The Effect of Knowledge Sharing on Organizational Performance in Small and Medium Enterprises

Rohana Ngah¹, Abdul Razak Ibrahim²

¹Faculty of Business Management Universiti Teknologi MARA Segamat Johor, MALAYSIA rohanangah@johor.uitm.edu.my

²Faculty of Business and Accountancy Universiti Malaya Kuala Lumpur, MALAYSIA razak@malaya.edu.my

ABSTRACT

Knowledge sharing is always linked to SMEs due to its advantage of being small. However, very few research on knowledge sharing being done especially in SMEs. Convenience sampling was used for manufacturing and services industries of SMEs. Data was tested using Structural Equation Modeling to see the impact of knowledge sharing on organizational performance. Measurement model and structural model were developed. Knowledge sharing has strong influence on organizational performance as a second latent variable. It is important for SMEs to invest and focus on knowledge sharing activity as it would create a platform for innovation thus enhances the performance.

Keywords

Knowledge sharing, organizational performance, Small and Medium Enterprises

1.0 INTRODUCTION

The global economy is moving from physical labor to knowledge based. Knowledge gives long-term competitive advantages to countries as well as organizations. Asia Top-3 namely South Korea, Japan and Hongkong (UNDP, 2007) has proven that knowledge-based economy allows the countries to remain competitive even in uncertain situation.

Knowledge is said to be the main sources of competitive advantage for companies, therefore more and more companies are investing in knowledge and information, making them a knowledge-intensive companies (Stewart 2000). The best part is; knowledge and information can be detached from the physical movement of goods and services.

Operating within KBE, knowledge drives profit for the organizations for capital gain and sustaining competitive advantage (Wickramansinghe, 2005). The knowledge that residing in every corner of Small and Medium Enterprises (SMEs), must be managed effectively in enhancing the organizational performance.

Furthermore, compounded by informal and oral culture of communication within SMEs, tacit nature of knowledge will give rise to the knowledge retention problem, therefore sharing need to be adopted immediately (Thorpe et al, 2005). Beside, SMEs are known of lacking of knowledge management practices even though they have a strong communication links and social networks in the organization. It is said that knowledge sharing especially tacit knowledge, is highly and actively interacted in SMEs. As more and more researches are interested in exploring this tacit knowledge sharing which is very valuable and difficult to codify, SMEs could benefit from this advantage compared to bigger organizations.

Definition of Knowledge sharing

Knowledge sharing is basically the act of making knowledge available to others within the organization (Ipe, 2003). Knowledge sharing enables managers to keep the individual learning flowing throughout the company and integrate it for practical application.

Definition of Organizational Performance

Measuring organizational performance is comparing the expected results to actual results, investigating deviations from plans, assessing individual performance and examining progress being made toward meeting the targeted objectives (Hashim, 2007).

Knowledge Sharing

Knowledge lies in human minds and exists only if there is a human mind to the knowing (WidenWulff & Suomi, 2007). There are three dimensions of knowledge: width, depth and tacitness (Nooteboom, 1993). Knowledge can be created by intentional and resource-consuming efforts (Du et al, 2007). Ideas or knowledge is a well-known as intellectual capital for organization. The neglect of knowledge based on people and ideas has undoubtedly reduced the corporate market place's capability for true innovation and sustainable competitiveness (Gamble & Blackwell, 2001).

Knowledge sharing is perceived to be the most essential process for knowledge management (Bock & Kim, 2002). Knowledge sharing is a reciprocal process of knowledge exchange and examines factors that help explain why individuals are willing to engage in this process. Knowledge sharing is a fragile process (Renzl 2008). Most of researchers that knowledge sharing improves report organizational performances (Lesser & Storck, 2001), promoting competitive advantage (Argote & Ingram, 2000), organizational learning (Argote, 1999), innovation (Powell, Koput, & Smith-Doerr, 1996) and even survival (Baum & Ingram, 1997).

