

## Knowledge Factors Of Knowledge Sharing Intention And Behavior

**Mahyarni<sup>a,\*</sup>**

**M. S. Idrus<sup>b</sup>**

**Fatchur Rochman<sup>c</sup>**

**Noermiyati<sup>d</sup>**

<sup>a</sup>Doctorate Program, Department of Management, Faculty of Economics and Business, University of Brawijaya, Malang, Indonesia; <sup>b,c,d</sup>Department of Management, Faculty of Economics and Business, University of Brawijaya, Malang, Indonesia

### Abstract

Changes in the external environment in the world of education, ranging from the social, economic, technological, and political, education requires rethinking how these changes influence as an institution and how it should interact with these changes. Islamic University has more challenges than other higher education institutions. The challenges are linked to the human resource improvement in science and technology. Islamic University has also been bonded to a commitment of leading the core mission of university; therefore, Islamic University has to hold a strong commitment and it needs to be attached by self-image which holds life values in leading the commitment. This research is based on the theory of reasoned action and the theory of planned behavior, by developing other theories related to knowledge-sharing behavior such as covering information technology and Islamic teachings. Data are analyzed using Structural Equation Modeling with AMOS application program. The research objectives are to test and analyze direct and indirect effects, the variables of information technology covering, Islamic teachings, attitude, subjective norm and perceived behavior control and knowledge-sharing behavior. The result shows that technology, religion taught, and theory of planned behavior insignificantly influence knowledge-sharing behavior.

### Keywords

Theory of Planned Behavior, Knowledge-sharing Behavior

Received: 15 September 2012; Accepted: 30 November 2012; Published Online: 24 Desember 2013

### Introduction

Knowledge Management (KM) recently has become the focus of attention from various circles of practitioners and academics. Organizations have realized that in order to compete successfully in rapidly developing markets, improving

competence and knowledge in an organization are needed (Orr and Persson, 2003). Chauhan and Bontis (2004) and Kawalek (2004), state that today is the moment of “knowledge era”, and only a organization which is able to manage the knowledge optimally, can survive in

competitive circumstances. Knowledge is a core asset so that an organization has a sustainable competitive advantage. The most important in KM is how to encourage individuals in an organization in sharing the knowledge about what they understand (Orr and Persson, 2003). Organization ability factor in encouraging knowledge-sharing behavior among employees, becomes important, because by knowledge-sharing, the knowledge can be distributed, implemented, and improved.

The customization of knowledge-sharing refers to promoting innovation sustainably. Knowledge-sharing can be done through seminar, workshop, conference, discussion forum, and even by doing face-to-face or through a virtual world, are some activities that result in improving knowledge which affects innovative behavior. Knowledge-sharing, practically, has two aspects: (1) behavior, and (2) technology. In predicting behavior when an individual does not have full self awareness, Ajzen (1988) states that one's behavior depends on behavioral intention which consists of three components, i.e.: attitude, subjective norms, and perceived behavior control.

Environmental changes have influenced education through the presence of information technology. Information technology has presented new media in distributing information, which is digital media. This media has changed the human thought framework as the response to the information package. Knowledge-sharing behavior is determined mostly by the role of information technology, known as IT (information technology), along with the research done by Huysman and Wulf (2006) and Kim and Lee (2006) which shows that the use of IT has a positive impact in collecting and spreading knowledge.

Religion also has been an important role in human development, as morale controls and rightness precursors. Religion taught is defined as the comprehension about Koran (Islamic bible) and Hadists (prophet Mohammad sayings) related to knowledge-sharing behavior by determining to what extent the behavior is being motivated by religion taught in life. The indicators based on the Koran is the existence of role-sharing as mentioned in At-Taubah (122), attending the knowledge-sharing group as mentioned in Al-Ahqaf (29-31), sharing the knowledge openly as mentioned in Al-Hijr (94-95), and realizing that time holds essential points in life as mentioned in Al-Ashr (1-3). While the indicators based on Hadists are the obligation to share knowledge and the knowledge we share will return to us the merit from Allah (*pahala*).

The existence of the Islamic paradigm about knowledge shows that knowledge will not run if is shared, and the more it is shared the more *pahala* one will get. Sedikides (2010) also conveys that 80 percent of people around the world believe that religion is an important part of their daily lives. Managing knowledge resources is a function in a modern organization. Knowledge is treated as a potential and strategic resources because it affects significantly the organization's competitive advantage (Alavi and Leidner, 2001). Knowledge-sharing strategy done by the organization is a target to promote the sharing of knowledge, ideas, and experience among individuals and groups (Cabrera and Cabrera, 2002).

