed and validated by industrial experts in focus group discussions and finally, pilot testing. While many of these scales are obviously and appropriately rooted in the previous literature, the development process is necessary to ensure the appropriateness of these scales in the manufacturing context. As such, the researcher was able to develop a new set of SCI across supply chain elements that has been tested to be valid and reliable.

In this study, exploratory data analyses (EDA) using principal component analysis (PCA) were performed to derive valid and reliable SCI components. A PCA test was used to derive a relatively small number of variables that could account for the variability found in a relatively large number of measures (De Winter & Dodou, 2014). The findings in Table 3 show a total of five factors (dimensions), which explain about 68% of the total variance. Thus, the original eight dimensions of the SCI components shown in Table 1 have been compressed further to five, after using the PCA.

TABLE 3
The SCI Components after Using the PCA

COLL	Factor 1	Factor 2	Factor 3	Factor 4	Factor
SCI Items	Sales & Mktg	R&D	Org. Resources	Supply Chain	Externa
Customer service	.833				
Price strategy	.814				
Customer complaints	.793				
Product quality	.793				
Market focus	.786				
After sale service	.761				
Flexibility customer	.740				
Market strategy	.687				
Product enhancement	.664				
Supply chain goals	.648				
Product price	.646				
New prod develop	.633				
Cost structure	.614				
Quality service	.566				
Tech expertise		.789			
Compatible tech		.741			
R&D develop		.682			
Financial stability		.681			
Delivery capacity		.660			
IT Capacity		.649			
Commit. to cont. imp		.613			
Communication ability		.607			
Comp. strategy		.590			
Orgn goals		.587			
Tech. capacity		.567			
Reward			.779		
Structure			.736		
Staff policies			.735		
Culture			.700		
Training			.698		
Lifelong learning			.671		
Knowledge share			.644		
Communication			.630		
Scope of activity			.617		
Top mgmt.			.609		
Transp. costs			.606 .598		
Internal operations			.398	.723	
Delivery accuracy					
Delivery flexibility				.699 .659	
Supplier forecast Shifting needs &prio.				.647	
On time delivery				.609	
Relation supp./buy.				.605	
Barg. power supp/buy				.598	
Cost structure				.576	
Cap. Expansion				.564	
Cust/suppinteg.				.504	.719
Substitute products					.619
Market structure					.595
Agility					.590
Benchmarking					.589
Economic cond.					.571
Outsourcing					.569

All the calculations of Cronbach's alpha coefficients resulted in alpha coefficients for supply chain components

that showed acceptable reliability above 0.7 (Nunnally, 1978; Slater & Narver, 1995; Hair *et al.*, 2010) (see Table 4).

TABLE 4 Reliability Analysis

Variables	Cronbach's Al	pha
Pilot Study (N=25)	Actual Study (N=174)	
SCI Components		
Uncontrollable Environment	0.874	
Competitive Activities	0.855	
SCM Activities	0.944	
Supplier/Buyer Activities	0.957	Original eight dimensions
Technology Initiatives	0.955	
Marketing Activities	0.979	
Strategic Planning	0.908	
Resources and Capabilities	0.966	
External Environment		0.855
Supply Chain Integration		0.910
Research & Development		0.907 Five dimensions after PCA
Sales & Marketing		0.946
Organizational Resources		ر 0.922

Table 5 indicates the company's background that consists of company size, company ownership and the industries participating in the study. There are three groups of company sizes: small (<100 workers), medium (100 - 499 workers) and large firms (> 500 workers). The findings show that a very small percentage (16.1%) of small companies participated in the survey; most of them refused to participate due to shortage of manpower and the rare use of SCI in their organisation. On the contrary, large companies (53.4%) and medium-size companies (30.5%) showed more willingness to cooperate in the survey. There is also an equal percentage of company ownership among the companies: 50% are foreign-owned, and another 50% locally-owned companies. are about eleven manufacturing sectors; however, for analysis purposes, these sectors are divided into five categories. The majority of the companies (46%) are from electrical and electronics since this industry contributes the largest export amounts, and Malaysia is one of the important hubs of global supply chain manufacturing (MIDA, 2014). As for the rest, solid material industry accounts for 24.7%, followed by liquid material industry (13.2%),consumer product industry (9.8%) and other industries (6.3%).

