



Assessing Knowledge Sharing Behaviour among Employees in SMEs: An Empirical Study

Syed Shah Alam (Corresponding author)

Faculty of Business Management, Universiti Teknologi MARA

40450 Shah Alam, Selangor

Tel: 60-3- 5544 4708 E-mail: syedshah@salam.uitm.edu.my

Zaini Abdullah

Research and Innovation, Universiti Teknologi MARA

40450 Shah Alam, Selangor

Tel: 60-3- 5544 225 E-mail: zabadu@salam.uitm.edu.my

Noormala Amir Ishak

Faculty of Business Management, Universiti Teknologi MARA

40450 Shah Alam, Selangor

Tel: 60-3- 5544 4692 E-mail: noormala317@salam.uitm.edu.my

Zahariah Mohd. Zain

Faculty of Business Management, Universiti Teknologi MARA

40450 Shah Alam, Selangor

Tel: 60-3- 5544 4794 E-mail: zahar297@salam.uitm.edu.my

Abstract

The purpose of this study is to present and tests the key factors of knowledge sharing behavior of employees in the SMEs in Malaysia. A survey was designed and interview conducted with employees in the manufacturing companies from Melaka and Johor states. Survey questions designed from the literature to examine employee perceptions of all variables were identified. Data from 305 respondents were used to validate the measures and test our research model. The results of the study show that reward system, culture, trust and technology are the four key factors which influencing the knowledge sharing behavior in the firms. Finally, the recommendation for HR executives are discussed in this research may help the firms in guiding their efforts to build knowledge based firms in Malasia.

Keywords: Knowledge sharing, Behaviour, SMEs, Malaysia

1. Introduction

Malaysia has shifted its agriculture-based economy to industry based in order to stand with the challenges of the twenty first century. The latest industrial initiative taken by the Malaysian Government after 1997 was to encourage firms to be more knowledge-intensive rather than production-intensive in order to transform Malaysia into a knowledge-economy (K-economy).

In today's knowledge-intensive economy, knowledge management plays an important role in an organization and knowledge management has become very popular. According to Nonaka and Konno (1998) knowledge management is defined as a method for simplifying and improving the process of sharing, distributing, creating, and understanding company knowledge. Knowledge is considered as an asset which has to be valued, developed, and managed (Bogdanowicz & Bailey, 2002). The sharing of knowledge between individuals and departments in the organization is considered to be a crucial process here (O'Dell & Grayson, 1998).

Knowledge sharing is a process where the individual exchange his/her knowledge and ideas through discussions to create new knowledge or ideas. Hislop (2002) argued that the relationship between attitudes and behaviors of workers to knowledge sharing and the workers who are willing to share their knowledge are a two way reciprocal process between attitudes and behavior of the relationship between the workers' willingness to engage in the knowledge sharing. This is a crucial process for an organization to become successful.

Recently many organizations are encouraging the knowledge sharing behavior among their employee in order to meet the organization's objective and goals. There are some organizations which gain benefit after implementing knowledge sharing (O'Dell & Grayson, 1998). They found that companies such as Buckman Laboratories and Texas Instruments and a great saving in Dow Chemical and Chevron have huge gain of profit for knowledge sharing process. Cheng (2002) stated that, knowledge sharing can helps employees to new understanding their jobs and bring personal recognition within the department. Once the knowledge is built, companies will be able to have sustainable competitive advantage.

There are many employees who are unwilling to share their knowledge they have (Chow, Deng, & Ho, 2000). They added that this phenomenon happens is because the employees scared of the loss of valuable knowledge. Although many organizations apply technology to support knowledge sharing behavior, the problem still exists and is far from being successful (Grumbley, 1998). It is a problem to encourage the employees to share their knowledge because the knowledge is with them and is a sign of power to them (Grumbley, 1998). Due to the situation, Mason and Pauleen (2003) noted that this represents a formidable challenge for most managers.

This paper addresses this gap. It focuses on the knowledge sharing behavior of knowledge workers in Malaysia. This study provides empirical evidence and discusses the factors influencing knowledge sharing behavior. We investigate a relationship between these factors and knowledge behavior. ICT industries were chosen for this study. The results of this study indicate that some factors have clear impact on knowledge sharing behavior.

