Jurnal Teknik Industri, Vol. 12, No. 2, Desember 2010, 81-88
ISSN 1411-2485

Assessing the Impact of IT Competency on Organizational Learning Capability of Indonesian Manufacturing Firms

Alizar Hasan[1]

Abstract: This paper attempt to assessing the impact of IT competency on organizational learning capability by using the measurement scale that have been developed by Tippins *et al.* and Gomes *et al.* These studies cover a sample of 192 manufacturing firms. IT competencies are classified into three dimensions: IT knowledge, IT operations, and IT objects, and organizational learning capability are classified into four dimensions: Managerial commitment, System perspective, Openness and experimentation, and Knowledge transfer and integration. The result of factor analysis on IT competency and Organizational learning capability show that all items have high loading only on a single factor with ranging from .60 to .84. The findings revealed that IT competency positively and significantly influences the organizational learning capability of Indonesian manufacturing firms.

Keywords: IT Competency, organizational learning capability.

Introduction

The development of Indonesian information technology has supported the growing implementation of organizational learning and knowledge management in every Indonesian company (Yuliazmi [22]). Furthermore, the concept of IT competency is also defined as the shared IT capability that enables the flow of knowledge in organization to be supported (Gold *et al.* [7]). It includes a set of technological resources, both hardware and software applications, which enable us to conceptualize organizational learning as the capability of an organization to process knowledge, In other word, to create, acquire, transfer and integrate knowledge, and modify its behavior to reflect the new cognitive situation, with a view to improving its performance (Gomez *et al.* [8]). Therefore, the number of Indonesian compa-nies that are interested in applying organizational learning and knowledge management increased every year after PT Dunamis intensively promoted the most admired knowledge enterprise (MAKE) award through the Indonesian companies that have succeeded in the application of organizational learning and knowledge management.

Few researches have investigated the relationship between IT competency and organizational learning capability in Indonesian manufacturing firms, therefore, this study will attempt to assessing the impact IT competency on organizational learning capability and research on such matter is very timely, as evidence that IT competency and organizational learning capability has been developing in Indonesian manufacturing firms.

Methods

Based on Tippin's definition, there are three important component of IT competency, namely IT knowledge, IT operation, and IT object. Cumulatively, the three dimensions of IT competency represent co-specialized resources (one resource has little or no value without another) that provide an indication of the organization's ability to understand and utilize IT tools and processes that are needed to manage market and customer information. Moreover, Scholars stated that it is important to conceptualize the IT construct based on theory of the resource-based view (RBV) and then to disaggregate this construct into meaningful sub-component (Melville *et al.* [14]). According to RBV, IT per se may not generate a sustainable advantage, because it can be commoditized through competitive imitation and acquisition. However, the advantages of IT can be protected by embedding it in an organi-zation through complementarity and co specializa-tions (Powell and Dent-Micallef [17]). Furthermore, Tippins and Sohi [21] stated that no one has examined how IT as a resource can be embedded in an organization and protected through co specialize-tion. Moreover, Tippins' classification is consistent with this concept commonly accepted by most scholars (Li *et al.* [12]). Therefore, this present research will adopt IT competency as independent variable from the Tippin's construct and will be measured by using five-point Likert scales.

[1,2] Faculty of Technique, Department of Industrial Engineering, Andalas University. Limau Manis, Padang 25163. Email: alizar_hasan@ft.unand.ac.id

Received 30th May 2010; revised1 25th June 2010; revised2 23rd July 2010; accepted 29th September 2010.

IT knowledge refers to specialized knowledge possessed by individuals: How well they understand fundamental IT concepts, how well informed they are about IT in their organization (Basselliar *et al.* [2]). Davenfort *et al.* [3] stated that knowledge is information combined with experience, context, interpretation, and reflection. In addition, knowledge possesses a tacit component that is difficult to quantify. Tippins and Sohi [21] possess a body of technical knowledge about objects such as computer based systems.