This study aims to test and analyze direct and indirect influences of information technology proficiency, Islamic taught, attitude, subjective norm, and perceived behavioral control on knowledge-sharing intentions and behavior.

## Literature Review

### Theory of Reasoned Action And Theory of Planned Behavior

Theory of Reasoned Action was formulated in 1976 in an attempt to give consistency to the study between attitude and behavior (Fishbein and Ajzen, 1975; Werner, (2004). Theory of Planned Behavior (Ajzen, 1991) was assumed as the improvement of the Theory of Reasoned Action (Werner, 2004). Ajzen (2005) states that attitude on behavior is determined by beliefs gained about consequences of behavior or known as behavioral beliefs. Belief related to one's subjective judgment to his surroundings, self understanding and environment. To understand belief, in the Theory of Reasoned Action, Ajzen (2005) states that belief can be expressed by linking a behavior, which is going to be predicted with many advantages and disadvantages, to one's will and whether he does or not. This belief will strengthen attitude to behavior based on a data evaluation of how the behavior is able to benefit the doers. Attitude is defined as the stages of positive feeling about knowledge-sharing. The indicator used is known as a knowledge-sharing attitude which are; good and risky attitude, delightful experience, strongly useful, and wise acting (Ajzen 1991, 2002, Bock and Kim 2000, 2002, Bock and Pan n.d., Ryu et al. 2003, Lin and Lee 2004, Chatzoglou and Vraimaki 2009).

On the other hand, another important aspect of this theory is the subjective norm of one's feeling or allegations on the expectation from people in a life about what he does and does not. Since this feeling is subjective this dimension is known as the subjective norm. The relation between attitude and behavior determines significantly. The subjective norm is also affected by beliefs. What

differentiates is if the relationship is an attitude toward behavior that would mean that the subjective norm is a function of one's beliefs obtained and the views of people related to the normative belief. Subjective norm is defined as the social-pressure feeling in implementing or not doing the knowledge-sharing behavior. The indicators used are the existence of hope and belief, the importance of doing knowledge-sharing and the conformity to do knowledge-sharing referring to research done by Ajzen (1991, 2002), Bock and Pan (n.d.), Ryu et al. (2003), Lin and Lee (2004), Chatzoglou and Vraimaki (2009).

Perceived behavioral control, also known as behavior control, is one's feelings about how easy or difficult it is to realize a particular behavior (Ajzen, 2005). Ajzen explores feelings related to control behavior by distinguishing it with locus of control stated by Rotter's Control Center theory. This is related to one's belief which is relatively stable in every condition. Perceived behavioral control changes based on the situation and the types of behavior that is going to be done. Center control related to individual's belief that an achievement in doing anything relays on its own attempt (Rotter, 1966). This belief is linked to specific achievement, such as belief in having the skill proficiency to use a computer well, and it is known as perceived behavioral control. Perceived behavioral control is measured by the perceived ease and difficulty experienced when doing knowledge-sharing behavior. The indicators used are the possibility of knowledge-sharing, the ability of knowledge-sharing based on the individuals and their interest referring to research done by Ajzen (1991, 2002), Ryu et al. (2003) Lin and Lee (2004), Chatzoglou and Vraimaki (2009).

Information Technology development has a very big impact in many aspects of life, as well as in education, such as conveying learning material using online learning system, and e-learning or web based learning. The use of information technology is bringing excellence and order to improving learning systems, learning material for teaching, and how the process is to be applied. The use of information technology potentially affects the numerous amount of knowledge, since the use of information technology has been studied in many research projects (Jarvenpaa and Staples, 2000; Huysman and Wulf, 2006). Research done by Jarvenpaa and Staples (2000) states that the use of information systems with computer based and electronic media has contributed in providing valuable information for individuals in an organization. Information technology proficiency is the frequency level in using information technology. The indicators used are systems of bulletin, e-mail, webpage, chat room, computer program, and knowledge and database storage referring to the research done by Bock and Kim (2000, 2002), Bock and Pan (n.d.), Chatzoglou and Vraimaki (2009).

