FACULTY PERCEPTIONS OF KNOWLEDGE SHARING BEHAVIOR

Sabrina O. Sihombing

Business School University of Pelita Harapan
sabrinasihombing@hotmail.com

ABSTRACT

Knowledge sharing is recognized as being important activities in many organizations, including in universities. One main reason why knowledge sharing is important is the ability of knowledge sharing to enhance not only knowledge of the person who owns but also others that are given or transformed the knowledge by that person. There are many studies about knowledge sharing. Those studies are concerning the different factors influencing sharing knowledge such as job satisfaction, reward, motivation, reward, and organizational knowledge capabilities. However, little is known about empirical studies regarding faculty perceptions of knowledge sharing behavior. Therefore, this research applied the theory of planned behavior (TPB) to examine knowledge sharing behavior among faculty. A self-administered questionnaire was used to collect the data for this study. Questionnaires were distributed to respondents by the drop-off/pick-up method and a total of 127 completed questionnaires were used in the analysis. The data was then analyzed using structural equation modeling. Two out of five hypotheses were supported. Those hypotheses are the relationship between attitudes toward knowledge sharing and intention to share knowledge, and the relationship between intention and knowledge sharing behavior.

Key words: knowledge sharing, theory of planned behavior, faculty

BACKGROUND TO THE RESEARCH PROBLEM

Today's business environment is highly competitive environment, which often characterized by radical changes. One essential tool to the survival of many organizations is an understanding in knowledge management (Wheatley, 2001). Furthermore, in the literature concerning knowledge management within an organization, most researchers acknowledge the important role knowledge sharing (for example: Small & Sage, 2005; Cummings, 2003; Alavi & Leidner, 2001 cited by Bartol & Srivastava, 2002).

Knowledge sharing is important. This activity can enhance not only knowledge of the person who owns but also others that are given or transformed the knowledge by that person (Halal, 2008; Gurteen, 1999). Furthermore, Gurteen (1999) pointed out several reasons why sharing knowledge is important. First, knowledge is a perishable. In other words, knowledge is increasingly short-lived, if the people do not use their knowledge then it will rapidly loses its value. Second, sharing knowledge is a synergistic process which people who share will gain more then lose. Third, many organizations today require a collaborative effort from their employees. In other words, when one individual try to work alone, s (he) is likely to fail. This is because many people need other people to support their works. Being open with other people and sharing with them will help us to achieve our objectives.

There are many researches about knowledge sharing. Those research concerning the different factors influencing sharing knowledge such as job satisfaction (de Vries, van den Hooff, & de Ridder, 2006), reward (Bartol & Srivastava, 2002), motivation (Lin, 2007; Yuen & Majid, 2007;

Burgess, 2005), and organizational knowledge capabilities (Yang & Chen, 2007). However, empirical studies regarding the influence of religiosity on knowledge sharing behavior have been rarely conducted. Therefore, this research applied the theory of planned behavior (TPB) by incorporating Christian values as antecedent variable of attitude to examine knowledge sharing behavior.

LITERATURE REVIEW
Knowledge and knowledge sharing

Knowledge is defined as "a fluid mix of framed experience, values, contextual information, and expert insights that provides a framework for evaluating and incorporating new experiences and information (Davenport & Prusak, 1998 cited by Ipe, 2003). In other words, it can be stated that knowledge refers to the fact or condition of knowing something gained through experience.

There are 12 characteristics of knowledge (Halal, 2008). Those characteristics are : (1) created by anyone, (2) acts as a fluid, (3) organized hierarchically, (4) reduces conflict, (5) changes value, (6) distributed cheaply, (7) increases when shared, (8) transmitted in networks, (9) abhors a vacuum, (10) guided by spirit, (11) unique for individuals, and (12) an infinite resource. As stated before, one characteristic of knowledge is increases when shared.

Knowledge is an intangible asset that increases when shared (Halal, 2008). In other words, the owner of knowledge can duplicate this knowledge and share it with others in return for their knowledge. Both parties would then continue to own their original knowledge, while also having the new knowledge they gained, thereby increasing the total amount of knowledge in use (Halal, 2008, p.6).

This leads to the importance of knowledge sharing.