IT operations comprise activities that can be considered as the methods, skills, and process requireed for completing an important task. Technical operation is also thought of as a manifestation of technical knowledge in that the implementation of technical knowledge results in technical operation or skills. Tippins and Sohi [21] conceptualized IT operation as "the extent to which a firm utilizes IT to manage market and customer information".

IT object represents computer-based hardware, software, and support personnel. Moreover, Glazer [6] stated that IT object act as enablers and is largely responsible for the current increases in information production and dissemination. IT object can be as a tool, and technical object refer to artifacts which assist in the acquisition, processing, storage, dissemination, and use of information.

The literature offers various definitions of organizational learning depending from which perspective it is viewed. There are at least seven perspectives such as system perspective, tool perspective, structure perspective, cognitive mode perspective, network perspective, socialization perspective, and knowledge -based perspective (Liu [13]). The presence of these multiple perspective has been criticized by DiBella and Nevis [4], because the organizational learning is a chameleon like target. It means different things to different people. DiBella and Nevis [4] have built a more comprehensive framework that integrates these multiple perspective. They reveal their way of thinking about and building organizational learning capability that combines the insights of these diverse perspectives. Furthermore, Gomez *et al.* [8] proposed four conditions which are necessary to achieve the effective development of organizational learning capability and they are reflected into four dimensions such as managerial commitment, systems perspective, openness and experimentation, and knowledge transfer and integrations. In the context of organizational learning capability, although the four dimensions of organizational learning capability are different, they are related to each other. Moreover, all four components (knowledge transfer and integration, openness and experimentation, systems perspective, and managerial commitment) are necessary to be present in order to achieve the higher organizational learning capability.

The knowledge that is acquired and created on an individual level has to be transferred and integrated into the organization. Furthermore, the climate of openness is required to encourage the arrival of new ideas and points of view, both internal and external organization. Thus, the successes of integration depend on the presence of the common language and the shared vision by all the organization's members (system perspective). Then, organizational culture will play an important role, and its development will depend on management support (managerial commitment). Therefore, every one of the dimensions supports the firms to be high learning capability. Organizational learning can be classified as a dynamic process based on knowledge. Moreover, this process stems from the knowledge acquisition of the individuals and progresses with exchange and integration of this knowledge until a corpus of collective knowledge is created, embedded in the organizational processes and culture. This collective knowledge can be stored in the organizational memory. Therefore, organizational learning can be conceptualized as the capability of an organization to process knowledge such as to create, acquire, transfer, and integrate knowledge (Gomes *et al.* [8]). These four dimensions will be discussed in following section.

Managerial commitment states that management should recognize the relevance of learning, should articulate a strategic view of learning, should ascertain that the firm's employees understand the importance of learning, and should drive the process of change, taking the responsibility for creating an organization that is able to regenerate itself and face up to new challenges (Gomes *et al.* [8]).

Systems perspective make necessary to bring the members of organization together around a common identity. The various individuals, departments, and area of the firm should have a clear view of the objectives of organization and understand how they can help in their development Lei *et al.* [11]). The organization should be considered as a system that consists of different parts, and each part has its own function but act in a coordinated manner (Nevis *et al.* [15]).

In generating the openness climate, there needs to be a previous commitment to cultural and functional diversity, as well as a readiness to accept all types of opinions and experiences and to learn form them, avoiding the egocentric attitude of considering one's

own values, beliefs, and experiences to be better than the rest (Nevis *et al.* [15]). Openness to new ideas, coming from within the organization or from outside it, supports experi-mentation which is an essential aspect for generative learning, as far as it suggests that the search for innovative flexible solution to current and future problems, based on the possible use of different methods and procedures (Garvin [5]).

Knowledge transfer and integration relates to two closely linked processes, which occur simultaneously rather than successively: internal transfer and integration of knowledge. Furthermore, transfer implies the internal spreading of knowledge acquired at an individual level, mainly through conversations and interaction among individual. Moreover, integration guides to the creation of a collective body of knowledge rooted in organizational culture, work processes, and the remaining elements that form the organizational memory (Gomes *et al.* [8]).