Bakhtiar and Amsal (2011) defines the terminologically of religion as a belief system to God perceived by a community frequently interacting with Him. Reasons why a religion is really important in human's life, includes: (a). Due religion is the moral source, (b). Because religion is a hint of truth, (c). Because religion is a source of information about the problem of metaphysics, (d) Because religion provides spiritual guidance to people both in times of joy, and in times of sorrow. Sedikides (2010), states that 80 percent of people around the world say that religion is an important part of their daily lives. Science occupies a very important position in the

teachings of Islam; it is evident from the many verses of Al-Quran that sees men of knowledge in a high position and hadith-hadith besides noble prophet to his people lots of encouragement to continue their studies. Obligation to submit Studies in Islamic teachings can be seen for example in the Word of Allah in Surat At-Taubah verse 122, which means:

*"It is suitable for those who went all believers (to war). Why not get away from each faction among them some people to deepen their knowledge of religion and to warn their people when they have been returned to Him, so that they can keep Him." (At-Taubah: 122).*

Knowledge is positioned importantly in Islamic teachings. This is reflected by many verses in the Koran saying that educated persons or persons with knowledge are high and precious; moreover, Prophet's Hadists gives encouragement for people to always learn the knowledge. In knowledge development, we have to possess intellectual attitude as commanded by Allah in the Koran. Firstly we must be critical with problems as it is written in Az-Zumar verse 18. Secondly it is forbidden to use sayings and actions that contain no knowledge as it is written in Al-Isra verse 36. And thirdly is the use of logical thinking to the maximum as it is written in Yunus verse 101. Every Muslim, whatever the profession and skill is, has the same obligation to present the kindness and spread da'wah, this is also told by Prophet Muhammad SAW, which is, "Let know from me, even only for one verse." (HR. Bukhari).

Using the approach developed by Ajzen (1991), regarding the Theory of Planned Behavior which consists of variables of attitude, subjective norms, perceived behavioral control, knowledge-



sharing intention and knowledge-sharing behavior, this research has some differences to previous research because it is integrated in a research model from the perspective of: (1) variables relation studied, (2) inserting back the information technology proficiency variable which is not confirmed in model testing done by Chatzoglou and Vraimaki (2009), (3) analysis unit, and (4) Islamic Teachings variable as addition.

Previous Research has shown that there is a strong causal relationship between intention and behavior as targeted (Ryu et al., 2003), and it has been suggested by previous theories. Information Technology is believed to be important factors in KM (Bock and Kim, 2002). The influence of the information technology proficiency level on knowledge-sharing intention and behavior is necessary to be researched in hypotheses below:

H1.a. Information technology significantly influences knowledge-sharing intention.

H1.b. Information technology significantly influences knowledge-sharing behavior either directly or indirectly.

Alawi et al. (2007) did research in Bahrain, and stated that religious teachings significantly affects the determining behavior and strongly influences business performances. Based on those the hypotheses proposed are:

H2.a. Islamic taught understanding significantly influences knowledge-sharing intention.

H2.b. Islamic taught understanding significantly influences knowledge-sharing behavior either directly or indirectly.

The Theory of Planned Behavior affirms that the more the intention does a behavioral act, the more probability an individual will do the behavior (Ajzen, 1991). Regarding these, the direct and indirect influences of attitude, subjective norm, and perceived behavioral control on knowledge-sharing intention and behavior are also studied by composing these hypotheses:

H3.a. Attitude significantly influences knowledge-sharing intention.

H3.b. Attitude significantly influences knowledge-sharing behavior either directly or indirectly.

H4.a. Subjective norm significantly influences knowledge-sharing intention.

H4.b. Subjective norm significantly influences knowledge-sharing behavior either directly or indirectly.

H5.a. Perceived behavioral control significantly influences knowledge-sharing intention.

H5.b. Perceived behavioral control significantly influences knowledge-sharing behavior either directly or indirectly.

H6. Intention significantly influences knowledge-sharing behavior.

## Research Methodology

This research took place in the Riau provinces, known as one of the provinces in Indonesia which directly borders on Malaysia. Riau province is located in the centre of Sumatera Island with a width of 111.228,65 Km<sup>2</sup>. The societies in Riau are extremely religious since Islamic teaching is the norm and spirit in doing daily activities there. The population in this research is all lecturers in 16 Islamic

universities in Riau Province with a total amount of 554 people. The sample for this research is 190 respondents with a purposive sampling method. It is determined by employee position or working period for more than 5 years. This method is determined with consideration of getting accurate information about knowledge-sharing behavior based on lecturer's working experience.