Lin (2007) defined knowledge sharing as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization. Other researchers, for example, Bartol and Srivastava (2002) and Lee (2001, cited by Pai, 2006) defined knowledge sharing as activities of transferring or disseminating organizationally relevant information, ideas, suggestions, and expertise with one another.

There are several theories that can be used to understand knowledge sharing. For instance, Wu and Li (2007) used theory technology acceptance model (TAM) to understand knowledge sharing behavior. Other researchers such as So and Bolloju (2005) and also Lin and Lee (2004) used the theory of planned behavior (TPB). This research applied TPB because TPB is a comprehensive theory in understanding human behavior (Cheng, Lam, & Hsu, 2006). Furthermore, the accumulated evidence shows that TPB is useful in explaining human behavior (e.g., Oreg & Katz-Gerro, 2006; Tarkiainen & Sundqvist, 2005; George, 2002; East, 2000; Dharmmesta & Khasanah, 1999).

The theory of planned behavior (TBP)

The theory of planned behavior is known as a general and parsimonious model of behavior-specific that has been shown to predict a range of behavior (Conner & Abraham, 2001). For example, the TPB has been successfully applied in a wide variety of behaviors such as organizational behavior (Cordano & Frieze, 2000; Morris & Venkatesh, 2000; Maurer & Palmer, 1999), complain behavior (Cheng, Lam, & Hsu, 2006; East, 2000), proenvironmental behavior

(Oreg & Katz-Gerro, 2006; Cheung, Chan, & Wong, 1999; Stern, Dietz, Kalof, & Guagnano, 1995), health protection (Conner & Abraham, 2001), and purchase behavior (Tarkiainen & Sundqvist, 2005; George, 2002; Dharmmesta & Khasanah, 1999; Kalafatis, Pollard, East, & Tsogas, 1999; Kokkinaki, 1999; Kanler & Todd, 1998; Thompson & Thompson, 1996).

Theory of planned behavior is an extension of the theory of reasoned action (TRA; Azjen & Fishbein, 1980). In its original form, TRA proposes that behavior can be predicted from a behavioral intention which attitude and subjective norms influence the behavioral intention. Furthermore, TRA assumes that a person behavior is under volitional control (Ajzen, 1988). However, problems are encountered when the theory (i.e., TRA) is applied to behaviors that are not fully under volitional control. In other words, for some behaviors there may be personal deficiencies or external obstacles that may limit goal achievement. Therefore, the importance of volitional control has lead Ajzen (1988) to develop the theory of planned behavior (TPB).

The TPB is made necessary by the original model's limitations in dealing with behaviors over which people have incomplete volitional control (Ajzen, 1991). Briefly, the theory postulates that individual's action is influenced by behavioral intention. Behavioral intention, in return, is a function of three factors: attitude toward the behavior, subjective norm, and perceived behavioral control (Figure 1). Attitude is defined as people's overall definition of their performing behavior. Subjective norms refer to people's perception of social pressure to perform the behavior. Perceived behavioral control measures how well a person can execute the behavior (Ajzen, 1991).
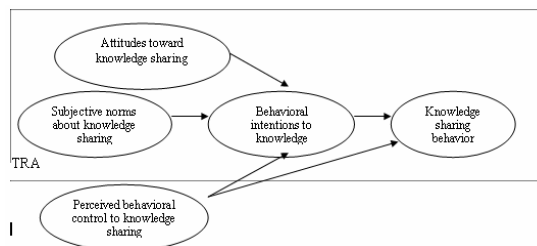

Image 1.
Theory of planned behavior
Source: Ajzen (1988,p.133)

There are two assumptions in TPB. First, the theory assumes that perceived behavioral control has motivational implications for behavioral intentions. In other words, people who believe that they have resources and opportunities are likely to form strong behavioral intentions. Second, the theory assumes that there is possibility of a direct link between perceived behavioral control and behavior. Furthermore, perceived behavioral control can also influence behavior indirectly via behavioral intentions (Ajzen, 1988).

Based on the theory of planned behavior, five hypotheses can be stated as follows:

H1: There is significant and positive relationship between attitudes toward knowledge sharing and behavioral intentions to share knowledge

H2: There is significant and positive relationship between subjective norms regarding knowledge sharing and behavioral intention to share knowledge.