The Relationship between ITC and OLC

Managerial commitment should reflect that the relevance of learning should be recognized by management, thereby, developing a culture that promotes the acquisition, creation, and transfer of knowledge as fundamental value (Garvin [5]; Nonaka and Takeuchi [16]). Moreover, IT provides the necessary mechanism for the acquisi-tion, creation, and transfer of knowledge. Huber [10] describes the following IT processes that contribute to organizational learning in term of knowledge acquisition, information distribution, and informa-tion interpretation. Learning occurs when an orga-nization acquires knowledge. Acquisition of declara-tive knowledge or facts and information is achieved by using IT capability to store, manage, and retrieve information carrying out research and development, carrying out education and training, patent watch-ing, and bibliometrics. Learning occurs not only due to knowledge acquisition from outside the organization but also due to the rearrangement of existing knowledge, the revision of previous knowledge structures, and the building and revision of theories. Furthermore, system perspective con-siders that the firm as a system implicitly involves recognizing the importance of relationships based on the exchange of information and services. This implies that organizational learning shared knowledge, perceptions and beliefs can be enhanced through system that supports communica-tion and discourse. Robey *et al.* [19] stated that information technologies can enhance organizational learning by providing communication and discourse among the organizational members. Supporting discourse implies more than providing electronic access to a centralized organizational memory. Therefore, new organizational knowledge is also generated through discourse.

The climate of openness that welcomes the arrival of new ideas and point of view, both internal and external, allowing individual knowledge to be con-stantly renewed, widened, and improved. Openness to new ideas, coming from within the organization or from outside it supports experimentation which is an essential aspect for generative learning (Garvin [5]). Furthermore, the genera-tive learning can be improved through encourage the employee trust, more open communication, and develop the information sharing. Therefore, the information sharing and open com-munication are expected to be increased by improvement IT capability. Since the improved IT capability will support communication, information sharing, and knowledge creation among members of an organization. Communication among members is essential to organizational learning (Ali and Pascoe [1]).

Transfer implies the internal spreading of know-ledge acquired at an individual level, mainly through conversations and interaction among individual or through fluid com-munication, dialogue, and debate. Fluid communi-cation relies mainly on the existence of agile information technology that guarantee the accuracy and availability of the information. Then, team learning places the group above the individual, allowing the transfer, interpre-tation, and integration of knowledge acquired individually. An emerging stream of research on IT and organiza-tional learning seeks to guide the application of technology that supports organizational learning. Moreover, it is expected that a firm that develops IT capability, is likely to enhance its ability to develop the organizational learning capability. Since one of the benefits of IT is that it enables organizational members to be more active in the information management process. Given the potential impact that IT competency has on the various organizational learning processes, the following hypothesis is set froth (Robey *et al.* [19]).

H1: The higher the IT competency of Indonesian company, the higher its organizational learning capability.

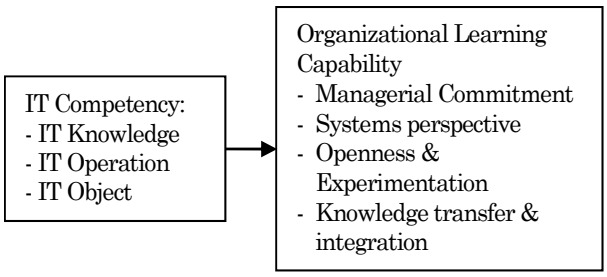

Figure 1. Theoretical Framework

Research Methodology

The present research will develop a model of IT business value in which the impact of IT on organizational learning capability as presented on Figure 1.

