

The Organizational Roles of Knowledge Sharing and Information Technology in the Commercial Banking Sector

Theresia Purbandari
Mujilan
Widya Mandala Madiun University

Abstract

This study investigates the antecedence of knowledge sharing and the following impact of knowledge sharing. The main factors of this study learning organization and IT support. This study is focused to explain the relationship of learning organization and IT support to the knowledge sharing, innovation, and performance. We focus the analysis to the middle managers of commercial bank, however non-managers is also included as a comparison analysis. A component based SEM is adopted to test the integrating factors that impact the knowledge sharing and innovation. The finding indicates that managers and non-managers have a difference perception in knowledge sharing. The trust to the supervisor and other member is important motivation of sharing among managers and non-managers. Managers also need clearly shared vision when considering to share. IT support for knowledge management hasn't direct impact to the knowledge sharing but it has significant direct impact to the firm innovation. Overall, it means that to leverage knowledge sharing activity in the organization we need to understand the stakeholder characteristics in their job positions. Also it is needed a socialization of the IT purpose in the knowledge management context to the related organization.

Keywords : *knowledge sharing, information technology support, innovation, knowledge management, learning organization.*

INTRODUCTION

Recently, knowledge sharing is become an important thing to support innovations and firm performance. Knowledge sharing and firm innovation is crucial factors for the continuously competitive advance (Liao, 2006). In other side, computer network and the internet grow fast to support organization and individual activities. Either individual behavioral or technology support is predicted to trigger the motivation to share knowledge.

There is a need to understand the antecedent factors of knowledge sharing motivation and how knowledge sharing affects the innovation and performance.

This study investigates the impact of technology and non-technology (organizational behavioral) to the knowledge sharing motivation from the commercial bank organizations among bank managers. The sharing motivation among managers is not only built by technology facilities but also how their acceptance to do share that related to behavioral aspects. The important of sharing is related to how it makes innovation and arise performance in the organization. Consequently, the understanding of the antecedent and the followed factors of knowledge sharing is needed.

This study is focused to predict the information technology supporting (Choi et al., 2010) and learning organization (Liao, 2006) to the knowledge sharing. Further, the successful of knowledge sharing management will improve the innovation of the firm (Liao, 2006) and finally improving the organizational performance (Choi et al., 2010).

The research approaches and integrates the related factors investigated by Liao (2006) and Choi et al. (2010). This study tries to solve the problem left by Choi et al. (2010) that knowledge sharing has no direct effect power to improve the team performance but via knowledge application. Other side, Liao (2006) proves that knowledge sharing has a direct to the firm innovation. Based on the two evidences, we integrate both evidence and predict that knowledge sharing has impact to the performance via firm innovation.

This study uses some assumptions: first, the bank managers have ability and familiarly which information technology for data communication. Second, the internet users' of Indonesia is in the early phase of adoption (Gounaris & Dimitriadis, 2003). Consequently, the result may different from middle or mature phase of internet adoption.

This study predicts that learning organizational and IT support for KM has positive impact to the knowledge sharing. Further, knowledge sharing has positive impact to the firm performance through the mediating of firm innovation.

We hope to provide the supporting literature to the information system and knowledge management. We suggest two factors influencing the knowledge sharing successful by individual behavior in the organization and information technology supporting. For organization context, this study gives supporting to understand the important of knowledge sharing to improve the innovation power that also can impact the firm performance.

LITERATURE REVIEW AND HYPOTHESES

Knowledge Management

Recently, Web 2.0 technology grows fast and get user's acceptance. Web 2.0 raises new interaction model among user all over the world. The booming of web 2.0 makes Time magazine state person of the year is YOU in the year of 2006 (Grossman, 2006; Turban et al., 2008). The application of web 2.0 can be exemplified as Wikipedia, YouTube, MySpace and Facebook. Other side, internet user is familiar which facilitation of searching, e-mail/mail list, and conference tools. The facilities and the way to communicate have given new habit among individual to share information they have

Viewing the theory firm as a bundle of knowledge, knowledge is become an important source to compete (Gey & Furu, 2008). Consequently, knowledge management is an important activity to reach the advantage of knowledge (Gennhuizen & Indarti, 2006). Further, knowledge is an important input in the economic process and an important thing to support the ability of the firm, community, or individual who participate in it. Choi *et al.* (2010) views the knowledge-based organization that the team plays a crucial role to improve the knowledge sources.

Choi et al. (2010) left a problem that knowledge sharing hasn't a significant impact to the firm performance. We suggest that this problem can be approached by Liao's research which proves that knowledge sharing has direct effect to the firm innovation. The knowledge sharing will improve the firm performance if actualized by firm innovation. Consequently, knowledge sharing of garbage materials can't support the organization improving and make inefficiency, further can reduce the performance. To explain the relationship of integrating variables please see the organizational roles of knowledge sharing model (research model) at **figure 1 in appendix 2**.

Learning Organization

Liao (2006) learns the employee character in the learning organization context. Learning organization is organization commitment level to systemic the believing and its practice. Learning organization refers to the wider organization activities to create and use knowledge to improve the competitive advantage. Further, Liao (2006) proves that three factors have significant impact to the knowledge sharing: open-mindedness, shared vision and trust.

Open-mindedness: is a willingness or intention to critically evaluate the routine firm operational, assumption, believing, and receiving of new ideas

Shared vision: is something generally knew, understood and used to lead or guide. The vision shall be socialized for all organization members to improve the commitment in the effort to reach the goal.

Trust: is the willingness of a group resulted from other person action which prediction that other person will form the important action of a group. Example is the trust of supervisor and employee in the job environment.