Every employee in the organization has knowledge embedded in their mind as tacit knowledge which is very sticky to be extracted directly (Ipe, 2003). As more and more companies realizing that knowledge sharing gives them a competitive edge by leading to accelerated learning and innovation, this particular activities of knowledge management is becoming important to organization(Ipe, 2003). For organization, knowledge sharing is capturing, organizing, reusing and transferring experiencebased knowledge that reside within the organization and making that knowledge available to others in the business. The interesting characteristics of knowledge is that its value grows when shared (Bhirud et al, 2005).

However, sharing knowledge is not that easy. When knowledge is regarded as power, individual would be reluctant to share his knowledge (Kinsey, 2007) especially the tacit knowledge; when they perceive that there a few rewards or when sharing is not recognized by the organization (Wah et al. 2005). It is very important for the organization to provide a conducive organizational to encourage knowledge sharing where knowledge sharing represents a key enabler of improved business performance.

Another important element in knowledge sharing is network which encourages people to work less formally; therefore relationships relying more on cooperation and collaboration (Laycock, 2005). As shown in the case of Buckman Laboratories, which proven that human networks, not IT networks as fundamental of effective knowledge sharing. Knowledge sharing is notably is people thing, not technology thing. (Laycock, 2005).

While knowledge sharing literature has conceptually emphasize the importance of motivating people to share their knowledge but empirically the role of employee motivation for knowledge sharing report mixed results (Husted et al, 2005). In fact, Bock and Kim (2002) found that motivational factors were negatively correlated to knowledge sharing.

Knowledge that resides in groups, teams or communities is a key source of under-leveraged know-how in most organizations. Communities of practice (CoP) are the nexus for sharing and transferring of valuable tacit knowledge possessed by individuals and groups (Kogut and Zander, 1992; Lesser and Storck, 2001) and they provide firms with a vital source of organizational learning and incremental innovation as community members improve their practice through the continuous creation of knowledge (Wenger, 1998). This transfer of tacit knowledge is actually not to codify it but rather to be shared. In smaller setting where CoP exist, the interaction is primarily in informal face-to-face discussions (Lave and Wenger, 1991). More commonly, people are unaware or are unable to articulate their tacit knowledge but storytelling during breaks and on the job helped the individuals to interpret knowledge and event (Schenkel and Teigland, 2008). Tacit knowledge cannot be captured but can only be demonstrated through expressible knowledge and acts, tacit knowledge can be shared (Mc Adam et al. (2007).

Knowledge sharing and organizational performance

In SMEs the knowledge management model which is basically based upon knowledge sharing – through constant and open communication (often SME strength) – the making explicit of often buried or tacit knowledge held by all employees (Gray, 2006). Gold et al (2001) emphasize that knowledge infrastructures such as technology, structure and culture along with knowledge acquisition, conversion, application and protection are essential organizational capabilities for higher organizational performance.

2.0 METHODOLOGY

The objective of this study is to examine the impact of knowledge sharing on organizational performance. The population frame for this study is the list of SMEs from Small and Medium Enterprises Corporation of Malaysia (SMIDEC) of manufacturing and services category. Unit analysis will be the organization where each SME will be taken as a sample. Convenient sampling is used to select sample data for this study. A questionnaire was sent to the CEO/managing director or manager of the firms. A total of 257 responses were received, after the first mailing.

All analysis (excluding structural equation modeling, SEM) is performed using SPSS version 16. Amos version 16 is used to analyze the proposed research framework through SEM.

Respondent Profile

Respondents' profiles are based on the type of industry, number of employees, annual sales turnover, type of ownership, length of business, current position, education level, previous working experience, years of working experience and area of expertise as shown in in Table 1. Most of respondents are from manufacturing industry which is the biggest industry player in Malaysia SMEs. 58.2% of SMEs are in partnership while 29.7% have been operating more than 10 years. Based on number of employees and annual turnover, 55.6% and 64.4% of respondents are in small enterprises respectively. Most of respondents are owner (25.3%) follows by executives (23.2%) and managers (22.3%). Most of them are degree holders (42.3%) who have previous working experience (76.8%). 41.7% have more than 5 years of working experience in business areas (17.3%).