The population of this research consists of all large-sized companies in Indonesia. The target population for the study consists of manufacturing organizations in ISIC codes 26 (other non-metallic mineral products), 27 (basic metal) 28 (fabricated metal products, except machinery and equipment), 29 (machinery and equipment n.e.c), 30 (office, accountting, and computing machinery), 31 (electrical machinery and apparatus n.e.c), 32 (radio, television and communication equipment and apparatus), 33 (medical, precision and optical instruments), 34 (motor vehicles, trailers and semi-trailers).

The unit of analysis for this study is organization, since the organizational study commonly uses a single key informant namely chief executive officer (CEO). Moreover, chief executive officer (CEO) can be considered as appropriate key respondent based on two criteria namely: (a) CEO possess of sufficient knowledge about the issues under investigation (b) CEO has also adequate level of involvement with regard to the issues under investigation. Scholars stated that a good informant for this purpose had to be one who had access to all the issues under investigation (Tippin and Sohi [21]). The type of sampling design is the unrestricted probability sampling (random sampling techniques) in which the elements in the population have some probability of being selected as sample subject. The sample of 1000 respondents were drawn from the listing of all respondent in the population by using random number that computer generated (Sekaran [20]).

There were a total of 270 returned questionnaires of which 192 were usable for the purpose of this study. Therefore, the response rate of 19.79% can be considered to be reasonable.

This section will also describe the research variables, constructs instruments, sources, dimensions and items as well as the scale used in the measurement. Moreover, to implement IT competency and organizational learning capability as a latent multidimensional construct have to be reflected on their full significance that lies beneath their dimensions. Therefore, this research adopt IT competency as independent variable from the Tippin and Sohi [43] construct. IT competency consists of three co-specialized resources, namely, IT knowledge (ITK), IT operation (ITO) and IT object (ITOB). In this study the level of IT competency will be measured by using five-point Likert scales. Organizational learning capability can be viewed as dependent variable which is adopted from Gomez *et al.* [8] construct. These dimensions are managerial commitment (MC), systems perspective (SP), openness and experimentation (OPEX), and knowledge transfer and integration (KTINTEG). Five-point Likert scales were also used to operationalize the dimension of organizational learning capability.

Confirmatory factor analysis helps to assess the construct validity of a proposed measurement theory. Construct validity is the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measured. Therefore, it deals with the accuracy of measurement (Hair *et al.* [9]). The construct reliability tests are done by assessing the internal consistency of the items representing each construct using the Cronbach's coefficient alpha.

Multiple regression analysis is a statistical technique that can be used to analyze the relationship between a single dependent (criterion) variable and several independent (predictor) variables (Hair *et al.* [9]).

In this research, the six assumptions recommended by Hair *et al.* [15] for conducting factor analysis are as follows: (1) The Kaise-Meyer-Olkin measure of sampling adequacy (KMO) values must exceed.50. (2) The Barlett's test of sphericity is at least significant at .05. (3) The anti-image correlations of items is greater than .50. (4) The communalities of items must be greater than .50. (5) The minimum requirement of factor loading (The cut-off points chosen in a sample of about 150-200) .45 and above is considered significant based on .05 levels. (6) The eigenvalues is considered more than 1 for the factor analysis extraction.

Result and Discussion

With regard to goodness of measures, there are at least two important methods that are used in this study such as validity and reliability test. Furthermore, one of the ways in which the validity tests can be done is through quasi confirmatory factor analysis by testing each construct using Principal Component Analysis (PCA) separately with varimax rotation technique, and then the reliability tests are done by assessing the internal consistency of the items representing each construct using the Cronbach's coefficient alpha (Sekaran [20]).

Principal Component Analysis on ITC and OLC

Principal component analyses on IT competency were conducted on the 4 question IT knowledge, 6 question of IT operation and 5 question of IT object. Table 1. Show the results on 15 questions of IT competency. After running of the factor analysis on 15 items of IT competency emerged with three factors, KMO (.84), Bartlett's test of spehericity is significant (p=.00), Anti-image correlation is above .50, and Eigen value greater than 1. As shown in Table 1, the factor loadings are improved for almost every item with ranging from .60 to .81. Therefore, it can be claimed that the result of factor analysis on IT competency is now very well defined, representing three distinct groups of items that can be utilized in further analysis.