Open mindedness will have a positive impact to the knowledge sharing behavior in the organization. Organization who enjoy in receives suggestion and give critically feed-back makes individuals who give the contribution feel have a meaning in contributing. If organization have no fear or reluctant to receive input from the members then the member will have no fear or reluctant too when give the input. The organization which wider vision understanding of all members will raise the intention to share knowledge to effort the overall goal. The trust among supervisor and employee also has impact to the knowledge sharing activity.

H1a: open-mindedness has a positive impact to the knowledge sharing.

H1b: shared vision has positive impact to the knowledge sharing.

H1c: trust has positive impact to the knowledge sharing.

IT support for Knowledge Management

Choi et al. (2010) state information technologies facilities can support knowledge management activity by provide features to encourage communication and collaboration. They give opinion that the using of information technology to support knowledge management will improve the effectiveness of knowledge sharing. In other functions, information technologies also can be used for searching and new information accessing.

Andriole (2010) learns about the using of web 2.0 in the US companies. He learns about wikis, blogs, RSS filters, folksonomies, mashups, podcasts, crowdsourcing, social networks, and virtual worlds. Some of this facilitation can be used to facilitate the knowledge management by share knowledge activities. This facility also can be related to the innovation process. Andriole (2010) identifies the innovation ability as ability to syndicate innovation, ability to improve successful hit rates, ability to increase innovation initiatives, ability to productize more cost-effectively.

Cohen & Levintal (1990) argument the organization ability to aware of the newness, external information, assimilating, and implementing it to commercial is the important thing in the innovation ability. They call it as absorptive capacity and this is related to the level of prior related knowledge. Absorptive capacity is also can't be separated from the abilities of individual and organizational level. Further they said that the ability to exploit external knowledge is an important in the innovation ability.

H2: IT support for KM has a positive impact to knowledge sharing.

Knowledge Sharing

According to kamus.net (dictionary), sharing is a using or enjoying something jointly with others. Consequently, sharing is an important thing in the organization. Knowledge management is aimed to improve the effectiveness of activity values via knowledge transfer and sharing in the inter-organizational scope (Yang, 2011).

Knowledge sharing and firm innovation is important element to effort the sustainability competitive advantage (Liao, 2006). Knowledge sharing also can be supported by information systems (Choi et al., 2010), and other factors or non information systems (Liao, 2006). For competitive advantage, organization must be able to improve the performance continuously. The improving of performance can be attained by firm innovation.

Liao (2006) investigates the relationship of learning organization, knowledge sharing behavior, and firm innovation. Choi et al. (2010) investigate IT support, knowledge sharing, and team performance. Liao's research (2006) doesn't include the supporting factor as information technology also it doesn't include performance, so there is a gap or lack. In other side, Choi et al. (2010) don't include firm innovation however their study result indicates the impact of knowledge sharing to the performance is mediated by knowledge application. We

suppose that firm innovation role is like knowledge application in mediating the relationship of knowledge sharing and firm performance.

Knowledge sharing refers to individual behaviors that voluntarily contribute to share their unique knowledge or experience to other actors (internal and external organization) (Hansen & Avital, 2005; Mogotsi *et al.*, 2011). They characterize two things: first, knowledge sharing raise among individual, this difference from knowledge transfer that raise among two entities in large organization like among departments or organizations. Second, knowledge sharing is voluntary activities.

Kleanthous (2007) argues that in the community knowledge sharing need specify supporting tailored to the all community requirements and not only tailored based on individual interesting. Knowledge sharing in the communities can be characterized as: 1) *transactive memory* (TM) related to memory system of individual and community. 2) *Shared mental models* (SMM) is knowledge understanding of the relevant key elements and the process in the community scope. 3) *Cognitive consensus* (CCs) is the conceptual sharing among member and understanding sharing about the meaning of that concepts. 4) *Cognitive centrality* (CCen) is the judgments of the importance of individual and community contribution.

In realizing innovation, organization is not only need knowledge creation but also how to assimilate knowledge sharing among co-worker (Yang, 2011). It can be interpreted when organization success to integrate internal and external knowledge, the impact is organization can create knowledge for innovation.

Spencer (2003) gives evidence that organization which includes knowledge management in the innovation system give better innovation than organization who doesn't include. Indeed, knowledge sharing is done which business competitors.

Based on the reasoning above, we can state if organization is able to manage the knowledge then it will support the effort to realize the innovation. Knowledge sharing is a key in the knowledge management, so if knowledge sharing is effectively implemented in the organization it will give a positive motivation to create firm innovation.

H3: knowledge sharing has positive impact to the firm innovation.

Firm Innovation

Liao (2006) used operational definition of innovation as the generation, acceptance, and implementation of new ideas, processes, products, or services. The source of innovation can be categorized into: values from internal, values from external, universities and laboratories, competitor and industry, and countries and regional (Geenhuizen & Indarti, 2006).

Choi et al., (2010) state that knowledge sharing will improve the performance through the process of knowledge application. We suppose that knowledge application can be actualized by the raising of innovation. So, knowledge sharing will give a positive impact to the performance if mediated by innovation. In other word, innovation will have a direct positive impact to the performance.

H4: firm innovation has a positive impact to the firm performance.

RESEARCH METHOD

Sampling and Data Collection

The population is bank managers in the East Java-Indonesia. Sample is middle manager of each bank. A mail post survey is conducted by self administrated, 1007 questioners are distributed. Obtained data is 141 questioners back, it give about 14% response rates.