H3: There is significant and positive relationship between perceived behavioral control and behavioral intention to share knowledge.

H4: There is significant and positive relationship between behavioral intention to share knowledge and knowledge sharing behavior.

H5: There is significant and positive relationship between perceived

behavioral control and knowledge sharing behavior.

RESEARCH METHOD

Measurement. Following Bratson, Coote, and Rudd (2006) and Sekaran (2003), whenever possible and appropriate, the measures used in this questionnaire were adapted from existing scales drawn from marketing and management literature. This research measured six constructs: attitude toward knowledge-sharing, subjective norms, perceived behavioral control, intention, and knowledge-sharing behavior. All constructs' indicators were adapted from Lin and Lee (2004) and Lin (2007).All items were measured using a seven-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree

Attitude toward knowledge-sharing was measured by using two items (e.g.: "encouraging knowledge-sharing with colleagues is a good idea"). Subjective norms were measured through three items (e.g.: "my supervisor influences my decision think that I should share knowledge with colleagues"). Perceived behavioral control was assessed through two items (e.g.: "I have the resources in sharing knowledge with colleagues"). Behavioral intentions were measured by using two items (e.g.: "I plan to share knowledge with my colleagues"). Sharing behavior was a self-stated rather than observed. Respondents indicated the extent to which they share knowledge with their colleagues. Sharing behavior was measured by two items (e.g.: "My colleagues in my university share knowledge obtained from their education").

Survey. A self-administered questionnaire was used to collect data. The questionnaire was pre-tested in order to uncover biased or ambiguous questions before they are administered at large (Sekaran, 2003). Moreover, pretesting helps to validate all the variables selected and wherever necessary, to modify the scales intended to measure the variables. It also sought to ascertain if the questionnaire was eliciting the responses required and to incorporate any changes suggested by the respondents in the final questionnaire. In this research, the pretesting involved a group of respondents selected on a convenience basis (Sekaran, 2003). A total of 20 sets of questionnaires were distributed to full-time and part-time lecturer. The instrument then was refined after pretesting. The result shows that Cronbach's alpha value of every construct is more than 0.7, exceeding the common threshold values recommended by Hair, Black, Babin, Anderson, and Tatham (2006).

Sample and questionnaire administration. Data was collected over a month period, using a convenience sample of 200 full-time and part-time faculty members in a private university. This research followed Hair et al. (2006, p.741) which recommended sample size is 200, which provides a sound basis for estimation. However, not all questionnaires could be collected and used for this study. In the specific, 127 complete questionnaires can be used; the effective response rate was 63.5 percent.

Analysis Data. A structural equation modeling was used to test the relationship between constructs. For the overall fit of the model, this research several indices such as CMIN/DF, GFI, AGFI, and RMSEA as suggested by Giles (2002).

RESULTS

Description of the sample. A total of 200 questionnaires was distributed and collected from full-time and part-time lecturers in a private

university. Of these, 127 samples can be used for further analysis, which constitutes a 63.5 per cent usable response rate. The profile of the sample reveals that male constituted about 59.8 per cent of the sample. Those between 31-35 years old represent 19.7% of the sample, and the oldest (more than 51 years old) represent 15% of the sample. The majority of the respondents are full-time lecturers (5 days work). Almost one-third of the respondents has teaching experience more than 11 years (31.7%).

Reliability and validity assessments. In assessing the psychometric properties of the instrument, issues of reliability and validity have been considered. First, reliability analyses were conducted. Table 1 shows the reliability of the measures. According to Hair et al. (2006), the generally agreed upon lower limit for Cronbach's alpha is 0.70. The reliability (i.e., Cronbach's Alpha) of the scales of all variables ranged from 0.776 to 0.921, proving evidence of internal consistency of the measures.

Table 1.
Construct reliability

Construct	Items	Cronbach alpha	Construct reliability	A.V.E
Attitudes		0.776	0.801	0.449
Subjective Norms		0.875	0.780	0.534
Perceived Behavioral Control		0.903	0.904	0.550
Behavioral Intentions		0.921	0.768	0.429
Behaviors		0.915	0.715	0.423

Source: analysis of field data

Having done the reliability tests, validity tests were performed to assess content and construct validity. Following Lin and Chen (2006, p.256), content validity can be performed based on the researcher's professional ability to judge subjectively if the selected scale can measure the researcher's intended-to-measure feature correctly. In the specific, the research indicators used in this study are based on relevant theory and previous research in the same are (that is, knowledge sharing).