A principal component analysis was performed on the 16 items measuring organizational learning capability that is presented in Table 2. It resulted in four factors with KMO (.85), Bartlett's test of sphericity (p = .00) and anti-image above .50. After varimax rotation, all items have high loading only on a single factor with ranging from .61 to .84. Therefore, it can be claimed that the result of factor analysis on the organizational learning capability is now very well defined, representing four distinct groups of items that can be utilized in further analysis.

Reliability Analysis

Reliability is concerned with stability and consistency with which the instrument measures the concept and helps to assess the goodness of a measure. Moreover, the most popular test of interitem consistency reliability is the Conbrach's alpha. According to Sekaran [20], when the Cronbarch's coefficient alpha is less than .60, it is generally considered as poor, the coefficient alpha of.70 is considered to be acceptable, and those higher than. 80 are good. Table 3 presented the result of the reliability analysis, where all scales are shown at satisfactory levels of reliability with Cronbach's coefficient alpha much higher than the minimum threshold (Cronbach's alpha >.70). For example, IT competency have the Cronbach's alpha ranging from .89 to .74, Organizational learning capability have Cronbach's alpha ranging from .86 to .72.

Descriptive Analysis on ITC and OLC

As presented in Table 4, the mean values of IT competency variables ranged from 3.86 to 3.98 and the standard deviation ranged from .50 to .56. The figures for mean value showed that IT object had the highest mean score (3.98) compared to IT operation (3.94) and IT knowledge (3.86). This indicated that Indonesian firm manufacturing give more priority to IT object and IT operation rather than IT knowledge in establishing their IT competency.

The mean value of organizational learning capability dimensions presented in Table 4 showed that the mean scores ranged from 5.50 to 4.97 with standard deviation ranged from .48 to .57. In addition, both knowledge transfer and integration, and managerial commitment achieved the highest mean score (3.90), followed by openness and experimentations (3.88), systems perspective (3.71). Based on these finding, it has been found that Indonesian firm manufacturing in achieving the processing knowledge capability, they emphasized on the internal spreading of knowledge acquired at an individual level, mainly through conversations and interaction among individuals and then leads to the creation of a collective body of knowledge that form the organizational memory.

Correlation Analysis

The information that provides the direction, strength, and significance of bivariate relationships of all these variables can be found by using a Pearson correlation. Moreover, the problems associated with multicollinearity (very high inter-correlation between explanatory variable, above .80) can also be monitored in this correlation analysis. The results of inter-correlation variables of this study were displayed in Table 4. The results of Pearson correlation showed that three dimensions of IT competency are positively and significantly correlated with the four dimensions of organizational learning capability. For instance, correlation between: IT knowledge and knowledge transfer and integration (r=.31, p<.01), IT knowledge and openness and experimentations (r = .35, p < .01), IT knowledge and managerial commitment (r = .32, p <.01), IT knowledge and systems perspective (r =.31, p <.01), another, correlation between: IT operation and knowledge transfer and integration (r =.38, p <.01), IT operation and Openness and experimenttations (r=.37,p<.01), IT operation and managerial commitment (r=.45, p<.01), IT operation and systems perspective (r =.39, p <.01), last, correlation between: IT object and knowledge transfer and integration (r =.37, p <.01), IT object and openness and experimentations (r = .47, p < .01), IT object and managerial commitment (r = .35, p <.01), IT object and systems perspective (r =.30 , p <.01).