TABLE 5
Background of Companies

Profile	Frequency (n=174)	Percentage (%)
Size of Organization		
Small (Below 100)	28	16.1
Medium (100-499)	53	30.5
Large (Above 500)	93	53.4
Company Ownership		
Foreign	87	50
Local	87	50
Manufacturing Industry		
1.Electrical & Electronics sector	81	46.0
2.Other Sectors	93	54.0
Solid Material Sector:	43	24.7
Wood Material	16	9.2
Basic Metal	14	8.0
Machine & Equipment	13	7.5
Liquid Material Sector:	23	13.2
Petrochemical & Polymer	15	8.6
Plastic Products	8	4.6
Consumer Product Sector:	17	9.8
Pharmaceuticals	7	4.0
Food Processing	8	4.6
Medical Devices	2	1.1
Others Sector	10	6.3

SCI Usage between Manufacturing Sectors

Table 6 shows almost equal numbers of electric and electronics (N= 81) and other sectors (N=93). The independent-sample t-test (refer to Table 7) shows that there is a significant difference in the scores for electric and electronics (M = 3.52, SD = 0.49) and others (M = 3.36, SD = 0.57) [manufacturing sectors; t (172) = 1.97, p = 0.05]. This finding suggests that the E&E

sector has a higher SCI usage than the other sectors. One possible explanation might be attributed to the fact that most E&E industry in Malaysia is foreign-owned and therefore represents global market players. Thus, a higher usage of SCI by E&E is expected, since they are more exposed to global competition and technology advancement, especially regarding the importance of practicing SCI.

TABLE 6 Statistics tests between Manufacturing Sectors and SCI

	Industry	N	Mean	Std. Deviation	Std. Error Mean
SCI	Electric & electronic	81	3.5241	.49093	.05455
	Others	93	3.3649	.56570	.05866

TABLE 7
Results of the Independent Samples Test of the SCI Usage between Manufacturing Sectors

Levene's Test for Equality t-test for Equality of Means of Variances 95% Confidence Interval of the Difference Mean Sig. Std. Error Upper Lower df Difference Difference F (2-tailed) Sig. SCI Equal .050* .15919 variances .963 .328 1.968 172 .08089 -.00048 .31885 assumed Equal 1.987 171.999 .15919 variances .048* .08010 .00108 .31730 not assumed

SCI Usage between Size of Organisations

Tests were also conducted to compare the use of SCI in small, medium and large organisational sizes. A one-way between subjects ANOVA test in Table 8 shows a significant difference of SCI usage on organisational size at p < .05 level for the three categories [F (2, 171) = 3.93, p =0.021]. Hence, post-hoc comparisons using the Tukey HSD test (Table 9) were carried out to determine the relationship of each size with all other sizes. The findings in Table 10 indicate that the mean score for the large companies (M = 3.53, SD = 0.59) is significantly different than the small companies (M=3.23, SD=0.45); meanwhile, the medium-sized companies (M = 3.39, SD = 0.45) do not significantly differ from either the large and small companies. Taken altogether, the result reveals that large companies are more inclined towards high SCI usage. This finding implies that SCI is the domain of larger firms even though there is a good representation in the small companies towards medium SCI usage. It might be possible to conclude that small companies are less likely to have the extra resources to invest heavily in SCI, even if they have an interest in it compared to larger organisations. This result is in line with the findings of Calof and Dishman (2002), Saayman et al. (2008) and Wright et al. (2012), who found the association between organisation size and SCI usage.

^{*}Significance level - 0.05

TABLE 8
Results of ANOVA of the SCI Usage between Organisational Size

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.189	2	1.094	3.929	0.021*
Within Groups	47.631	171	0.279		
Total	49.819	173			

^{*}Significance level - 0.05

Table 9
Results of the Tukey Post Hoc Test between Organisational Sizes

		Mean Difference			95% Confidenc	e Interval
(I) size	(J) size	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
small	medium	16234	.12330	.388	4539	.1292
	large	30472	.11377	.022*	5737	0357
medium	small	.16234	.12330	.388	1292	.4539
	large	14237	.09083	.263	3571	.0724
large	small	.30472	.11377	.022*	.0357	.5737
	medium	.14237	.09083	.263	0724	.3571

^{*}Significance level - 0.05

TABLE 10 Results of the Descriptive Statistics between Organisational Sizes

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Min.	Max.
small	28	3.2267	.45183	.08539	3.0515	3.4019	2.41	4.41
medium	53	3.3890	.44971	.06177	3.2651	3.5130	2.34	4.60
large	93	3.5314	.58609	.06077	3.4107	3.6521	1.68	4.84
Total	174	3.4390	.53663	.04068	3.3587	3.5193	1.68	4.84