To assess construct validity, a factor analysis was run using Varimax rotation. Each scale was subjected to exploratory factor analysis loading on the dominant factor (at least 0.50) with a sum of the items in the factor explaining more that 50 per cent of the factor's variance (Table 2). Based on Gerbing and Anderson (1988), confirmatory factor analysis (CFA) using maximum likelihood estimation procedures was performed for measure validation. Table 3 shows that the results indicate acceptable model fits, demonstrating adequate convergent validity.

Table 2.
Exploratory Factor Analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Attitude1					0.792
Attitude2					0.907
Subjective Norm1	0.863				
Subjective Norm2	0.931				
Subjective Norm3	0.875				
Perceived Behavioral Control1			0.938		
Perceived Behavioral Control2			0.908		
Intention1				0.932	
Intention2				0.907	
Behavior1		0.953			
Behavior2		0.944			

Source: analysis of field data

Table 3.
Confirmatory factor analysis

Item	Standardized loading	Critical Ratio (CR)
Attitude		
ATT1	0.936	
ATT2	0.687	6.247
Subjective Norm		
SN1	0.770	
SN2	0.959	10.163
SN3	0.791	9.500
Perceived Behavioral Control		
PBC1		
PBC2	0.874	
Intention	0.942	9.097
IN1		
IN2	0.881	
Behavior	0.970	10.614
BEH1		
BEH2	0.959	
	0.879	5.553
Goodness-of-fit statistics of the model $X^2 = 43.603$ Goodness-of-Fit Index (GFI) = 0.942 Comparative Fit Index (CFI) = 0.887 Root Mean Square Error of Approximation (RMSEA) = 0.047		

Source: analysis of field data

In order to provide support for discriminant validity, Pearson product-moment correlations among the study variables were computed. For this purpose, composite scores for each dimension were calculated by averaging scores representing that dimension. Table 4 provides the full set of correlations among the constructs of interest in this research. The highest correlation occurred between attitude and behavioral intention to do

knowledge sharing (0.467) and reversely, the lowest correlation was found between perceived behavioral control and knowledge sharing behavior (-0.090). The results provide support for the discriminant validity of the scale (Anderson & Gerbing, 1988).

Table 4.
Correlations among constructs

Construct	1	2	3	4	5
1. Attitude	1				
2. Subjective norms	0.184*	1			
3. Perceived behavioral control	0.434**	0.107	1		
4. Behavioral intention	0.467**	0.098	0.338**	1	
5. Behavior (knowledge sharing)	0.006	0.096	-.090	0.229**	1

Source: analysis of field data

Hypotheses testing results. Structural equation modeling was applied to estimate parameters of the structural model. The results show that the overall acceptability of the overall model was acceptable (Table 5).

Table 5.
Structural Model Results

Hypothesized Relationship	Estimate	C.R.	Conclusion
H1. Attitude toward knowledge sharing → behavioral intentions to share knowledge	0.466	3.573	Supported
H2. Subjective norms about knowledge sharing → behavioral intentions to share knowledge	0.015	0.185	Not supported
H3. Perceived behavioral control to share knowledge → behavioral intentions to share knowledge	0.128	1.210	Not supported
H4. Behavioral intentions to share knowledge → knowledge sharing behavior	0.321	3.110	Supported
H5. Perceived behavioral control to share knowledge → knowledge sharing behavior	-0.212	-2.054	Not supported (different direction)

Goodness-of-fit statistics of the model
X^2 = 44.421
Goodness-of-Fit Index (GFI) = 0.941
Comparative Fit Index (CFI) = 0.892
Root Mean Square Error of Approximation (RMSEA) = 0.043

Source: analysis of field data

The first hypothesis predicted a positive relationship between attitudes toward knowledge sharing and behavioral intentions to share knowledge. The results substantiated the hypothesis (CR = 3.573). The second hypothesis predicted a positive relationship between subjective norms about knowledge sharing and behavioral intentions to share knowledge. However, the results did not substantiated the hypothesis (CR = 0.185).