Table 1. Principal Component Analysis on ITC

Items	Component		
	1	2	3
IT knowledge (ITK)			
ITK1.	.13	.81	.08
ITK2.	.11	.80	.09
ITK3.	.17	.77	.15
ITK4.	.23	.73	.12
IT Operation (ITO)			
ITO1.	.77	.17	.12
ITO2	.80	.11	.08
ITO3.	.76	17	.16
ITO4	.75	.19	.17
ITO5.	.77	.07	.22
ITO6	.78	.15	.11
IT object (ITOB)			
ITOB1	.05	.15	.76
ITOB2	.02	.13	.77
ITOB3	.22	.15	.60
ITOB4	.20	.007	.65
ITOB5	.25	.05	.66
KMO (.84)			
Bartlett's test of sphericity (.00)			
Percentage Variance Explained	25.65	17.5	17.12
Eigenvalues	5.33	1.93	1.79

Table 2. Principal Component Analysis on OLC.

	Items	Component			
		1	2	3	4
KTINTEG	KTINTEG1.	.78	.30	.13	.05
	KTINTEG2	.79	.23	.12	.04
	KTINTEG3	.72	.27	.22	.13
	KTINTEG4	.84	.19	.04	.04
OPEX	OPEX1	.20	.75	.20	.07
	OPEX2	.32	.69	.19	.02
	OPEX3	.28	.76	.16	.10
	OPEX4	.20	.77	.23	.01
MC	MC1	-00	.20	.71	.01
	MC2	.25	-00	.69	.13
	MC3	.04	.20	.65	.03
	MC4	.15	.13	.61	.18
	MC5	.11	.18	.62	.05
SP	SP1	.02	.11	.13	.83
	SP2	.02	.00	.11	.83
	SP3	.15	.03	.05	.83
KMO (.85)					
Bartlett's test of sphericity (.00)					
Percentage Variance Explained		17.75	16.13	15.19	13.50
Eigenvalue.		5.32	2.04	1.58	1.05

Table 3. Reliability Analysis on ITC and OLC

Construct	Variables	Number of items	Cronbach's alpha
IT Competency	ITK	4	.82
	ITO	6	.89
	ITOB	5	.74
Organizational learning capability	KTINTEG	4	.86
	OPEX	4	.83
	MC	5	.72
	SP	3	.79

The Relationship between ITC and OLC

Table 5, showed the results of the regression equation testing the relationship between three dimensions of IT competency and four dimensions of organizational learning capability. On the whole, the model shows that the three dimension of IT competency (IT knowledge, IT operation, and IT object) jointly explained 22.0% of the variance of knowledge transfer and integration, 29.0% of variance of openness and experimentation, 26.0% of variance of managerial commitment, and 20.0% of variance of systems perspective. In addition, all the models were significant at 1% level (Sig. F=.000). Furthermore, the three dimensions of IT competency (IT knowledge, IT operation, and IT object) were positively and significantly associated with: Knowledge transfer and integration [IT knowledge (β=.15, p<.05), IT operation (β=.22, p<.01), and IT object (β=.24, p<.01)], openness and experimentation [IT knowledge (β=.19, p<.01), IT operation (β=.16, p<.05),and IT object (β=.35, p<.01)], managerial commitment [IT knowledge (β=.14, p<.05), IT operation (β=.33, p<.01),and IT object (β=.18, p<.05)], and systems perspective [IT knowledge (β=.16, p<.05), IT operation (β=.27, p<.01),and IT object (β=.14, p<.05)]. Thus it could now be concluded that the main hypothesis H1 and its corollary hypothesis (postulated a positive and significant relationship between all dimension of IT competency and dimension of organizational learning capability) were all accepted.

Discussion

This study is about the impact of IT competency on organizational learning capability in the context of Indonesian manufacturing firms. As reviewed, the value of IT can be enhanced when firms use IT to develop knowledge store about its customer, markets, and other factors that affect performance. Moreover, the role of knowledge as an important intangible resource for the firm has been recognized in the strategy literature (Nonaka and Takeuchi [16). Knowledge development is a part of organizationnal learning. Further, learning can be said to be more important in creating sustainable competitive advantage because it deals with the process of developing organizational capability.