The instrument in this research is questionnaire measured by a Likert scale which is 1 = very disagree and 5= very agree. Measurement method using Likert Scale is popular and is used more by researchers in human resources and other social sciences fields. The data collecting technique is done by using questionnaires set up with Likert Scales and through interview.

There are seven variables used that will be tested. All of the variables used in this study go through several data screenings, such as a validity test and a reliability test using the rule of thumb of no values

greater than 0.3. For the reliability test the Cronbach method was used which in this research uses values greater than 0.6 said that would indicate if the instrument is reliable.

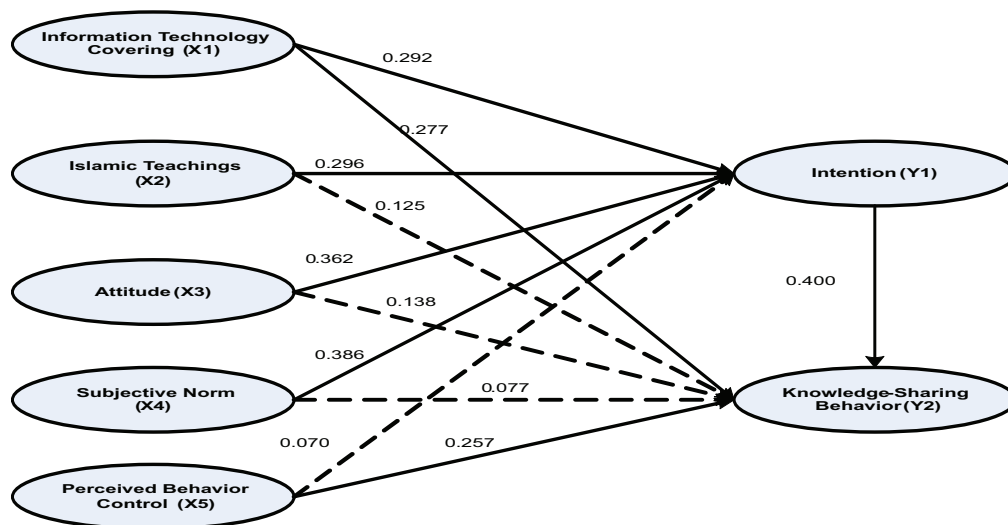
### Method of Data Analysis

The methods of data analysis used in this study will be inferential statistics, and the inferential statistical method used is Structural Equation Modeling (SEM). SEM is used to test research hypotheses. The patterns of variables relationship studied here are causal relationships of one or several independent variables on one or several dependent variables.

### Results and Discussion

Path analysis is generally used to test direct and indirect effects of variables used as "cause" on variables of "impact" by forming a diagram and path coefficient. Path analysis model and path coefficients are excellent in illustrating causal effects or causal relationships of several variables graphically.

Figure 1. Results of Structural Model



**Table 1. Hypotheses Testing Results: Direct Effect**

Hypothesized path	Direct Effect	P-value	Result
X1 → Y1	0.292	0.005	Significant
X2 → Y1	0.296	0.005	Significant
X3 → Y1	0.362	0.002	Significant
X4 → Y1	0.386	0.001	Significant
X5 → Y1	0.070	0.417	Insignificant
X1 → Y2	0.277	0.018	Significant
X2 → Y2	0.125	0.247	Insignificant
X3 → Y2	0.138	0.235	Insignificant
X4 → Y2	0.077	0.517	Insignificant
X5 → Y2	0.257	0.008	Significant
Y1 → Y2	0.400	0.017	Significant

**Table 2. Hypotheses Testing Results: Indirect Effect**

Hypothesized path	Direct Effect		Indirect Effect	Result
X1 → Y1 Y2	X1 → Y1 = 0.292	Y1 → Y2 = 0.400	0.117	Significant
X2 → Y1 Y2	X2 → Y1 = 0.296	Y1 → Y2 = 0.400	0.118	Significant
X3 → Y1 Y2	X3 → Y1 = 0.362	Y1 → Y2 = 0.400	0.145	Significant
X4 → Y1 Y2	X4 → Y1 = 0.386	Y1 → Y2 = 0.400	0.154	Significant
X5 → Y1 Y2	X5 → Y1 = 0.070	Y1 → Y2 = 0.400	0.028	Insignificant