Middle managers are chosen because they are predicted familiar with information technology, need communication with other managers, and have a responsibility to its own business unit. The responsibility triggers the manager motivation to innovate in their business. However, there are some questioners fulfilled by bank staff (non-manager). We use this data to give deeper understanding of the situation.

Instrument

All variables are measured by 7 point Likert-Scale. 'Shared vision', 'open mindednes', 'trust', 'firm innovation' are measured using instruments that referred to Liao (2006). 'IT support for knowledge management', 'knowledge sharing' and 'firm performance' instruments are referred to Choi et al. (2010).

We have a technical problem of product innovation indicator when distribute questioners. We continue the analysis and predict that in the bank sector or other service firms has insignificant product innovation. In other words, the product is routine, but the method and implementation system is continuing innovated.

By the data of this research, the instrument is validated by dimension reduction and reliability test by SPSS software. All variables are indicated have loading factor >0.6 , or in range of 0.684 – 0.900 and no cross loading. This loading factor value indicates the instruments have a good convergent validity. Cronbanch's Alpha shows value > 0.7 , or in range of 0.771 – 0.861, indicates the all variable instruments have reliability.

Tools of Analysis

The data is analyzed by component based SEM which SmartPLS software version 2.0. This analysis results a predicted relationship of each paths. The standardized coefficient and

the t significance indicate the impact power of the variables. The hypotheses are concluded by the t significance of the paths.

RESULT AND ANALYSIS

Demography

We indicated that some instrument we fulfilled by non-managers or staffs. So, we categorize the respondent by the managers and staffs. The questioners back indicates that 107 (76%) are managers and 34 (24%) are staffs. The respondent is dominated of male by 65%. The most respondents are 41-50 years of old. The diploma education is the first rating of the respondent education by 74%. This demography data can be seen in **table-1: demography**.

Data Evaluation / Preliminary Analysis

Table-2 shows a compare means and variance analysis. The main analysis is focused on job position. The job position of respondent indicates the differences in their perception of open mindedness, trust, knowledge sharing, and performance. The middle managers show a higher perception of these things. Based on this result, we divide the next analysis into two categorized: managers and non-managers.

Other variance analysis is in the context of gender, years of old and educational background. Gender don't make a significant difference, except in their shared vision, male has a higher value in shared vision. Years of old exactly don't make any differences. Among generation of employees have the same perception. Educational background doesn't make a significant difference in knowledge sharing, but it makes difference in the innovation and performance perception. The majority of respondents are come from diploma educational background, but these respondents have lower value than graduate background. Other side, the doctoral background shows the lowest value.

We also check the validity of each indicator through its loading factors from the model test by SmartPLS software. By overall data and all variables indicates that loading factors is in range 0.636 – 0.901. Consequently, no indicator is dropped. The result test also indicates no cross loading.

Results and Hypotheses Testing

The result of the research model testing can be seen in **table-3 of appendix-3**. The respondent agrees that is the most powerful to raise the knowledge sharing behavior. But, they haven't agreed that IT support make knowledge sharing run well. In the theory IT support make knowledge sharing run well, but in practice or in the respondent of this study context they feel unclear of the role IT to the knowledge sharing. Other side, they agree too that knowledge sharing can improve the firm innovation and firm performance.

We conclude the hypotheses which the result focused on manager data category (**Table-3: D2**). Hypothesis-1 predicts a positive impact of learning organization to the knowledge sharing activity. This hypothesis divides into three subs. Hypothesis-1a predicts a positive significant impact of shared vision to the knowledge sharing. The result shows a path coefficient value 0.197 ($t=1.858$; sig.: 10%). The result indicates that shared vision have a positive impact to the knowledge sharing. But, this impact hasn't been most powerful to raise knowledge sharing activity in bank sector. However, we can conclude that **H1a is supported**.

Hypothesis-1b predicts a positive impact of open-mindedness to the knowledge sharing. The result shows coefficient value 0.093 ($t=0.955$). This result indicates an insignificant impact. So we conclude that **H1b is unsupported**. Next is Hypothesis-3, it predicts a positive impact of trust to knowledge sharing. All data category indicate a significant impact of trust to knowledge sharing by significance level $<1\%$. We conclude that trust has significant positive impact to the knowledge sharing, so **H1c is supported**.

Hypothesis-2 predicts a positive impact of IT support for KM to the knowledge sharing. Ironically, all data category has insignificant impact of IT support for KM to the knowledge sharing. We can conclude that **H2 is unsupported**. Further analysis and discussion is given in the next section.

Hypothesis-3 predicts that knowledge sharing has a positive impact to the innovation. All data category indicates an agreement of this statement (sig < 1%). We conclude that **H3 is supported**. Finally, Hypothesis-4 predicts that firm innovation has a positive impact to the firm performance. This statements has become the general agreement, all data category indicates a significant impact (sig. < 1%) of innovation to the performance. So, we conclude that **H4 is supported**.

Further Analysis and Alternative Model

This study indicates an un-significant impact of IT support for knowledge management to the knowledge sharing. Look back to the Choi et al.'s study (2010) they give evidence that IT support for KM also have a direct impact to the knowledge application. The knowledge application is sound like innovation in this study. Also we remember to Geenhuizen & Indarti (2006) that said the source of innovation can be from the internal values, external values, universities and laboratories, competitor and industry, and countries and regional. Information technology can be an enabler and can be used to absorb the values from internal or external organization. In the situation respondent view IT support for KM as an information technology. Authors suppose that IT haven't been wider sharing tool facilitation in the organization, may the member of organization perceived information technology as an enabler for innovation.