Moreover, this finding also support the resource-based view of firm that explicitly recognizes the importance of organizational intangible such as organizational learning capability, organizational memory, knowledge asset, etc, have been indicated as the conversion effectiveness factor or intermediate process that mediates the relationship between IT competency and firm performance. Therefore, the

Table 4. Factor correlations, means and standard deviation

Variables	Means	S.D	IT1	IT2	IT3	OL1	OL2	OL3	OL4
IT knowledge (IT1)	3.86	.56	1.00						
IT operation (IT2)	3.94	.55	.38**	1.00					
IT object (IT3)	3.98	.50	.30**	.40**	1.00				
Knowledge transfer and Integration (OL1)	3.90	.57	.31**	.38**	.37**	1.00			
Openness and experimenttation(OL2)	3.88	.52	.35**	.37**	.47**	.60**	1.00		
Managerial commitment (OL3)	3.90	.48	.32**	.45**	.35**	.37**	.47**	1.00	
Systems perspective (OL4)	3.71	.56	.31**	.39**	.30**	.18*	.16*	.25**	1.00

Note: ** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)

Table 5. Multiple Regressions: IT Competency and Organizational Learning Capability

Independent variable	Dependent variable			
	KTINTEG	OPEX	MC	SP
	Beta (ß)			
ITK	.15**	.19***	.14**	16**
ITO	.22***	.16**	.33***	.27***
IT OB	.24***	.35***	.18**	.14**
R^2	.22	.29	.26	.20
Adjusted R^2	.21	.28	.24	.19
Sig F	.000	.000	.000	.000

Note. Significant levels :*** p<.01; ** p <.05; * p <.10

effectively building of organizational learning capability can lead to improvement in manufacturing firm performance.

The results of this study indicate that IT competency and organizational learning capability can be implemented together in Indonesian manufacturing firms and they are interrelated each other. The results also proved that the three dimensions of IT competency (IT knowledge, IT operation, and IT object) positively and significantly influence the four dimensions of organizational learning capability (knowledge transfer and integration, openness and experimentation, systems perspective, and managerial commitment). Therefore, recent literature suggest that organizational learning as intermediate process and also as organizational process that plays an important role to improve a firm's competitive advantage through enhancing the value IT (Tippin and Sohi [21]; Melville *et al.* [14]; Real *et al.* [18]; Lei *et al.* [11]).

Therefore, while developing IT competency, it is also strongly recommended that Indonesian manufacturing firms should be encourage to devote their efforts on enhancement of organizational learning capability considerations. Based on the findings of the study, the Gomez's recommendations [8] are offered here in order to achieve the effective development of organizational learning capability. Four conditions should be fulfilled. First, the firms should create a climate of openness that welcomes the new ideas or new concept, both coming from within and outside the firms, and support experimentation that implies the search for innovative flexible solutions to current and future problems. Second, the firms should spread the knowledge that acquires at an individual level through conversations and interactions among individuals and integrate this knowledge in order to form a body of organizational knowledge. Third, management should recognize the relevance of learning, and develop a culture that promotes the acquisition, creation, and transfer of knowledge as fundamental value. Fourth, the firms should bring the organization's members together around a common identity. Moreover, the organization's members should have a clear view of the organization's objective and understand how they help in their development, and then, the firms should also encourage the presence of a common language and a shared vision by all the organization's members.

Conclusion

The objective of this study was to investigate the relationship between IT competency and organizational learning capability. This finding of this study has proven that IT competency has a positive influence on the four dimensions of organizational learning capability (knowledge transfer and integration, openness and experimentation, systems perspective, managerial commitment) as organizational capability to create, acquire, transfers, and integrate knowledge.