2. Research Model and Hypotheses

The conceptual model tested in this paper contains constructs that have demonstrated theoretical support, based on a number of researches done in this area in different countries, particularly in knowledge management area (Scarbrough & Carter, 2000; Kugel & Schostek, 2004; McDermott & O'Dell, 2001; Connelly & Kelloway, 2003; Sharratt & Usoro, 2003; Yaacob & Hassan, 2005). The model examines the factors that would possibly affect the knowledge sharing behavior. The conceptual model is shown in Figure 1.

The schematic diagram of the theoretical framework in Figure 1 is to show the relationship between the dependent and independent variables. Essentially, the theoretical framework shown is the foundation on which the entire research is based upon.

Knowledge sharing behavior is the dependent variable in this research. The dependent variable is analyzed in this research in order to find out the answers or solution to the problem i.e., what are the factors that influence knowledge sharing behavior of employees in the SMEs in Malaysia? In this situation, the study will be testing six independent variables i.e. commitment, reward system, culture, social interaction, trust and technology as possible variables that are believed to have influence towards the dependent variable (knowledge sharing behavior).

Commitment: The commitment of the employees in the organization is one of the key issues in making the employees to share their knowledge. In order to make knowledge management successful, the level of commitment and capability to encourage knowledge sharing are strongly related (Scarbrough & Carter, 2000). According to Hislop (2002) the level of commitment will, in turn, influence employees attitudes and behaviors to sharing their knowledge for the benefit of the organization. When employees levels of commitment is high then they are more willing and work effectively for the organization. Hislop (2002) argued that commitment is important because workers with high levels of organizational commitment are less likely to leave, are more likely to be highly motivated, and will probably be more willing to provide extra discretionary effort and be generally more willing to share their knowledge within the organization. Therefore, commitment is taken into consideration as one of the factor that affects knowledge sharing behavior. Thus the following hypothesis needs to be substantiated:

Hypothesis 1: There is a significant relationship between commitment and knowledge sharing behavior.

Reward system: Reward is also one of the effective factors which will encourage people to share knowledge with others. Kugel & Schostek (2004) study found that knowledge is shared only because monetary rewards are obtained, and when the rewards system is withdrawn, the knowledge sharing behavior will decrease (. Rewards or bonuses are extrinsic motivation (Stenmark, 2003). Employees will generally act in a way that they perceive as being rewarded - this is not merely pay but the outcomes that will make an individual feel that they are achieving their intrinsic or extrinsic needs (Palardy, 1994; Mullins, 2002). Grumbley (1998) stated that one way of helping to convince them of their value to the organization is to offer inducements in a form that is linked to the well-being of the organization as share or share options that shape of performance or profit-based schemes. Syed-Ikhsan and Rowland (2004) study reveals that

organizations which provide “reward” systems will definitely encourage employees to share the knowledge. It is also found that one of the strategies that could foster knowledge sharing is by introducing incentive schemes for knowledge sharing (Matusik & Hill 1998; Trussler, 1998). The companies have to reward the employees who are willing to share their knowledge with others. Hariharan and Cellular (2005) emphasize that the management should announce reward and recognition schemes to measure and reward knowledge sharing and replication with demonstrated business results. Thus, reward system is included in the theoretical framework of this research, as follows:

Hypothesis2: there is a significant relationship between reward system and knowledge sharing behavior.

Culture: Researches have investigated the importance of organization culture. It is one of the main factors that make the knowledge management and knowledge sharing a success in an organization (Tuggle and Shaw, 2000). Strong culture and the attitudes of the employers and employees could help the company become successful. So, it is important to have a culture of sharing knowledge. Schein (1985) has defined culture as the shared values, beliefs and practices of the people in the organization. Culture exists in a deeper level as well for example how people act, what they expect of each other and how they make sense of the opposite party’s action (McDermott & O’Dell, 2001). McDermott and O’Dell (2001) added that people are often acting in ways consistent with its underlying or core values. From the definition it could be concluded that in an organization with knowledge sharing culture, people would share their ideas and exchange knowledge with others because they treat this culture as natural, rather than they are force to share their knowledge with others. Therefore, the hypothesis is:

Hypothesis 3: There is a significant relationship between culture and knowledge sharing behavior.