By the reasoning above, we modify an alternative model to explain the finding of this study. In this situation, and in the commercial banking context which our respondent exist, we

draw the Model-B: Alternative model of role sharing knowledge and information technology.

The model-B can be seen in **figure-1 of appendix 2**.

The result of alternative model can be seen in the **table-4 of appendix-3**. In this case, the role of IT is more visible. There is a significant impact of IT support for KM to the innovation for all data categories (sig. <1%). It can be seen too that non-manager view higher perception of IT can make innovation. But, non-managers haven't known or aware the role of knowledge sharing to the innovation. After the path of IT is moved from knowledge sharing to the innovation the role of knowledge sharing to the innovation become lower than before. It draws a figure that the role of IT is important, but in the bank sector where the respondent existing they feel unclear by the role of IT. Other factor supposed that they haven't been familiar to use IT as a sharing tool. Maybe they share by a manual system or face to face or older communication facility.

Findings, Implications and Discussion

Table-2 of mean comparison shows a difference occurs in the perception of managers and non-managers when they perceive about open mindedness, trust, knowledge sharing, and performance. Managers show a higher value of these things. This finding shows that manager more aware to the presenting of knowledge sharing and need to share among member. We suppose that the responsibility of manager to guide the employees and communicate to other managers make they open mind of knowledge sharing. In fact the staff is conducted to follow the rules or supervisor instruction and they busy of their operational activity, this situation make the staff feels no much time to share.

The differences also occur in the educational background. The diploma background shows lower value than graduate background. This situation may indicate that individual who has diploma background still has the limitation and awareness about the context of innovation

and performance. Diploma education is supposed give an application or practically expert in the education materials. So, the awareness of un-seen innovation or performance is lower than higher educational background. The other implication is the managers which diploma education background needs more training on managerial and performance measurement.

When we test the relationship of antecedent of knowledge sharing (showed in the Model), we find that trust is dominant factor agreed by managers and non-managers. They need a trusting when they consider of sharing information to others. This research use trust as a trust of individual who share information to their supervisor or other persons. Trust make an enjoyment to share without fear of lost benefit or fear of receiving punishment because of information they socialize.

Shared vision is important to managers to leverage their willingness to share knowledge. They need a clear objective or purpose of sharing, if organization need information to support organization goal, they will share. Further, we can view of two factors trust and clear objective of sharing indicates that people has a carefulness when they consider the decision to share information. They also consider the cost and benefit when they share information.

By the model, we also indicate that IT support for knowledge management doesn't have a direct impact to the share knowledge (Model-A), but it has a direct impact to the firm innovation (Model-B). We suppose two reasoning of this situation, first, the respondents view IT support for knowledge management as an IT in general purpose, or they don't aware of a specify IT to share knowledge. Second, the experience of individual in the organization conducts to perceive that IT is an enabler or supporter to make and implement the innovation.

CONCLUSSION AND LIMITATION

There is a difference perception of level management by managers and non-managers to the knowledge sharing activity. When we test the relationship of learning organization we find that trust is dominant factor in knowledge sharing consideration. Shared vision is important factors for the managers in the knowledge sharing activity. However, we find that open mindedness is important in non-managers perception.

First we hypothesize that IT support knowledge management has a direct impact to the knowledge sharing, but after we know the result, the fact of the data indicate that IT support for knowledge management has a direct effect to the firm innovation. We suppose it is depended on how is the situation of IT implementing in the organization. The implementing of IT makes a familiarity of using and affecting the user perception. If members of organization haven't familiar with the knowledge sharing form and IT knowledge sharing facilitations tool, they may view IT as in general purpose or not specify as a supporter for knowledge management.

The readers must consider the limitation of this study when judge the result, first this study is conducted from commercial bank in East Java Indonesia area by metropolis and non-metropolis city. This research is dominated by respondent who have a diploma educational background, even they are managers but we suppose that level of education give an effect to their rationality.

The next research can investigate in the context of metropolis or non-metropolis groups, or by the differences of facilitations that bank provide. The research also can investigate the characteristic of knowledge sharing in the level of management. We predict that the higher level of management wills more intent to share knowledge.

References

- Andriole, S.J. 2010. Business Impact of Web 2.0 Technologies. *Communication of the ACM*. Vol 53, No 12.
- Choi, S.Y.; H. Lee; Y. Yoo. 2010. The Impact of Information Technology and Transactive Memory Systems on Knowledge Sharing, Application, and Team Performance: A Field Study. *MIS Quarterly*. Vol. 34 No. 4 pp 855-870.
- Cohen, W.M.; D.A. Levinthal. 1990. Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*. Vol 35, No 1.
- Fey, C.F.; P. Furu. 2008. Top Management Incentive Compensation and Knowledge Sharing in Multinational Corporations. *Strategic Management Journal*. 29: 1301 – 1323.
- Geenhuizen, M.V.; N. Indarti. 2006. Knowledge and Innovation in the Indonesian Artisanal Furniture Industry. *European Regional Science Association (ERSA)*.
- Gounaris, S. and S. Dimitriadis. 2003. Assessing service quality on the web: evidence from business-to-consumer portals”, *Journal of Services Marketing*, Vol. 17, No. 5, pp. 529-548.
- Grossman, Lev. 2006. You – Yes, You – Are TIME’s Person of the Year. *Time*. December 25, 2006.
- Hansen, S. and M. Avital. 2005. Share and Share Alike: The Social and Technological Influences On Knowledge Sharing, *Sprouts: Working Papers on Information Systems*, 5(13), 1 – 19.
- Kleanthous, S. 2007. Semantic-Enhanced Personalised Support for Knowledge Sharing in Virtual Communities. *LNAI 4511*. Pp 465-469.
- Liao, LF. 2006. A Learning organization perspective on knowledge-sharing behavior and firm innovation. *Human Systems Management*. Vol 25 pp. 227-236
- Mogotsi, C; J.A. Boon; L. Fletcher. 2011. Modelling the Relationship between Knowledge Sharing, Organisational Citizenship, Job Satisfaction and Organisational Commitment among School Teachers in Botswana. *African Journal of Library, Archives & Information Science*. Vol 21. No 1.
- Spencer, J.W. 2003. Firms’ Knowledge-Sharing Strategies in the Global Innovation System: Empirical Evidence from the Flat Panel Display Industry. *Strategic Management Journal*. 24: 217-233.
- Turban, E.; D. King; P. Marshall; J. Lee and D. Viehland. 2008. *Electronic Commerce: A Managerial Perspective*. Pearson Educational International. New Jersey.
- Yang, D. 2011. How does Knowledge Sharing and Governance Mechanism Affect Innovation Capabilities? – From the Coevolution Perspective. *International Business Research*. Vol. 4, No. 1, January 2011.