Table 1 Respondents profile

Profile		Freq	%	
Type of	Type of Industry			
•	Manufacturing	242	55.6	
•	Services	193	44.4	
No of er	No of employee			
•	Small (Between 5 to	242	55.6	
•	19 employees) Medium (Between 20 to 150 employees)	193	44.4	
Annual Turnover				
•	Small (between RM200,000 and less	280	64.4	
•	Medium (between RM1 million and RM5 million)	155	35.6	
Type of	Ownership			
•	Sole-proprietor	104	23.9	
•	Family-owned	78	17.9	
•	Partnership	253	58.2	
Length	Length of Business			
•	Less than 2 years	39	9.0	
•	2-4 years	108	24.8	
•	5 – 8 years	108	24.8	
•	8- 10 years	51	17.7	
•	More than 10 years	129	29.7	

Reliability Test

Reliability test is an assessment of the degree of consistency between multiple measurements

of a variable. The Cronbach alpha coefficient was used to measures (Nunnally, 1978). Table 2 presents the alpha coefficients that were above the required level of 0.7 as suggested by Malhotra et al. (1999).

Table 2 Reliability Test

Factors	Items	Cronbach's Alpha
Knowledge Sharing	20	0.943
Organizational	5	0.920
Performance		

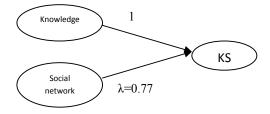
The result of reliability test showed that the items measured are reliable.

3.0 DATA ANALYSIS

The SEM technique consists of two components also known as two-step approach (1) the measurement model and (2) the structural model. The measurement model is the first stage in the SEM approach. Subsequently, the structural model is the second stage and last step in the SEM approach. It also provides a structural link from the KS construct to the organizational performance. KS is represented by knowledge value and social network

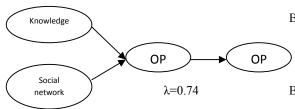
4.0 RESULTS AND FINDINGS

Figure 1 displays its indicators of fit for measurement model of KS: CMIM/df = 1.686(all below the recommendation threshold of 3.0; (Hair et al., 2006); GFI = 0.989; TLI= 0.986; RMSEA = 0.045. Figure 2 displays its indicators of fit for structural model: CMIN/df = 2.355(all below the recommendation threshold of 3.0; (Hair et al., 2006); GFI = 0.970; TLI= 0.964; RMSEA = 0.063. Figure 2 empirically shows that KS has a highly significant influence (β =0.74, p=.0001) on firm organizational performance (R²=0.55). Thus, relationship between KS and organizational performance is well supported.



 χ^2 = 57.431, df = 34, CFI = 0.989, TLI = 0.986, RMSEA = 0.045

Figure 1 Measurement model of KS



 $\chi^2 = 172.792$, df = 74, CFI = 0.970, TLI = 0.964, RMSEA = 0.063

Figure 2 Direct Relationships between Study Variables

5.0 DISCUSSION/CONCLUSION

This research finding of knowledge sharing is significant and influential effect to organization consistent with prior study by Mu et al (2008).. The finding has shown that KS is positively influencing organizational performance. The author also recommended that SMEs should focus more on knowledge sharing activities when setting its strategies.

In addition, the value of knowledge and social network are the main elements of knowledge sharing in SMEs. This could be contributed by the structure of SMEs, the close relationship in the informal organizations and the working environment that normally found in SMEs. The finding is open up an alternative opportunity for SMEs to get involve actively in knowledge management and SMEs should capitalize knowledge sharing to start innovation which is the main strength for long survival.

This finding is similar to previous studies done by Yang (2005), Cheng et al., (2008), Du et al., (2007), Hoffman et al., (2005). The significant standardized coefficient of the direct link of knowledge sharing and organizational performance is supporting the relationship, shows that KS has a direct positive influence on organizational performance with path coefficient of 0.74, t-value 10.951 and significant at p>0.05.

REFERENCES

- Argote, L. & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. Organizational Behavior and Human Decision Processes, 82 (1), 150-169.
- Argote, L. (1999). Organizational Learning. Creating, Retaining and Transferring Knowledge. Norwell, MA: Kluwer Academic Publishers.