This research proposed that there was a positive relationship between perceived behavioral control and intention to share knowledge (hypothesis three). Contrary to expectations, the result did not substantiated hypothesis three (CR = 1.210). Then, the fourth hypothesis proposed a positive relationship between behavioral intention and knowledge sharing behavior. The results did supported the hypothesis (CR = 3.110). The fifth hypothesis stated a positive relationship between perceived behavioral control to share knowledge and knowledge sharing behavior. The results supported the hypothesis (CR = -2.054). In spite of its statistical significance, this result does not support hypothesis 5.

DISCUSSION

The objective of the present study was to the theory of planned behavior to examine knowledge sharing behavior. The present study shows that attitude affect behavioral intentions to knowledge sharing. Furthermore, behavioral intention affects knowledge sharing behavior. However, there were three hypotheses that were not supported in this research. Those hypotheses were the positive relationship between subjective norms regarding knowledge sharing and behavioral intention to share knowledge, the positive relationship between perceived behavioral control and behavioral intention to share knowledge, and the positive relationship between perceived behavioral control and knowledge sharing behavior.

No relationship between subjective norms and behavioral intention was found in this study. Therefore, respondents' intention to share knowledge was not related with perceived social pressure from important referents. The finding was inconsistent with previous studies that applied TPB in understanding knowledge sharing behavior (e.g., Lin & Lee, 2004). The inconsistency of the

research could be a reflection of nature of the study sample. Specifically, this research used faculty members in a private university as study respondents.

Based on exploratory research, this study found that two relevant referents for this study are head department and colleagues. However, findings from descriptive statistics (mean= 4.19, minimum= 1, maximum= 7) show that head department was not considered as person that can affect respondents' intention to share knowledge. In other words, it can be stated that respondents' intention to share knowledge was not because of the pressure from the head department.

Head department and colleagues were stated above as two important referents for respondents. However, Leenders (2002, cited by Cheng, Lam & Hsu, 2006) pointed out that the more frequent and intense the communication is between and individual and his or her important others, the more likely it is that an individual will adopts the beliefs from them. On the other hand, faculty's responsibilities such as teaching load, research, and community service may result in infrequently contact or talk with other faculty members and even with the head department. Statistics descriptive also show that colleagues (mean= 4.52) and others perceived important referents for the respondents (mean= 4.74) were also not really considered as person that can affect respondents' intention to share knowledge.

No relationship between perceived behavioral control and behavioral intention to share knowledge was found in this study. Furthermore, perceived behavioral control was significantly related to knowledge sharing behavior, however, in a different direction (i.e., negative direction).

Perceived behavioral control refers to people's appraisal of their ability to perform the behavior. According to several researchers (Triandis, 1977; Sarver, 1983; Liska, 1984 cited by Lam and Hsu, 2006), there are several factors that affect perceived behavioral control such as facilitating factors, the context of opportunity, and available resources. In relating to the results of this research, no relationship between perceived behavioral control and behavioral intention to share knowledge was found in this study. Therefore, it can be stated that when a faculty member feels that he or she has no resources (such as abilities and experience), and then he or she may have no intention to share knowledge. Because of the nature of the sample (faculty member), a respondent may feel that s (he) has no resources because s (he) has expertise differently compared with other colleagues. In other words, when a respondent with expertise in marketing subject, s (he) may feel that s(he) has no resources (i.e. abilities and experience) in finance when have opportunities talking with other colleagues with finance background. Again, because of the nature of this sample (faculty members), respondents of this study may have own expertise. They may have general topic discussion rather than sharing knowledge or discussion in a specific subject area. Thus, no relationship between perceived behavioral controls to share knowledge.

The estimated standardized coefficient for the relationship between perceived behavioral control to knowledge sharing and knowledge sharing behavior was -0.212 (CR= -2.054). This indicates that the higher the degree of knowledge sharing barriers is perceived by faculty members, the lower the behavior of knowledge sharing. Therefore, when a faculty

member want to share his or her knowledge, but there is no available resources such as formal or informal discussion and seminars, it may result to the decrease of knowledge sharing behavior.