Appendix 1: Survey Instruments

Shared Vision

No	Item	Notes
1	There is a commonality of purpose in my organization.	Commonality of purpose
2	There is total agreement on our organization vision across all levels, functions, and divisions.	Total agreement of vision
3	All employees are committed to the goals of this organization	Committed to the goal
4	Employees view themselves as partners in charting the direction of the organization	Partnership

Open-Mindedness

No	Item	Notes
1	We are not afraid to reflect critically on the shared assumption we have made about our customers.	Reflection
2	Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned	Continually questioned the perception
3	We always collectively question our own bias about the way we interpret customer information	Reducing bias of interpretation
4	We continually judge the quality of our decisions and activities taken over time.	Continually judge the quality

Trust

No	Item	Notes
1	My supervisor shows complete trust in employees' ability to perform their job well	Supervisor's trust
2	I feel free to discuss problems or negative feelings with my supervisor	Free to discuss
3	Within reason, people in organization can say what they want without fear of punishment.	Free of punishment

IT Support for KM

No	Item	Notes
1	Our organization is provided with IT support for collaborative work regardless of time and place	IT for collaboration
2	Our organization is provided with IT support for communicating among team members	IT for communication
3	Our organization is provided with IT support for searching and accessing necessary information	IT for searching
4	Our organization is provided with IT support for systematic storing	IT for storing

Knowledge Sharing

No	Item	Notes
1	Our organization members share their work reports and official documents with other team members	Sharing of work and documents
2	Our organization members provide their manuals and methodologies for other team members	Sharing of manuals and methodologies
3	Our organization members share their experience or know-how from work with other team members	Sharing of experience

Firm Innovation

No	Item	Notes
1	Our organization frequently tries out new ideas	New ideas
2	Our organization seeks out new ways to do things	New ways
3	Our organization is creative in its methods of operation	New methods

Firm Performance

No	Item	Notes
1	Our organization deliverables were of excellent quality	Excellent deliverables
2	Our organization managed time effectively	Time effectively
3	Our organization met important deadlines on time	On time