Based on table 1 and table 2, the influence coefficient between the mastery of information technology by the willingness to share knowledge is at 0.292 with a p-value of 0.005. P-value < 0.05 indicates that the hypothesis H1a is acceptable. The results are consistent with the findings of previous research that states the higher the mastery of information technology, the higher the willingness to share knowledge. Previous research conducted by Salisbury *et al.* (2001); Citrin *et al.* (2000) Goldsmith, 2002; Bobbit and Dabholkar, 2001; Chiu *et al.* (2005), Lee *et al.* (2010), reports the influence coefficient between the mastery of information technology with knowledge-sharing behavior is at 0.277 with a p-value of 0.018. P-value < 0.05 indicates that the hypothesis H1b acceptable. The results are consistent with the findings of previous

research that states the higher the mastery of information technology, the higher the knowledge-sharing behavior. Previous research conducted by Bock and Kim (2000); Alawi *et al.* (2007); Alwi *et al.* (2009); Tohidinia and Mosakhani (2010) supports that the coefficient of the indirect effect is positive indicating that the higher the value of mastery of information technology, the higher the knowledge-sharing behavior, if the intention to share knowledge also higher.

The influence coefficient between the teachings of Islam with the intention to share knowledge is at 0.296 with a p-value of 0.005. P-value < 0.05 indicates that the hypothesis H2a is acceptable. The results of this study support the research conducted Alawi *et al.* (2007). Whilst the coefficient between the teachings of Islam

influence the behavior of knowledge-sharing at 0.125 with a p-value of 0.247 the P-value > 0.05 indicates that the hypothesis H2b was rejected. That is, regardless of the value of Islamic teachings, these will not have a significant effect on the level of the value of knowledge-sharing behavior. The results are inconsistent with the findings of previous studies conducted by the Alawi *et al.* (2007). The coefficient has a positive indirect effect indicates, the higher the value of Islamic teachings, the higher the knowledge-sharing behavior, if the intention to share knowledge is also higher.

The influence coefficient between knowledge-sharing attitude and willingness to share knowledge is at 0.362 with a p-value of 0.002. P-value < 0.05 indicates that the hypothesis H3a is acceptable. The results are consistent with the findings of previous research that states the higher the value of knowledge-sharing attitudes, the higher the willingness to share knowledge. Previous research includes that conducted by Bock and Kim (2002); Ryu *et al.* (2003); Lin and Lee (2004); Bock *et al.* (2005), So and Bolloju (2005); Chatzoglou and Vraimaki (2009); Tohidinia and Mosakhani (2010). The value of the coefficient of influence attitudes towards intention to share knowledge according to Ajzen (1991), depending on the circumstances and habits of behavior in organizations. On the other hand, the influence coefficient between the attitude of sharing knowledge with knowledge-sharing behavior is at 0.138 with a p-value of 0.235 P-value > 0.05 that indicates that the hypothesis H3b was rejected. The results are inconsistent with the findings of previous studies, which reported an influence of attitude to share knowledge with knowledge-sharing behaviors. Previous research carried out includes a project by Xue *et al.* (2011).

The coefficient of a positive indirect effect indicates, the higher the value of knowledge-sharing attitudes, the higher the knowledge-sharing behavior, if the intention to share knowledge also higher.

The influence coefficient between subjective norms to share knowledge with intention to share knowledge is at 0.386 with a p-value of 0.001. P-value < 0.05 indicates that the hypothesis H4a is acceptable. The results are consistent with the findings of previous research that states the higher the subjective norm of knowledge-sharing, the higher the willingness to share knowledge( Ryu *et al.* 2003; Lin and Lee 2004; Chatzoglou and Vraimaki 2009). The influence coefficient between a subjective norm to share knowledge with knowledge-sharing behavior is at 0.077 with a p-value of 0.517. P-value > 0.05 indicates that the hypothesis H4b was rejected. The results are inconsistent with the findings of previous studies, which reported an influence of subjective norm to share knowledge with knowledge-sharing behaviors. Previous research was conducted by Masrek *et al.* (2008). The coefficient has a positive indirect effect indicates, the higher the value of subjective norm of knowledge-sharing, the higher the knowledge-sharing behavior, if the intention to share knowledge also higher.