Social interaction: Knowledge sharing can occur without our realization. Knowledge sharing behavior or knowledge transfer is actually has been occur at that time of communicating or talking with people. Even the employees having a cup of coffee at a coffee shop or talking about their work; some knowledge has been exchanged among them (Connelly & Kelloway, 2003). This behavior not only applies to the employees, this could be possible to the upper management as well. The employees and the employers should interact more in order to gain knowledge. When both employees and employers communicate, it indirectly reduces the status differentials. This reducing nature of status differential may encourage social interaction among them which may increase the knowledge sharing (Connelly & Kelloway, 2003). Employees will not share their knowledge among all groups of the members if the organization is constrained by hierarchies and status differentiations among them (Connelly & Kelloway 2003). Thus, many organization encourage to motivate their employees to interact more among them by providing rest rooms or provide food or drinks for them (Flaherty, 2000). This leads to the fourth hypothesis:

Hypothesis 4: There is a significant relationship between social interaction and knowledge sharing behavior.

Trust: Trust is the most effective and least costly method that can encourage people to share their knowledge (Dyer & Singh, 1998). Many people are willing to share their knowledge with others if they feel that the person is honest and can be trusted (Sharratt & Usoro, 2003). This has become a tool to motivate people to share knowledge. According to Sharratt and Usoro (2003), when one views a community as upholding trustworthy values such as mutual reciprocity, honesty, reliability and commitment, there is likely to be greater degree of motivation to participate and share one’s knowledge. Thus it concludes that high level of interpersonal trust correlate with high levels or willingness to knowledge sharing (Kalantzis & Cope, 2003). Thus, the hypothesis is:

Hypothesis 5: There is a significant relationship between trust and knowledge sharing behavior.

Technology: Many organizations increase the knowledge sharing behavior among the employees by introducing and using technology (Yaacob & Hassan, 2005). The organizations create or acquire database or “knowledge repository” where the employees can contribute their expertise in a way that can be accessed by other employees as well (Ruggles, 1998). Through technology, employees not only can share their knowledge internally but they can share even across a wide geographical separation (Connelly & Kelloway, 2003).

Knowledge sharing technology may provide a visible symbol of management’s support for the knowledge sharing (Connelly & Kelloway, 2003). Technology makes people easily to access and more willing to share their knowledge because it suits for those who are shy or very busy and prefer to avoid face to face interaction (Connelly & Kelloway, 2003). This leads to the sixth hypothesis:

Hypothesis 6: There is a significant relationship between technology and knowledge sharing behavior.

3. Research Methods

A survey instrument was formulated to obtain feedback from the employees of SMEs in Malaysia, assessing their knowledge sharing behaviour. In order to focus on SMEs, lists were sought from the Small and Medium Industries Development Corporation (SMIDEC) in Malaysia web site. As such, the surveys sent out were personally addressed to the owner and or manager of each of SMEs and requesting them to distribute the questionnaires to their employees.

3.1 Data Collection

The population of this study comprises of all SMEs from service sectors in Melaka and Johor in Malaysia. These are registered under Small and Medium Industries Development Corporation (SMIDEC). Data were gathered based on mail and personal administered questionnaire. A packet of 500 survey instruments, enclosing a return envelop were sent to randomly selected SMEs from the list of SMIDEC. The respondents for this study were targeted to be any employees who are working in the organizations for more than two years. It was assumed that those employees working in that organization for more than two are already familiar with the culture of the organizations.

To maximize the return rate, three subsequent reminders were sent over telephone and the mail lists maintained by SMIDEC after the initial surveys were mailed. Telephone inquiries were conducted only three weeks later as a last resort for those SMEs that had not responded. The response rate for the survey was 64.8 per cent (324 responses). Due to missing values for at least two sections of the responses 19 samples were discarded from this research and finally 305 samples were then processed and analysed using SPSS.