Appendix 2: Research Model

Figure 1: Model-A: Organizational Roles of Knowledge Sharing and IT Model

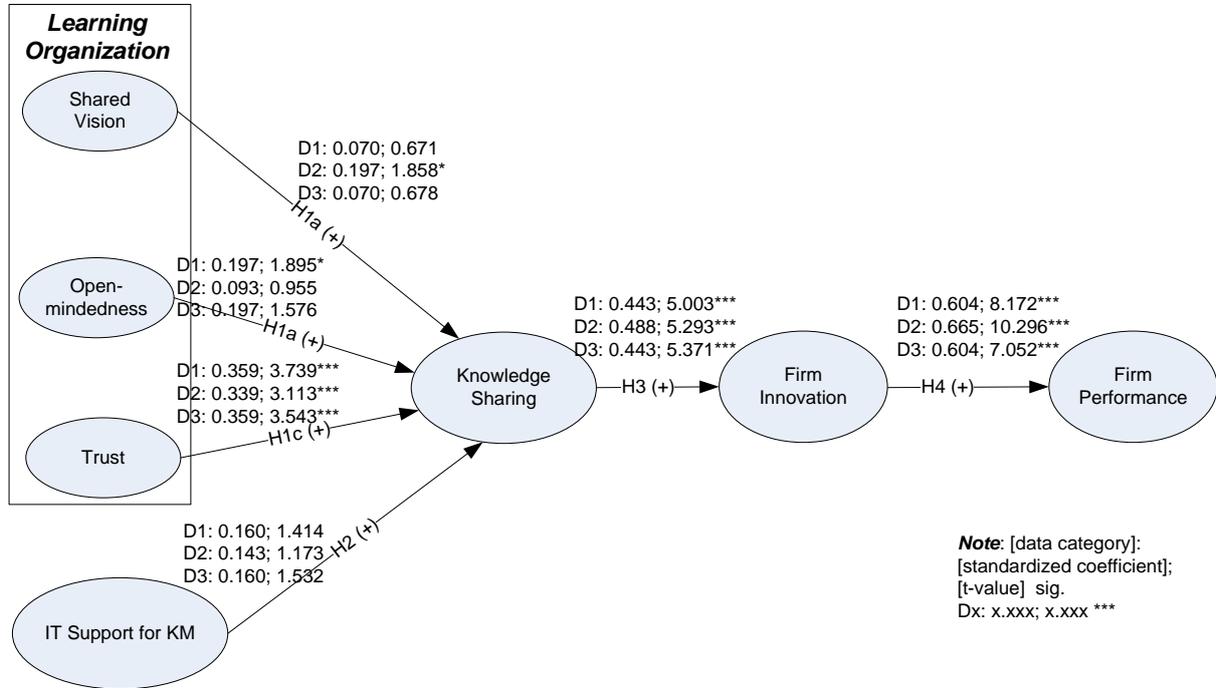
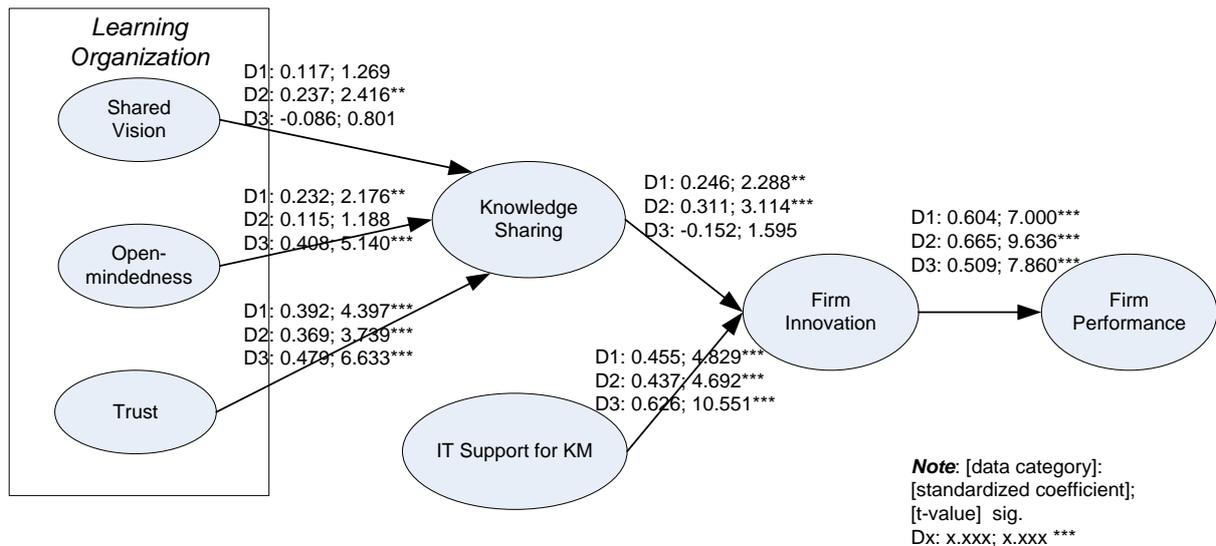


Figure 2: Model-B: Alternative Model of Organization Roles of Knowledge Sharing and IT



Appendix 3: Research Results

Table 1: Demography

Categories	Counting	%
N	141	
Position		
Middle Manager	107	76%
Staff	34	24%
Gender		
1) Male	91	65%
2) Female	50	35%
Years of old		
1) 21 - 30	34	24%
2) 31 - 40	46	33%
3) 41 - 50	52	37%
4) 51 - 60	9	6%
Educational		
1) Senior High	8	6%
2) Diploma	105	74%
3) S1: graduate	21	15%
4) S2: master	1	1%
5) S3: doctoral	6	4%

Table 2: Compare Means and Anova

Compare Means and ANOVA (value range: 1 - 7)

Categories	Shared	Open	Trust	IT Supp.	Know. Share	Innovation	Perform.
Position							
0) Staff	5.904	5.493	5.293	5.721	4.863	5.392	5.931
1) Midle Manager	5.846	5.874	5.635	5.958	5.327	5.941	5.891
F	0.163	6.915	3.480	2.369	5.189	11.572	0.068
Sig.	.687	.010	.064	.126	.024	.001	.795
		***	*		**	***	
Gender							
1) Male	5.962	5.816	5.560	5.956	5.333	5.853	5.905
2) Female	5.675	5.720	5.539	5.800	5.000	5.727	5.893
F	5.052	.524	.015	1.271	3.320	.715	.007
Sig.	.026	.470	.904	.262	.071	.399	.933
	**				*		
Years of Old							
1) 21 - 30	5.779	5.713	5.461	5.794	5.264	5.764	5.980
2) 31 - 40	5.783	5.668	5.608	5.815	5.073	5.790	5.884
3) 41 - 50	5.909	5.870	5.544	5.962	5.282	5.769	5.820
4) 51 - 60	6.278	6.111	5.664	6.389	5.370	6.296	6.147
F	1.364	1.265	.203	1.670	.438	1.061	.616
Sig.	.257	.289	.894	.176	.726	.368	.606
Educational							
1) Senior High	6.250	6.083	5.775	6.083	4.888	5.722	5.945
2) Diploma	5.469	5.344	5.249	5.531	4.956	5.333	5.624
3) S1: graduate	5.893	5.840	5.593	5.960	5.273	5.892	5.996
4) S2: master	5.798	5.619	5.459	5.702	5.173	5.698	5.619
5) S3: doctoral	4.500	4.750	4.330	5.750	4.000	3.670	3.670
F	1.992	1.841	.817	1.011	.686	2.690	3.729
Sig.	.099	.125	.517	.404	.603	.034	.007
	*					**	***