SCI Usage between Types of Company Ownership

Ownership was examined to compare the use of SCI between foreign-owned (N=87) and locally-owned (N=87) companies (see Tables 11 and 12). An independent-samples t-test was conducted, and the results in Table 11 show that there is a significant difference in the scores for foreign-owned

(M = 3.53, SD = 0.49) and locally-owned (M = 3.35, SD = 0.57) companies, with t (172) = -2.15, p = 0.033. The results indicate that foreign-owned organisations are more inclined towards high SCI usage. Many foreign-owned companies are exposed to global competitiveness, and thus, they need to be more alert for sustainability by having more systematic

processes of SCI at headquarters in their home country. In contrast, locally-owned organisations are more inclined towards medium SCI usage, and this is largely due to financial constraint. This finding is further described by Worldbank (2007, 2014), which reported that MNCs have better advantages over local firms in terms of technology and financial availability.

TABLE 11 Statistics Tests of the SCI Usage between Types of Company Ownership

SCI	Ownership Local	N 87	Mean 3.3524	Std. Deviation .56715	Std. Error Mean .06080
	Foreign	87	3.5256	.49240	.05279

TABLE 12
Results of the Independent Samples T-test of the SCI Usage between Types of Company Ownership

	Levene's Tes of Variances	t for E	quality	t-test fo	test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Cont Interval o Difference	f the
									Lower	Upper
SCI	Equal variances assumed	0.312	0.577	-2.151	172	.033*	-0.17322	0.08052	-0.33216	-0.01427
SCI	Equal variances not assumed			-2.151	168.675	.033*	-0.17322	0.08052	-0.33218	-0.01425

^{*}Significance level - 0.05

Level of Usage of the SCI Components

In ranking the importance among five SCI dimensions, Table 13 shows the descriptive findings.

TABLE 13
Mean and Standard Deviation Statistics

Variables	Mean	Std. Deviation					
Supply Chain Intelligence Components							
Sales & Marketing	3.583	0.643					
Supply Chain Integration	3.540	0.658					
Research & Development	3.382	0.693					
External Environment	3.369	0.543					
Organizational Resources	3.321	0.620					
Supply Chain Elements							
SCI Internal Process	3.506	0.578					
SCI Customer	3.500	0.568					
SCI Supplier	3.430	0.598					
SCI Competitor	3.184	0.685					

In ranking the importance among five SCI components, the results in Table 13 show that sales and marketing intelligence has the highest mean score (M=3.583, SD=0.643), supply chain integration intelligence is second (M=3.540,SD=0.658), research and development intelligence is third (M=3.382, SD=0.693), external environment intelligence is fourth (M=3.369, SD=0.543), and the lowest mean score is organisational resources intelligence (M=3.321, SD=0.620). Sales and marketing intelligence such as pricing strategy, quality service, cost structure, marketing strategy, customer service and market structure is perceived as important information to retain and generate customers. This finding is consistent with the empirical studies that show that business and supply chain networks have emphasised customer satisfaction as their main strategy to maximise profits, in which SCI of sales and marketing is the main resource to fulfil a customer's needs (Horvath, 2001; Vickery et al., 2003; Singh & Power, 2009). In general, the high mean score of sales and marketing is expected because intelligence is originally rooted in the sales or marketing department (Pelsmacker et al., 2005; Qiu, 2008). Meanwhile, SCI of supply chain integration such as relationships with supply chain partners, delivery flexibility, on-time delivery, cost structure, supplier forecast, bargaining power and shifting needs and priorities, has the second highest mean score. This intelligence is given considerable attention because most manufacturing companies in Malaysia are

part of the global supply chain companies which leads to more emphasis improving their supply chain effectiveness (Sambasivan & Jacobs, 2008). In other words, supply chain networks create cross-organisational linkages to integrate human, financial or technical resources in order to have better business model (Bowersox et al., 2003). Research and development intelligence such as patent technology development, capability, compatible technologies with supply chain partners, technology expertise and IT capacity are also found to be important for organisational growth and supply chain activities. A few past studies have found that a large number of companies gave more attention to innovation as one of their core capabilities for competitiveness (Tanev & Bailetti, 2008; Nemutanzhela & Iyamu, 2011). External environment intelligence (i.e., global economic condition, changing market structure, substitute product, capacity expansion competitors and benchmarking) has also influenced organisations in strategizing against their competitors (Wilkins, 2007). Finally, organisational resources intelligence such as culture, reward system, structure, staffing, top management, internal operations, learning and knowledge sharing and training is also important to assess a firm's and its main competitors' internal strengths in terms of operations (Simkin & Cheng, 1997; Calof & Wright, 2008; Tanev & Bailetti, 2008).