LIMITATIONS AND FUTURE RESEARCH

The main objectives of this study are to explore the effect of attitude toward sharing knowledge, subjective norms, perceived behavioral control, behavioral intention, and sharing knowledge behavior. However, there are two main limitations of this study. First, this research used self-reports of sharing knowledge were obtained, rather than actual sharing knowledge behavior. Second, this research tests the fit of the model within a single university. Therefore, further research should attempt to replicate this research in other universities and in other contexts.

CONCLUSIONS

This research applied the theory of planned behavior in order to understand the underlying drivers of lecturers' knowledge sharing behaviors. The results showed those lecturers' attitudes toward knowledge sharing also significantly impacted behavioral intention. Then, behavioral intention significantly impacted knowledge sharing behavior. However, subjective norms about knowledge sharing and perceived behavioral control to knowledge sharing did not significantly influence lecturers' behavioral intention. Also, this research found that perceived behavioral control to knowledge sharing significantly impact knowledge sharing behavior in a different direction. In other words, it was expected the relationship between perceived behavioral control and knowledge sharing was positive.

However, the result of this research pointed out that the direction was negative and significant.

REFERENCES

[1] Anderson, J.C. and Gerbing, D.W. 1988. Structural equation modeling in practice: a review and recommended two-step approach, *Psychological Bulletin*, May, 411-423.

[2] Ajzen, I. 1988. *Attitudes, Personality, and Behavior*, Open University Press, Britain.

[3] Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes,* 50, 179-211.

[4] Alavi, M and Leidner, D.E. 2001. Review: knowledge management and knowledge management systems: conceptual foundations and research issues, *MIS Quarterly*, 25, 107-132.

[5] Babakus, E., Cornwell, T.B., Mitchell, V. and Schelelmilch, B. 2004. Reactions to unethical consumer behavior across six countries. *Journal of Consumer Marketing,* 21, 4, 254-263.

[6] Bartol, K.M. and Srivastava, A. 2002. Encouraging knowledge sharing: the role of organizational reward systems. *Journal of Leadership and Organization Studies*, 9, 1, 64-76.

[7] Beatson, A., Coote, L.V. and Rudd, J.M. 2006. Determining consumer satisfaction and commitment through self-service technology and personal service usage. *Journal of Marketing Management*, 22, 853-882.

[8] Beatty, S.E., Kahle, L.R., Homer, P. and Misra, S. 1996. Alternative measurement approaches to consumer values: the list of values and the Rokeach Value Survey.

Psychology & Marketing, 2, 3, 181-199.

[9] Burgess, D. 2005. What motivates employees to transfer knowledge outside their work unit? *Journal of Business Communication*, 42, 4, 324-348.

[10] Cheng, S., Lam, T. and Hsu, C.H.C. 2006. Negative word-of-mouth communication intention: an application of the theory of planned behavior. *Journal of Hospitality & Tourism*, 30,1, 95-116.

[11] Cheung, S.F., Chan, D.K.S., & Wong, Z.S.Y. 1999. Reexamining the theory of planned behavior in understanding wastepaper recycling. *Environment and Behavior*, 31, 587-612.

[12] Conner, M. and Abraham, C. 2001. Conscientiousness and the theory of planned behavior: toward a more complete model of the antecedents of intentions and behavior. *Personality and Social Psychology Bulletin*, 27, 11, 1547-1561.

[13] Cornwell, B., Cui, C.C., Mitchell, V., Schlegelmilch, B., Dzulkiflee, A. and Chan, J. (2005). A cross-cultural study of the role of religion in consumers' ethical positions. *International Marketing Review*, 22, 5, 531-546.

[14] Cummings, J. 2003. Knowledge sharing: a review of the literature. Available at: http://lnweb18.worldbank.org/oed/knowledge_eval_literature_review.pdf

[15] Davenport, T.H. and Prusak, L. 1998. *Working knowledge: how organizations manage what they know*. Harvard Business School Press, Boston.

[16] De Vries, R.R., Van Den Hooff, B. and De Ridder, J.A. 2006. Explaining knowledge sharing: the role of team communication styles, job satisfaction, and performance beliefs, *Communication Research*, 33, 2, 115-135.