The influence coefficient between perceived behavioral control with the intention of knowledge-sharing is at 0.070 with a p-value of 0.417. P-value > 0.05 indicates that the hypothesis H5a was rejected. These results contrast with the findings of previous studies, which reported an influence of perceptions of knowledge-sharing behavior control with the intention to share knowledge. Previous research was conducted by Ryu *et al.* (2003); Lin and Lee (2004); So and Bolloju (2005); Tohidinia and Mosakhani (2010).



The results of this study do not support the theory of planned behavior proposed by Ajzen, this is because the sample size is still small and further this is possible because of the influence of gender, level of education, and work experience as it has been revealed earlier research, (Constant et al. 1994, Connelly and Kelloway, 2003; Miller and Karakowski, 2005). The influence coefficient between perceived behavioral control of knowledge-sharing behavior is at 0.257 with a p-value of 0.008. P-value  $<0.05$  indicates that the hypothesis H5b is acceptable. These results indicate the existence of significant influence between perceived behavioral control to share their knowledge with knowledge-sharing behaviors. Based on the analysis of indirect effects between perceived behavioral control toward knowledge-sharing behavior through the intention of knowledge-sharing, the indirect effect coefficient obtained by  $0.070 \times 0.400 = 0.028$ . That is, regardless of the value perception of knowledge-sharing behavior control, it will not affect the level of knowledge-sharing behavior, although the value of knowledge-sharing willingness to change.

Continuing from above, the influence coefficient between the intentions to share knowledge with knowledge-sharing behavior is at 0.400 with a p-value of 0.017. P-value  $<0.05$  indicates that the hypothesis H6 is acceptable. The results are consistent with the findings of previous research that states the higher the willingness to share knowledge, the higher the knowledge-sharing behavior. Previous research was conducted by Bock and Kim (2002); Lin and Lee (2004); Tohidinia and Mosakhani (2010).

## Conclusion

This study is expected to give thinking contributions in testing the consistency

of the planned behavior theory (which consists of variables of attitude, subjective norms, and perceived behavioral control) and the relation of information technology variable and Islamic teachings with knowledge-sharing intention and behavior.

The research results that indirectly influence the theory of planned behavior have significant influence on knowledge-sharing behavior. While attitude and subjective norm has significant and indirect influence on knowledge-sharing attitude, this supports the theory of planned behavior by Ajzen. The attitude to share knowledge is showing a strongly delightful attitude, intimate atmosphere, complacency, capacity and ability in the field involved. Perceived behavioral control has no indirect influence on knowledge-sharing behavior and this fact does not support the theory of planned behavior by Ajzen. This situation is because in the University context, these impossible conditions create difficulty of perception in experiencing knowledge-sharing.

Religious teachings and information technology indirectly have a significant influence on knowledge-sharing behavior, in this case, knowledge-sharing as a crusade in the name of Allah SWT relating to worship and goodness to be done. If the situation permits, then knowledge-sharing can benefit in developing knowledge and improving the horizon of thinking.

This study has been done by applying scientific standards, yet this study still has limitations such the study is limited only in measuring the influence of the theory of planned behavior, technology information proficiency, religious teaching variables on knowledge-sharing intention and behavior. Other than that, the results of this study cannot be generalized to all Islamic Universities in Indonesia because

only few samples are tested and for future study, other variables such as climate, organizational culture, and leader's commitment can be added.

### Theoretical Implications

The results provide the theoretical implications of the theory related to HRM concerning the factors that influence the willingness and behavior of knowledge-sharing. The behavior should be encouraged to share their knowledge with the chief and should focus on building a positive attitude through improved faculty relations and recognition for their contributions. Bock and Kim (2002), explain that the positive behavior of the underlying knowledge sharing arises through the belief that sharing knowledge and belief benefits can contribute to improving organizational performance. Gurteen (1999), states that if people understand that sharing knowledge will help them: "... perform tasks more effectively, ... keep their jobs; help them develop their careers, and enhance self-actualization, the sharing of knowledge will be realized." Therefore it needs more specific attention in managing human resources, because if human resources are managed well, it will give many contribution in yielding effectiveness in organization, for instance helping

organization in pursuing its targets, using skills and abilities of workforces efficiently, and increasing job satisfaction and employee's actualization maximally.

### Notes on contributors

**Mahyarni** is a Lecturer in Faculty of Economics and Social Science, State Islamic University Sultan Syarif Kasim, Riau .She got her doctorate degree in Management Department at the Faculty of Economics and Business, University of Brawijaya Malang, Indonesia. Her research interests are Knowledge Management and Strategic Management.