Table I presents a breakdown of the respondents' demographic situation. The majority of the respondents were male (60.0 percent), Chinese group was the highest contributors of the total respondents (61.31 percent) and the second highest group is represented by Malays (26.51 percent). Majority of the respondents were in the service organisations and most of the SMEs are local. In terms of position held by the respondents, majority of them were mid level manager.

The questionnaire was operationalised using the literatures on knowledge sharing behavior (Scarborough & Carter, 2000; Hislop, 2002; Kugel & Schostek, 2004; Palardy, 1994; Mullins, 2002; Grumbley, 1998; Matusik & Hill 1998; Trussler, 1998; Tuggle and Shaw, 2000; Connelly & Kelloway, 2003; Dyer & Singh, 1998; Connelly & Kelloway, 2003). The first part of the questionnaire included questions about the demographic characteristics of the respondents such as gender, race and working experience. The second part consisted of questions measuring the factors influencing knowledge sharing behavior on a Likert scale ranging from 1= strongly disagree to 5 = strongly agree.

3.2 Measures

Table II shows the number of items comprising each scale: the reliability reported by Moore and Benbasat (1991) for the scale and Cronbach's alpha for scale reliability obtained for our sample. Reliability from our sample showed a reasonable level of reliability ($\alpha > 0.70$).

3.3 Hypotheses Testing

The strength of the proposed relationship was assessed using the respective statistical analyses summarized in Tables III.

Hypothesis 1: *There is a significant relationship between commitment and knowledge sharing behavior.*

The results of this study show that the association between commitment and knowledge sharing behavior is not significant. The multiple regression result shows commitment has $\beta = .093$; $p\text{-value} = .140$. The results prove that, the null hypothesis that there is no relationship between commitment and knowledge sharing behavior can not be rejected. In this situation, the employees those are working in the SMEs perceived commitment as a less important factor for knowledge sharing behavior.

Hypothesis 2: *There is a significant relationship between reward system and knowledge sharing behavior.*

Reward is one of the effective factors that will encourage employees to share knowledge with each other in the organization (Kugel & Schostek, 2004). The results of this study show that there is a significant association between reward system and knowledge sharing behavior. It is significant at .05 levels. Accordingly, the hypothesis 2 could not be rejected. In addition, the direction of the associations is positive in which it indicates that the higher the reward system in the organization, the higher will be possibility of knowledge sharing among the employees.

Hypothesis 3: *There is a significant relationship between culture and knowledge sharing behavior.*

Researches have investigated the importance of organization culture. It is one of the main factors that make management and knowledge sharing successful in an organization (Tuggle and Shaw, 2000). Culture factor is an important factor that has a positive effect on knowledge sharing behavior. Referring to Table II, the third hypothesis tested the relationship between culture and knowledge sharing behavior. The regression result ($\beta = .180$, $t\text{-value} = 2.662$, $p\text{-value} = .01$) indicates that the association between culture and knowledge sharing behavior is significant at .01 level ($p = .008$). In term of direction, the result shows that there is a positive direction between the two constructs. This study also confirmed by another study by McDermott and O'Dell (2001).

Hypothesis 4: *There is a significant relationship between social interaction and knowledge sharing behavior.*

The results of this study show that the association between social interaction and knowledge sharing behavior is not significant. The multiple regression result shows social interaction have $\beta = .018$; $p\text{-value} = .779$. The results prove that, the null hypothesis that there is no relationship between social interaction and knowledge sharing behavior could

not be rejected. From this situation, many organization start to motivate their employees to interact more among them by providing rest rooms or provide food or drinks for them (Flaherty, 2000).

Hypothesis 5: *There is a significant relationship between trust and knowledge sharing behavior.*

Table II shows the association between trust and knowledge sharing behavior is significant at 0.01 level and the beta = .131 and t-value = 2.016 ($p=0.045$). The support for hypothesis 5 reflects the similar arguments in previous studies (Dyer & Singh, 1998; Sharratt & Usoro, 2003 ; Kalantzis & Cope, 2003) found that trust have greater impact on the knowledge sharing behavior.