The level of SCI usage among supply chain elements (i.e., supplier, internal process, customer and competitor) was also examined. The result of supply chain elements indicates the mean score of internal process (M=3.506, SD=0.578), customer (M=3.500, SD=0.568), supplier (M=3.430, SD=0.598) and competitor (M=3.184, SD=0.685). This finding provides a valid evidence that the supply chain element of the internal process is perceived to be the most important and frequently-used by organisations. The results appear to be in line with those of Tanev and Bailetti (2008), who found that the use of supply chain elements was highest on internal information and customer, while competitor and industry information were the lowest. Consistently, a study by Kaplan and Norton (2004) also found that internal processes were the most critical in creating value for customers, shareholders and other stakeholders because the organisation can easily access the full details of its own operation. This is further supported through recent studies by global audit firms, KPMG (2011) and Supply Chain Foresights (2013), which revealed that internal process improvement efforts were highly demanded.

CONCLUSION AND RECOMMENDATIONS

In this study, SCI was found to be the domain of large-sized and foreign-owned organisations such as multinational corporations (MNCs). Even though larger firms have an edge in terms of greater financial advantage and are able to conduct more formal SCI analysis, small firms can still focus on SCI by using informal

intelligence networks (McGonagle & Vella, 2004; Wright & Calof, 2006). In other words, for most businesses, SCI is one of the important tools to understand and predict the future market and to ensure business survival and competitiveness in a rapidly growing market. According to Stefanikova and Masarova (2014), acquiring and embracing knowledge of SCI will help firms achieve higher performance and ultimately contribute to Malaysia's economic growth.

Even though SCI is an established practice in large-scale companies in developed countries, the concepts and practices of strategic intelligence among businesses in Malaysia are still very new. Awareness programmes to recognise SCI as a strategic management tool to achieve competitive advantages need to be expanded by the government. The manufacturing companies were also found to be a bit passive in building SCI, due to limited accessible information from the government and limited financial resources. Apart from limited intelligence expertise, the costs to acquire and obtain global SCI information are staggering and become a hindrance, especially after considering the foreign exchange rate. Even though most manufacturing firms in Malaysia are multinational corporations (MNCs), the headquarters that handle the SCI functions or research and development (R&D) are located in their respective home countries (Worldbank, 2014). Since economic growth and the success of a country depend on its ability to create,

accumulate and disseminate knowledge (Worldbank, 2014), effective use of SCI is greatly needed as a source of intelligence for creating knowledge. This fact should be addressed with serious and careful consideration by Malaysia due to its direct effect on the country's plan to transition to a K-economy country by the year 2020.

This study contributes to the literature by developing a valid and reliable measure for the dimensions of SCI components. It thus offers a new tool for researchers in the area of SCM and CI, who are interested exploring dynamic and strategic information for competitive advantages. This study discussed the importance of SCI to be adopted by firms as one of the measures to deal with an increasingly competitive business environment, especially in ensuring successful supply chain integration. This study is limited by the relatively small sample size due to the sensitive nature of the intelligence information in businesses. The SCI components of this study are specifically designed for the manufacturing industry, and thus the priority of the SCI components might be different when applied to another industry. Future research could strengthen the SCI in service sectors since SCI components are different between tangible and intangible products. It would be interesting to probe deeper into the strategic role of SCI in the respective functional units both within an organisation and between supply chain networks as a competitive advantage. This future research could result in a more objective assessment of the effectiveness of SCI

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Pertanika Editorial Office, Journal Division
Office of the Deputy Vice Chancellor (R&I)
1st Floor, IDEA Tower II
UPM-MTDC Technology Centre
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan
Malaysia

http://www.pertanika.upm.edu.my/
E-mail: executive_editor.pertanika@upm.my

Tel: +603 8947 1622 / 1619

Choo Wei Chong



http://penerbit.upm.edu.my
E-mail : penerbit@putra.upm.edu.my

Tel : +603 8946 8855/8854