**M. S. Idrus** is a Professor in Management Department at the Faculty of Economics and Business, University of Brawijaya Malang, Indonesia. His research interests are in Strategic Management.

**Fatchur Rochman** is a senior lecturer in Management Department at the Faculty of Economics and Business, University of Brawijaya Malang, Indonesia. His research interests are in Marketing and Strategic Management.

**Noermiyati** is a Senior Lecturer in Management Department at the Faculty of Economics and Business, University of Brawijaya Malang, Indonesia. Her research interests are in Human Resources Management and Strategic Management.

### References

- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed), *Advances in experimental social psychology*, New York: Academic Press, Vol. 20, pp. 1-63.
- Ajzen, I. (1988). *Attitudes, personality, and behavior*. Chicago: Dorsey Press.
- Ajzen, I. (2002), "Constructing a TPB questionnaire: conceptual and methodological considerations", available at: [www-unix.oit.umass.edu/~ajzen/pdf/tpb.measurement.pdf](http://www-unix.oit.umass.edu/~ajzen/pdf/tpb.measurement.pdf) (accessed 9 June 2004).
- Ajzen, I. (1991). The Theory of Planned Behavior, *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179-211.

- Ajzen, I. and Fishbein, M. (2005). *The influence of attitudes on behavior*. In Albarracin, D., Johnson, B.T., Zanna MP. (Eds), *The handbook of attitudes*, Lawrence Erlbaum Associates
- Al-Alawi, Nayla Yousif Al-Marzooqi, and Yasmeen Fraidoon Mohammed. (2007). Organizational culture and knowledge sharing: critical success factor, *Journal of Knowledge Management*, Vol. 11 Iss: 2, pp.22 – 42
- Alavi, M and Leidner, D.E. (2001). Review: knowledge management and knowledge management systems: conceptual foundations and research issues, *MIS Quarterly*, Vol. 25, pp. 107-36.
- Alwi, Najwa Hayaati Mohd., Azreena Abu Bakar, and Hanifah Abdul Hamid. (2009). Factors Contributing Knowledge Sharing In Higher Learning Institution, *ebscohost.com*
- Bakhtiar, Amsal. (2011). *Filsafat Ilmu*, PT Raja Grafindo Persada, Jakarta
- Bobbit, L.M. and Dabholkar, P.A. (2001). Integrating attitudinal theories to understand and predict use of technology-based self-service, *International Journal of Service Industry Management*, Vol. 12 No. 5, pp. 423-50
- Bock, G.W. and Kim, Y.G. (2002). Breaking the myths of rewards An Exploratory Study of Attitudes About Knowledge Sharing, *Information Resources Management Journal*; Apr-Jun, ABI/INFORM Global pg. 14
- Bock, G.W. and Kim, Y.G. (2000). Breaking the myths of rewards: : A Study of Attitudes about Knowledge Sharing, *Proceedings of the INFORMS-KORMS Conference*, Seoul, Korea, 18-21 June.
- Bock, G.W. and Pan, S.L. (n.d.), “Questionnaire for knowledge sharing”, unpublished questionnaire.
- Cabrera, A. and Cabrera, E.F. (2002). Knowledge sharing dilemmas, *Organization Studies*, Vol. 23 No. 5, pp. 687-710.
- Chatzoglou P.D and Eftichia Vraimaki, (2009). Knowledge-sharing behavior of bank employees in Greece, *Business Process Management Journal*, Vol. 15 No. 2, pp. 245-266.
- Chauhan, N., and Bontis, N., (2004). Organisational Learning via Groupware: A Path to Discovery or Disaster?, *International Journal Technology Management*, Vol. 27, No. 6/7, pp. 591-610.
- Chiu ,Y., Chieh-Peng Lin and Ling-Lang Tang, (2005). Gender differs: assessing a model of online purchase intentions in e-tail service, *International Journal of service Industry Management*, Vol. 16 No. 5, pp. 416-435
- Citrin, A.V., Sprott, D.E., Silverman, S.N. and Stem, D.E. Jr. (2000). Adoption of internet shopping: the role of consumer innovativeness, *Industrial Management & Data Systems*, Vol. 100 No. 7, pp. 29-45.
- Connelly, C.E. and Kelloway, K.E. (2003), “Predicting of employees knowledge sharing cultures”, *Leadership & Organizational Development Journal*, Vol. 24 No. 5, pp. 294-301.
- Constant, D., Kiesler, S. and Sproull, L. (1994), “What’s mine is ours, or is it? A study of attitudes about information sharing”, *Information Systems Research*, Vol. 5 No. 4, pp. 400-21.