Hypothesis 6: *There is a significant relationship between technology and knowledge sharing behavior.*

The higher levels of technology are associated with knowledge sharing behavior among the employees in the Malaysian SMEs. Multiple regression analysis shows results of (beta= .273, p-value= .000), implying that there is a positive and significant correlation between technology and knowledge sharing behavior. This research therefore further proves the earlier findings that showed technology as having a positive and significant influence on knowledge sharing behavior (Connelly & Kelloway, 2003).

4. Conclusion

The research was done under theoretical framework developed based on the previous study. The multiple regression analysis shows that reward system, culture, trust and technology are significant elements of knowledge sharing behavior of the employees in the SMEs in the two states in Malaysia. The model explains 32 per cent of the variance in companies' knowledge sharing behavior. As we know exchanging knowledge with other people will indirectly help the management to create some new idea or knowledge and Malaysian government trying to develop knowledge based management, an understanding of the factors that influence knowledge sharing behavior is invaluable. Knowledge is also very crucial in order to compete among business organization in today's world. An assessment of the validity of the findings presented in this paper would be especially valuable.

Like other empirical studies, this study is not without its limitations. Our sample consisted of SMEs in Melaka and Johor state in Malaysia may limit the generalizability of the results. The sample size itself is relatively small. The study can be strengthened by increasing the sample size and including participants in other geographical areas. With an increased sample size, a more detailed empirical analysis among the independent variables and the variables that have multiple categories can be performed. Potential correlations between some of the independent variables (e.g. gender, race, working experiences, educational level) need to be reported in a future study.

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Table 1. General Information

No	Demographic Variables	No. of Respondents	%
	Sex		
	Male	183	60.0
	Female	122	40.0
	Race		
	Malay	81	26.56
	Chinese	187	61.31
	Indian	32	10.49
	others	05	1.64
1.	Working place		
	Manufacturing	114	37.37
	Services	191	62.63
2.	Ownership of the SMEs		
	Local	269	88.20
	Foreign	36	11.80
3.	Respondents position		
	Manager	40	13.12
	Mid level manager	181	59.34
	Executive	84	27.54

Table 2. Reliability Analysis

Variables	Coefficient Alpha
Knowledge sharing behavior	0.835
Commitment	0.896
Reward system	0.885
Culture	0.792
Social interaction	0.768
Trust	0.831
Technology	0.808

Table 3. Regression Results

Variables	Beta	t-value	p-value
Commitment	.093	1.483	.140
Reward system	.136	2.110	.036
Culture	.180	2.662	.008
Social interaction	.018	.280	.779
Trust	.131	2.016	.045
Technology	.273	4.316	.000

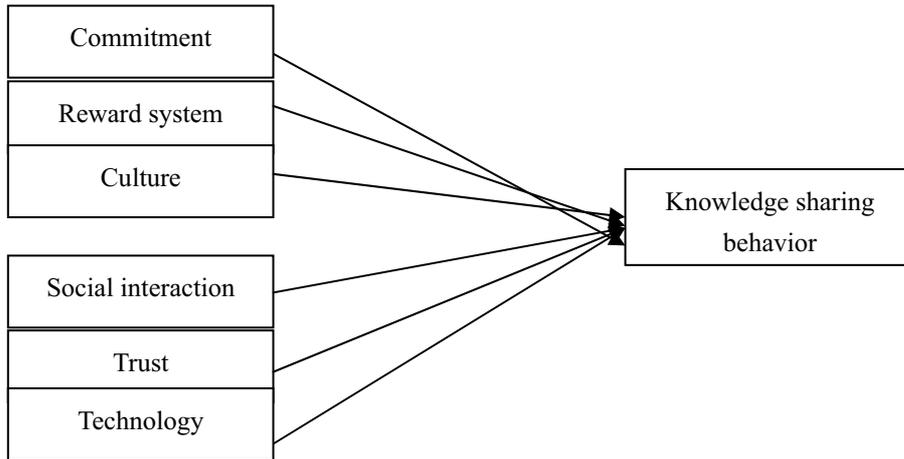


Figure 1. A schematic diagram of the conceptual framework