*** sig. 1%, ** sig. 5%, * sig. 10%

Table 3: Standardized Coefficient and Hypotheses Testing

Endogen	Exogen	Hyp.	Pred.	(D1) All Data			(D2) Managers			(D3) Non-Managers		
				Coeff.	t	sig.	Coeff.	t	sig.	Coeff.	t	sig.
Knowledge Sharing	<-- Shared Vision	H1a	+	.070	.671		.197	1.858	*	.070	.687	
Knowledge Sharing	<-- Open Mindedness	H1b	+	.197	1.895	*	.093	.955		.197	1.576	
Knowledge Sharing	<-- Trust	H1c	+	.359	3.739	***	.339	3.113	***	.359	3.543	***
Knowledge Sharing	<-- IT Support	H2	+	.160	1.414		.143	1.173		.160	1.532	
Innovation	<-- Knowledge Sharing	H3	+	.443	5.003	***	.488	5.293	***	.443	5.371	***
Performance	<-- Innovation	H4	+	.604	8.172	***	.665	10.296	***	.604	7.052	***
R²												
Knowledge Sharing				0.392			0.369			0.392		
Innovation				0.196			0.238			0.196		
Performance				0.364			0.442			0.364		

*** sig. 1%; ** sig. 5%; * sig. 10%

D1: tested by all data; D2: Tested by managers data only; D3: tested by non-managers data

Table 4: Standardized Coefficient of Model-B

Endogen	Exogen	Pred.	(D1) All Data			(D2) Managers			(D3) Non-Managers		
			Coeff.	t	sig.	Coeff.	t	sig.	Coeff.	t	sig.
Knowledge Sharing	<-- Shared Vision	+	.117	1.269		.237	2.416	**	-.086	.801	
Knowledge Sharing	<-- Open Mindedness	+	.232	2.176	**	.115	1.188		.408	5.140	***
Knowledge Sharing	<-- Trust	+	.392	4.397	***	.369	3.739	***	.479	6.633	***
Innovation	<-- Knowledge Sharing	+	.246	2.288	**	.311	3.114	***	-.152	1.595	
Innovation	<-- IT Support	+	.455	4.829	***	.437	4.692	***	.626	10.551	***
Performance	<-- Innovation	+	.604	7.000	***	.665	9.636	***	.509	7.860	***
R²											
Knowledge Sharing			0.376			0.355			0.472		
Innovation			0.365			0.399			0.322		
Performance			0.365			0.442			0.260		

Curriculum Vitae

A. Ketua Penelitian

Keterangan Diri

Nama : Theresia Purbandari, S.E., M.Sc.
NIDN : 0710117601
Tempat, Tanggal Lahir : Jakarta, 10 November 1976
Jenis Kelamin : Laki-laki Perempuan
Golongan / Pangkat : III.c/Penata
Jabatan Akademik : Lektor
Perguruan Tinggi : Unika Widya Mandala Madiun
Alamat : Jl Manggis No. 15-17 Madiun 63131
Telp./Faks. : (0351) 453328; (0351) 453167
Alamat Rumah : Perumnas I Manisrejo Jl Megomanis IA No 15 Madiun 63138
Telp./Faks. : (0351) 456988
Alamat e-mail : theresia@staff.widyamandala.ac.id

Riwayat Pendidikan

Jenjang Pendidikan	Lulus Dari	Tahun
Sarjana Strata 1	Jurusan Akuntansi, Fakultas Ekonomi Universitas Atma Jaya Yogyakarta	2001
Sarjana Strata 2	Jurusan Akuntansi, Fakultas Ekonomika dan Bisnis Universitas Gadjah Mada Yogyakarta	2010

Pengalaman Penelitian dalam 5 Tahun terakhir

Tahun	Judul Penelitian	Ketua/anggota Tim	Sumber Dana
2011	Faktor Teknologi dan Non-Teknologi dalam Kaitannya dengan Berbagi Pengetahuan untuk Meningkatkan Inovasi Organisasi dan Kinerja Organisasi	Ketua	Hibah Penelitian Dosen Pemula Kopertis VII Tahun 2011
2011	Perbedaan Persepsi Etis Mahasiswa terhadap Praktik Manajemen Laba (Studi pada Perguruan Tinggi Swasta se-Eks Kresidenan Madiun)	Ketua	LP3M Universitas Katolik Widya Mandala Madiun
2008	Manajemen Laba pada Perusahaan Besar dan Perusahaan Kecil dalam Periode Penawaran Saham Perdana di Bursa Efek Jakarta	Ketua	LP3M Universitas Katolik Widya Mandala Madiun