- Baum, J.A.C., & Ingram, P. (1998). Survivalenhancing learning in the Manhattan hotel industry, 1989-1990. *Management Science*, 998-1016.
- Bharadwaj, A. (2000). A resource-based perspective on information technology capability of and firm performance: an empirical investigation. *MIS Quarterly*, 24 (1), 169-196.
- Bharati, P. & Chaudhury. A, (2004). An Empirical Investigation of Decision-Making Satisfaction in Web-Based Decision Support Systems. *Decision Support Systems*, 37(2), 187-197.
- Bhirud, S., Rodrigues, L., & Desai, P. 2005. Knowledge Sharing Practices In KM : A Case Study In Indian Software Subsidiary. *Journal* of Knowledge Management Practice, 2(2), 83-90.
- Bhutta, M. K.S., Rana, A.I & Asad, U. (2007). SCM exploratory study of attitudes about knowledge. *Information resources* management journal, 15 (2), 14-21.
- Bock & Kim (2002). Breaking the myths of rewards. An exploratory study of attitudes about knowledge. *Information Resources Management Journal*, 15 (2) 14-21.
- C Huang, S-H. (2004). A sources-based perspective on knowledge management capability and competitive advantage: an empirical investigation. *Expert System with Applications*, 27 (3), 459- 465.
- Chan, I., Au, A.K.K., & Chao, K.C.K. (2006). Barriers in knowledge sharing in Hong Kong. *Knowledge Managementreview*. Retrieved 20 May 2009 from http:www.encyclopedia.com.doc/1P31041192 791.html
- Cheng, W., Hailin, L. & Hongming, X. (2008). Does Knowledge Sharing mediate the relationship between trust and performance? *International Symposiums on Information Processing, IEEE.* Doi 10.1109/isip.2008.130.
- Christensen, P.H. (2005). Facilitating Knowledge Sharing: A Conceptual Framework Center for Strategic Management and Globalization. Copenhagen Business School.
- Cohen, W.M. & Levinthal, D.A. (1990). Absorptive capacity; a new perspective on learning and innovation. *Administrative Science Quarterly*, 35, 128-152.
- Cohen, S. & N. Kaimenakis (2007). Intellectual Capital and corporate performance in knowledge-intensive SMEs. *The Learning* Organization, 14 (3), 241-262.
- Conner, K. & Prahalad, C. (1996). A resourcebased theory of the firm: Knowledge versus opportunism. *Organization Science*, 7 (5), 477-501.
- Cooper, D. R., & Schindler, P. S. (2003). Business Research Methods (8th Ed.). New York.

- Du, Rong, Ai, S., & Ren, Y. (2007). Relationship between knowledge sharing and performance: A survey in Xian, China. *Expert Systems with Applications*, 32, 38-46.
- Gamble, P.R. & Blackwell, J. (2001). *Knowledge Management: A state of the art guide*. London, UK: Kogen Page.
- Gray, C. (2006). Absorptive capacity, knowledge management and innovation in entrepreneurial small firms. *International Journal of Entrepreneurial Behavior & Research*, 12 (6), 345-360.
- Gold H.A. et al (2001). Knowledge management: An Organizational Capabilities Perspective. Journal of Management Information Systems, 18 (1), 185-214.
- Hair, J. F, Jr., Black, W.C., Babin, B.J., Anderson,
 R.E. & Tatham, R.I. (2006). *Mutltivariate Data Analysis*, (6th Ed.). Upper Saddle River,
 NJ: Pearson Education Inc.
- Hashim, M. K. (2007). *SMEs in Malaysia: A Brief Handbook*. Kuala Lumpur: August Publishing Sdn. Bhd.
- Hoffman, J. J, Hoelscher, M.L. & Sherif, K. (2005). Social capital, knowledge management and sustained superior performance. *Journal of Knowledge Management*, 9 (3), 93-100.
- Husted, K., S. Michailova, et al. (2005). Knowledge sharing and organizational performance: the role of extrinsic and intrinsic motives. 8th International Human Resource Management Conference, Cairns, Australia, Copenhagen Business School.
- Ipe, M. (2003). Knowledge sharing on organizations: A conceptual framework. *Human Resource Development Review.* 2 (4), 337-358.
- Kinsey, C.G (2007). The hoarding/sharing instinct. *Knowledge Management Review*, 9 (6), 6.
- Kogut & Zander (1992). Knowledge of the firm, combinative capabilities and the replication of technology. *Organization Science*, *3* (3), 383-399.
- Lesser, E.L., & Storck, J. (2001). Communities of Practice and organizational performance. *IBM Systems Journal*, 40 (4), 831-841.
- Laycock, M. (2005). Collaborating to compete: achieving effective knowledge sharing in organizations. *The Learning Organization*, 12 (6), 523-538.
- Lave, J. & Wenger, E. (1991). Situated Learning: Legitimate Peripheral Participation. Cambridge: Cambridge University Press.
- Malhotra et al (2007). *Marketing Research; an applied orientation* (5th Ed.). Upper Saddle River, New Jersey: Pearson Education.
- Mc Adam, R. & Armstrong, G. (2001). A symbiosis of quality and innovation in SMEs:

a multiple case study analysis. *Managerial* Auditing Journal, 16 (7), 394-399.

- Mu, J., Peng, G. & Love, E. (2008). Interfirm networks, social capital and knowledge flow. *Journal of Knowledge Management*, 12 (4), 86-100.
- Nooteboom, B. (1993). Innovation and Diffussion in Small Firms: Theory and Evidence. *Small Business Economics*, 6, 327-347.
- Nunally, J.C. (1978). *Psychometric Theory* (2nd Ed.). New York: McGraw Hill.
- Powell, W.W., Koput, K.W & Smith Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology. *Administrative Science Quarterly*, 41, 116-145.
- Renzl, B. (2008). Trust in management and knowledge sharing: The Mediating effects of fear and knowledge documentation. Omega -The International Journal of Management Science, 36, 206-220.
- Schenkel, A. & Teigland, R. (2008). Improved performance through communities of practice. *Journal of Knowledge Management*, 12 (1), 106-118.
- Thorpe, R., Holt, R., Macpherson, A. & Pittaway, L. (2005). Using knowledge within small and medium-sized firms: A systematic review of the evidence. *International Journal of Management Review*, 7(4), 257-281.
- Tvorik, S.J & McGivern, M.H. (1997). Determinants of organizational performance. *Management Decisions*, 35 (6), 417-435.
- Tyagi, P.K. (1989). The effects of appeals, anonymity, and feedback on mail survey response patterns from salespeople. *Academy* of Marketing Science Journal, 17 (3), 235-241.
- UNDP(United Nations Development Programme), (2007). Malaysia: Small and Medium Enterprises Building and Enabling Environment. Kuala Lumpur.
- Wah, C.Y., Menkhoff, T., Loh, B. & Evers, H.D. (2005). Theorizing, Measuring and Predicting Knowledge Sharing Behavior in Organizations A Social Capital Approach. Proceedings of the 38th Hawaii International Conference on System Sciences. Hawaii.
- Wenger, E. (1998). Communities of Practice: Learning, Meaning and Identity. Cambridge: Cambridge University Press.
- Wickramansinghe, N. & S. K. Sharma (2005). Key factors that hinder SMEs in succeeding in today's knowledge-based economy. *International Journal of Management* and Enterprise Development, 2 (2), 141-157.
- Widen-Wulff, G. & Suomi, R. (2003). Building a Knowledge Sharing Company – Evidence From the Finnish Insurance Industry.

Proceedings of the 36th Hawaii International Conference on System Sciences.

Yang, J. (2005). Knowledge integration and innovation: securing new product advantage in high technology industry. *Journal of High* Technology Management Research, 16, 121-135.

Yang, J.T. & Fu, Y.J. (2008). Structural Equation Model of Knowledge Management in the Hospitality Industry. *Conference paper presented at EuroCHRIE*2008.