References

1. Ali, M. I., and Pascoe, C., Interaction of Organizational Culture and Collaboration in Working and Learning, *Journal of Educational Technology & Society*, 5(2), 2002, pp.1-10.
2. Bassellier, G., Benbast, I., and Reich, B. H., The Influence of Business Managers' IT Competence on Championing IT, *Information Systems Research*, 14(4), 2003, pp.317-336.
3. Davenport, T. H., De Long, D. W., and Beers, M. C., Successful Knowledge Management Projects, *Sloan Management Review*, winter, 1998, pp. 43-57.
4. DiBella, A. J., and Nevis, E. C., *How Organizations Learn: An Integrated Strategy for Building Learning Capability,* Jossey-Bass, A Wiley Company, San Francisco, 1998.

5. Garvin, D. A., Building Learning Organization, *Harvard Business Review*, July/Aug, 1993, pp.78-91.
6. Glazer, R., Marketing in Information–Intensive Environment: Strategic Implications of Knowledge as an Asset, *Journal of Marketing*, 55, 1991, pp.1-19.
7. Gold, A. H., Malhotra, H. A., and Segard, A, H., Knowledge Management: An Organizational Capability Perspective, *Journal of Management Information Systems,* 18(1), 2001, pp.185-214.
8. Gomez, P. J., Lorente, J. C., and Cabrera, R. V., Organizational Learning Capability: A Proposal of Measurement, *Journal of Business Research*, 58, 2005, pp.715-725.
9. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L., *Multivariate Data Analysis*, 6th edition, Prentice Hall International, Inc, New Jersey, 2006.
10. Huber, G. P., Organizational Learning: The Contributing Process and the Literature, *Organization Science*, 2, 1991, pp. 88-115.
11. Lei, D., Slocum, J. W., and Pitts, R. A., Designing Organizations for Competitive Advantage: The Power of Unlearning and Learning, *Organization Dynamic*, 1999, pp.24-38.
12. Li, E. Y., Chen, J. S., and Huang, Y. H., A Framework for Investigating the Impact of IT Capability and Organizational Capability on Firm Performance in the Late Industrializing Context, *International Journal of Technology Management*, 36, 2006, pp. 209-229.
13. Liu, T. L., *Organization Learning and Social Network Market Orientation*: *The Role of Resource-Based View Strategy in Gaining Dynamic Capabilities Advantage*, Tajen Institute of Technology, Taiwan, R.O.C, 2004.
14. Melville, N., Kraemer, K. L., and Gurbaxani, V., Information Technology and Organizational Performance: An Integrative Model of IT Business Value*, MIS Quarterly,* 28(2), 2004, pp. 283-322.
15. Nevis, E. C., DiBella, A. J., and Gould, J. M., Understanding Organizations as Learning Systems, *Sloan Management Review, Winter*, 1995, pp. 73-85.
16. Nonaka, L., and Takeuchi, H., *The Knowledge Creating Company*, Oxford University, Press, New York, 1995.
17. Powell, T. C., and Dent-Micallef, A., Information Technology as Competitive Advantage: The Role of Human, Business and Technology Resources, *Strategic Management Journal*, 18(5), 1997, pp. 375-405.
18. Real, J. C., Leal, A., and Roldan, J. L., Information Technology as a Determinant of Organizational Learning and Technological Distinctive Competencies, *Industrial Marketing Management*, 35(4), 2005, pp.1-17.
19. Robey, D., Boudreau, M. C., and Rode, G. M., Information Technology and Organizational Learning: A Review and Assessment of Research, *Accounting Management and Information Technology*, 10(2), 2000, pp. 125-155.
20. Sekaran, U., *Research Methods for Business*: *A Skill Building Approach,* 4th eds.*,* John Wiley & Son, Inc., New Delhi, India, 2003.
21. Tippins, M. J., and Sohi, R. S., IT Competency and Performance: Is Organizational Learning a Missing Link, *Strategic Management Journal,* 24, 2003, pp. 745-761.
22. Yuliazmi, *The Implementation of Knowledge Management on PT. Reasuransi Nasional Indonesia*, Theses Magister Ilmu Komputer Fakultas Pascasarjana Universitas Budi Luhur Jakarta, 2005.