- Fishbein, M., and Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*, Reading, MA: Addison-Wesley.
- Goldsmith, R.E. (2002). Explaining and predicting consumer intention to purchase over the internet: an exploratory study, *Journal of Marketing Theory and Practice*, Vol. 10 No. 1, pp. 8-22.
- Gurteen, D. (1999). Creating a Knowledge Sharing Culture, *Knowledge Management Magazine*, Vol. 2, Issue 5, February
- Huysman, M. and Wulf, V. (2006). IT to support knowledge sharing in communities, towards a social capital analysis, *Journal of Information Technology*, Vol. 21, pp. 40-51.
- Jarvenpaa, Sirkka L., & Staples, D. Sandy. (2000). The use of collaborative electronic media for information sharing: an exploratory study of determinants. *Journal of Strategic Information Systems*, 9(2/3), 129-154.
- Kawalek, J. P. (2004). Systems Thinking and Knowledge Management: Positional Assertions and Preliminary Observations, *Systems Research and Behavioral Science*, Vol. 21, No. 1, pp. 17-36.
- Kim, S. and Lee, H. (2006). The impact of organisational context and information technology on employee knowledge-sharing capabilities, *Public Administration Review*, Vol. 66 No. 3, pp. 70-85.
- Lee, H., Hyeon Jeong Cho, Wenwen Xu, and Ann Fairhurst. (2010). The influence of consumer traits and demographics on intention to use retail self-service Checkouts, *Marketing Intelligence and Planning*, Vol. 28 No. 1, pp. 46-58
- Lin, H.F. and Lee, G.G. (2004), "Perceptions of senior managers toward knowledge-sharing behaviour", *Management Decision*, Vol. 42 No. 1, pp. 108-25.
- Masrek, Mohamad Noorman and Nor Shahriza Abdul Karim and Ramlah Hussein. (2008). The effect of organizational and individual characteristics on corporate intranet utilizations, *Information Management & Computer Security*, Vol. 16 No. 2, 2008, pp. 89-112
- Miller, D.L. and Karakowski, L. (2005), "Gender influences as an impediment to knowledge sharing: when men and women fail to seek peer feedback", *The Journal of Psychology*, Vol. 139 No. 2, pp. 101-18.
- Orr, E., and Persson, M. (2003). *Performance Indicators for Measuring Performance of Activities in Knowledge Management Projects*, Master Thesis, Department of Informatics, University of Gothenburg.
- Rotter, J.B. (1966). "Generalized expectancies of internal versus external control of reinforcements". *Psychological Monographs* 80 (whole no. 609).
- Ryu, Seewon, Seung Hee HO and Ingoo Han. (2003). Knowledge Sharing Behavior of Physicians in Hospitals, *Expert Systems with Applications*, Vol. 25 No. 1, pp. 113-22.
- Salisbury, W.D., Pearson, R.A., Pearson, A.W. and Miller, D.W. (2001). Perceived security and world wide web purchase intention, *Industrial Management and Data Systems*, Vol. 101 No. 3/4, pp. 165-76
- Sedikides, C. (2010), "Why does religiosity persist?", *Personality and Social Psychology Review*, Vol. 14 No. 1, pp. 3-6.

- So, Johnny C.F. and Narasimha Bolloju . (2005). Explaining the intentions to share and reuse knowledge in the context of IT service operations, *Journal of Knowledge Management*, Vol. 9 No. 6, pp. 30-41
- Tohidinia, Zahra and Mohammad Mosakhani. (2010). Knowledge Sharing Behaviour and its Predictors, *Industrial Management and Data System*, Vol 110 No 4, Pp 611-631
- Werner, P. (2004). Reasoned Action and Planned Behavior, in S.J. Peterson and T.S. Bredow (eds), *Middle range Theories: Application to Nursing Research*, Lippincott Williams and Wilkins, Philadelphia, pp. 125-147.
- Xue, Y., John Bradley and Huigang Liang. (2011). Team climate, empowering leadership, and knowledge sharing, *Journal of Knowledge Management*, Vol. 15 No. 2, 2011.