[17] Gerbing, D.W. and Anderson, J.C. 1988. An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25, May, 307-319.

[18] Giles, D. 2002. *Advanced Research Methods in Psychology*. NY: Routledge.

[19] Gurteen, D. 1999. Creating a knowledge sharing. *Knowledge Management Magazine*, 2, 5, February.

[20] Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and Tatham, R.L. 2006. *Multivariate Data Analysis*. New Jersey: Pearson Education, Inc.

[21] Halal, W.E. 2008. The logic of knowledge: making sense of the new principles that govern organizations and economics. Available at http://home.gwu.edu/uhalal/Articles/Logic.pdf

[22] Hall, H. and Goody, M. (2007). KM, culture and compromise: interventions to promote knowledge sharing supported by technology in corporate environments. *Journal of Information Science*, 33, 2, 181-188.

[23] Ipe, M. 2003. Knowledge sharing in organizations: a conceptual framework, *Human Resource Development Review*, 2, 4, 337-359.

[24] Lin, L. and Chen, C. 2006. The influence of the country-of-origin image, product knowledge and product involvement on consumer purchase decisions: an empirical study of insurance and catering services in Taiwan. *Journal of*

Consumer Marketing, 23, 5, 248-265.

[25] Lin, H. and Lee, G. 2004. Perceptions of senior managers toward knowledge-sharing behavior. *Management Decision*, 42, 1, 108-125.

[26] Lin, H. 2007. Effects of extrinsic and intrinsic motivation on employee sharing intentions, *Journal of Information Science*, 33, 3, 135-149.

[27] Morris, M. and Carter, C.R. 2005. Relationship marketing and supplier logistic performance: an extension of the key mediating variables model. *The Journal of Supply Chain Management*, 41, 4, 32-43.

[28] Oreg, S. and Katz-Gerro, T. 2006. Predicting proenvironmental behavior cross-nationally: values, the theory of planned behavior, and value-belief-norm theory. *Environment & Behavior*, 38, 4, 462-483.

[29] Pai, J. 2006. An empirical study of the relationship between knowledge sharing and IS/II strategic planning (ISSP). *Management Decision*, 44, 1, 105-122.

[30] Popper, K.R. 1962. *Conjectures and refutations: the growth of scientific knowledge*, NY: Basic Books.

[31] Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*. 4th ed., New York: John Wiley & Sons.

[32] Small, C.T. and Sage, A.P. 2005. Knowledge management and knowledge sharing: a review. Information *Knowledge Systems management*, 5, 153-169.

[33] So, J.C.F. and Bolloju, N. 2005. Explaining the intentions to share and reuse knowledge in the context of IT service operations, *Journal of Knowledge Management*, 9, 6, 30-41.

[34] Stern, P.C., Dietz, T., Abel, T., Guagnano, G.A. and Kalof, L. 1999. A value-belief-norm theory of support for social movements: the case of environmentalism. *Human Ecology Review*, 6, 81-97.

[35] Steven, M.B. and Steenkamp, J.E.M. 1999. Value priorities and consumer behavior in a transitional economy. In Rajeev Batra, ed., *Marketing Issues in Transitional Economies*, Norwell, MA: Kluwer Academic Press.

[36] Tarkiainen, A. and Sundqvist, S. 2005. Subjective norms, attitudes and intentions of Finnih consumers in buying organic food, *British Food Journal*, 107, 11, 808-822.

[37] Watkins, L. and Gnoth, J. 2005. Methodological issues in using Kahle's list of value scale for Japanese tourism behavior. *Journal of Vacation Marketing*, 11, 3, 225-233.

[38] Wheatley, M.J. 2001. The real work of knowledge management, *IHRIM Journal*, 5, 2, 29-33.

[39] Wu, W. and Li, C. 2007. A contingency approach to incorporate human, emotional and social influence into a TAM for KM programs, *Journal of Information Science*, 33, 3, 275-297.

[40] Yang, C. and Chen, L. 2007. Can organizational knowledge capabilities affect knowledge sharing behavior?, *Journal of Information Science*, 33, 1, 95-109.

[41] Yuen, T.J. and Majid, M.S. 2007. Knowledge-sharing patterns of undergraduate students in Singapore. *Library Review*, 56, 6, 485-494.