Pengalaman Publikasi Ilmiah dalam 5 Tahun Terakhir

A. Jurnal

Tahun	Judul	Penerbit/Jurnal
2012	Perbedaan Persepsi Etis Mahasiswa Akuntansi terhadap Praktik Manajemen Laba (Studi pada Mahasiswa Akuntansi Perguruan Tinggi Swasta di Eks-Karesidenan Madiun)	Jurnal Ilmiah Widya Warta, Universitas Widya Mandala Madiun, No. 01 Tahun XXXVI/ Januari 2012, ISSN 0854-1981 Halaman: 66-83
2011	Pengaruh Dukungan Teknologi Informasi untuk Pengelolaan Pengetahuan terhadap Berbagi Pengetahuan pada Perbankan di Jawa Timur	Working Paper: Jurnal Ekonomika Kopertis 7 Jawa Timur
2010	Pengaruh Ekspektasi Kinerja, Ekspektasi Usaha, dan Pengaruh Sosial terhadap Intensi Penggunaan <i>Website</i> Perusahaan Publik	Jurnal Ilmiah Ilmu-Ilmu Sosial dan Humaniora, Kopertis Wilayah VII Jatim, Vol 7, Nomor 1, Juni 2010, ISSN: 1693-8925, Halaman 29-34
2010	Pengaruh Umur dan Pengalaman Berinvestasi terhadap Hubungan antara Faktor-Faktor yang Mempengaruhi Intensi Penggunaan <i>Website</i> Perusahaan Publik	Jurnal Ilmiah Widya Warta, Universitas Widya Mandala Madiun, No. 02 Tahun XXXV/ Juli 2010, ISSN 0854-1981 Halaman: 203-215
2009	Laporan Arus Kas: Sejarah Perkembangan Penggunaan Metode Langsung dan Tidak Langsung	Jurnal Ilmiah Widya Warta, Universitas Widya Mandala Madiun, No. 02 Tahun XXXIII/ Juli 2009, ISSN 0854-1981 Halaman: 152-161
2007	Manajemen Laba: Perspektif Ekonomi dan Perspektif Etika	Jurnal Ilmiah Widya Warta, Universitas Widya Mandala Madiun, No. 02 Tahun XXXI/ Juli 2007, ISSN 0854-1981 Halaman: 32-42
2003	Analisis Biaya Kualitas untuk Pengendalian Kualitas Makanan (Studi Kasus pada Hotel Melia Purosani Yogyakarta)	Jurnal Ilmiah Widya Warta Universitas Widya Mandala Madiun No. 01 Tahun XXVI/ Januari 2003, ISSN 0854-1981 Halaman: 32-42

B. Makalah dalam *Proceeding*

Tahun	Judul	Penyelenggara
2012	The Organizational Roles of Knowledge Sharing and Information Technology in the Commercial Banking Sector	Working paper: reviewed process: Seminar Nasional Akuntansi (SNA) XV Banjarmasin Banjarmasin
2010	Intensi Penggunaan <i>Website</i> Perusahaan Publik dalam Proses Pengambilan Keputusan Investasi oleh Investor Individual	Universitas Katolik Widya Mandala Surabaya, 25 November 2010

Madiun, 25 Mei 2012
Yang menyatakan,

(Theresia Purbandari, S.E., M.Sc.)
NIDN: 0710117601

B. Anggota Penelitian

Keterangan Diri

Nama : Mujilan, S.E., M.Sc.
NIDN : 07-0206-7703
Tempat dan Tanggal Lahir : Sleman, 02 Juni 1977
Jenis Kelamin : Laki-laki Perempuan
Golongan / Pangkat : III.a/Penata Muda
Jabatan Akademik : --
Perguruan Tinggi : Unika Widya Mandala Madiun
Alamat : Jl Manggis No. 15-17 Madiun 63131
Telp./Faks. : (0351) 453328; (0351) 453167
Alamat Rumah : Jl. Prakatambi 11 Madiun
Telp./Faks. : HP 085735010301
Alamat e-mail : agusmuji@staff.widyamandala.ac.id

Riwayat Pendidikan

Jenjang Pendidikan	Lulus Dari	Tahun
Sarjana Strata 1	Jurusan Akuntansi, Fakultas Ekonomi Unika Widya Mandala Madiun	2003
Sarjana Strata 2	Jurusan Ilmu Akuntansi, Fakultas Ekonomika dan Bisnis Universitas Gadjah Mada Yogyakarta	2012

Pengalaman Penelitian dalam 5 Tahun Terakhir

Tahun	Judul Penelitian	Ketua/anggota Tim	Sumber Dana
2009	Posisi Sistem Informasi sebagai Aktiva dan Biaya pada Pelaporan Keuangan	Mandiri	Mandiri
2011	Penerapan UML dalam Perancangan Sistem Informasi Akuntansi (Studi Kasus pada LKK Mojorejo Madiun)	Mandiri	LP3M Universitas Katolik Widya Mandala Madiun
2011	Niat Penggunaan Layanan Internet Banking: Modifikasi Model berdasar Karakteristik Kualitas dan Risiko	Mandiri (Thesis)	APTIK Jakarta
2011	Faktor Teknologi dan Non-Teknologi dalam Kaitannya dengan Berbagi Pengetahuan untuk Meningkatkan Inovasi Organisasi dan Kinerja Organisasi	Anggota	Hibah Penelitian Dosen Pemula Kopertis VII Tahun 2011

Pengalaman Publikasi Ilmiah dalam 5 Tahun Terakhir

A. Jurnal

Tahun	Judul	Penerbit/Jurnal
2010	Posisi Sistem Informasi sebagai Aktiva dan Biaya pada Pelaporan Keuangan	Jurnal Ilmiah Widya Warta; Juli 2009
2011	Pengaruh Dukungan Teknologi Informasi untuk Pengelolaan Pengetahuan terhadap Berbagi Pengetahuan pada Perbankan di Jawa Timur	Working Paper: Jurnal Ekonomika Kopertis 7 Jawa Timur

B. Makalah dalam *Proceeding*

Tahun	Judul	Penyelenggara
2012	Internet Banking Using Intention: a Model Modification Based on Quality and Risk Characteristics	Accepted Paper: <i>Airlangga Accounting International Conference (AAIC) 2012, Bali</i>
2012	Users' Intention in Internet Banking Adoption: Risk and Quality Demand Matching	Working paper: reviewed process: Seminar Nasional Akuntansi (SNA) XV Banjarmasin
2012	The Organizational Roles of Knowledge Sharing and Information Technology in the Commercial Banking Sector	Working paper: reviewed process: Seminar Nasional Akuntansi (SNA) XV Banjarmasin

Madiun, 25 Mei 2012

Yang menyatakan,

(Mujilan, S.E., M.Sc.)

NIDN: 0702067703