

The Influence of Information Technology Capability, Organizational Learning, and Knowledge Management Capability on Organizational Performance (A Study of Banking Branches Company in Southern Kalimantan Province)

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Abstract

This research aims to test and analyze the impact of Information Technology Capability, Organizational Learning, and Knowledge Management Capability on Organizational Performance, as well as to provide academic horizon for academics and practicing, and applicable references for banking offices in Southern Kalimantan Province. Knowledge-based recourses supported by Information Technological Capacity will enhance Organizational Performance and efficiently.

72 samples of Banking Branch Offices in Southern Kalimantan Province used saturated sample. Respondents consist of Heads of bank branch office for 3 years, from 2009 to 2011. Data collection used questionnaires regarding to perception of head of bank branch office. There were 69 questionnaires collected and quantitative data analysis approach with Partial Least Square. 4 variables were used in this research consist of Information Technology Capability, Organizational Learning, Knowledge Management Capability and Organizational Performance with 6 Hypotheses. 5 significant hypotheses are the impact of the Information Technology Capability on Organizational Learning, the impact of the Information Technology Capability on Knowledge Management Capability, the impact of the Information Technology Capability on Organizational Performance, the impact of the Organizational Learning on Organizational Performance, and the impact of the Knowledge Management Capability on Organizational Performance, and 1 non significant hypothesis is the impact of the Organizational Learning on Knowledge Management Capability.

Keywords: Information Technology Capability, Organizational Learning, Knowledge Management Capability and Organizational Performance.

Introduction

Building a competitive business organization in uncertain situations requires businessmen to find strategies that are better suited to the demands of the ever changing environment. The concept of Knowledge Management is a concept that can be considered in such situations. Knowledge Management concept has been widely studied over the last two decades (e.g Pitt and Clarke, 1999; Corrillo et al., 2003; Carrion et al., 2004; Wong, 2004; Darroch, 2005; Lin and Tseng, 2005; Tanriverdi, 2005) . However, such researches are characterized by the absence of consistency in terms of defining knowledge. Triggers from various different points of view of the concept of Knowledge Management in today's business strategy is supported by a growing body of research on Knowledge Management, which is a barometer of the strength and weaknesses of the company, hence the business model in the long term must refer to knowledge creation and integration (knowledge creation and integration), continuously renew knowledge based (as well as constantly updating the knowledge base) which is aimed at increasing competitive advantage of the company (Volberda, et al., 1999).

With the rapid technological developments which also affects the condition of the company to be more competitive in every way, and with the view that the company is currently oriented on knowledge also spur the organization to be more creative and produce continuous innovation. A banking company is a service company which is highly dependent on the use of information technology, and has a very tight competition. Capabilities of information technology combined with organizational learning and knowledge management capabilities to

organizational performance, is something that is extremely interesting to study.

Banking organizations in Southern Kalimantan Province is a very important organization in moving the economy in this province, therefore the organization should be robust to any changes that occur, and the rapid development of knowledge demands the employees in these companies tube eager to learn continuously, whether it is well understood and recognized by the employees, hence this study aims to test the theory of Knowledge Based View, Whether in this case the management of the company or the employees of the company in developing organizations are based their orientation more on Resource based View, or even Market based View, so it is known that the theory of Knowledge based View is applicable in the banking organization, therefore this study is expected to give a clear picture of the actual situation, and make it as an input for a better banking organizations in Southern Kalimantan province.

Material and Method

Influence of Information Technology Capability On Organizational Learning

The use of Information Technology to support knowledge creation process dynamically, the researcher has consistently chosen to adopt terminology of Organizational Learning. The researcher considers there are two forms of Organizational Learning: exploration and exploitation. Exploration involves the development of new knowledge or replacing existing content within the organization memory (Abernathy, 1978, March, 1991, Pentland 1995). Exploitation refers to improvement, and use of knowledge (Larsson et al., 1998, March, 1991, Smith and Zeithaml 1996). Information System can affect both exploration and exploitation (Attewell, 1992, Gray, 2001, Pentland 1995). Based on the study of theory and empirical research, first hypothesis can be formulated, namely:

H1: Information Technology Capability has significant influence on Organizational Learning

Influence of Information Technology Capability On Knowledge Management Capability

Tippins and Sohi (2003) indicates that the Information Technology also enhances the ability of organizational memory. As an organization that creates knowledge at every stage, both declarative and procedural, Information Technology collects a lot of valuable information. Information Technology provides an ideal mechanism for linking individuals, which is also considered as a part of the organizational memory. (Davenport and Prusak, 1998; Moffett, et al., 2004; Ramesh and Tiwana, 1999; Sher and Lee, 2004 Zack, 1999). Bharadwaj (2000) argues that Information Technology systems create excellence by transforming the company-specific knowledge in a particular asset that is almost impossible to imitate by competitors. Based on the study of theory and empirical research second hypothesis can be formulated, namely.

H2: Information Technology Capability has a significant influence on Knowledge Management Capability

Influence of Information Technology Capability on Organizational Performance

Bharawaj (2000) empirically tested that Information Technology Capability has advantages compared to the Information Technology in encouraging better corporate performance. The advantages of Information Technology Capability compared with Information Technology is that Information Technology Capability not only as investments as Information Technology, but more than that. Information Technology Capability has the ability to create a new resource, either by spreading or incorporating some other resources, in other words by using Information Technology Capability the company has strategies to gain a variety of benefits and advantages to its investment in information technology. By developing Information Technology Capability the company can create competitive advantage, and essentially it can improve Organizational Performance. Based on the study of theory and empirical research, third hypothesis can be formulated, namely

H3: Information Technology Capability has a significant influence on Organizational Performance

Influence of Organizational Learning on Knowledge Management Capability

Relationships between Organizational Learning and other dimensions Harvey et al. (2004) suggested that one of the keys of Management Organization Capability is the ability of individuals to quickly learn to adapt to the competitive changing of global environment. The purpose of learning is to increase employees' skills and knowledge and to be able to implement knowledge in this information age. Lee and Gondolfi. (2007) suggested that the ability to learn and the ability of knowledge is a source of competitive advantage factors of the organization. Currie and Kerrin (2003) adopt the perspective of Organizational Learning to reflect something more critical to the issue of Knowledge Management. Studies have shown a correlation between Organizational

Learning and Knowledge Management Capability (Theriou and Chatzoglou, 2008). Therefore, the researcher built a fourth hypothesis as follows:

H4: Organizational Learning has a significant influence on Knowledge Management Capability

Influence of Organizational Learning on Organizational Performance

According to Theriou and Chatzoglou (2008) Knowledge Management and Organizational Learning play a unique role for themselves in creating organizational capabilities, resulting in superior performance. The findings indicate that the company implemented the influence of Organizational Learning performance. Hanvanich et al. (2006) argued how the relationship between learning orientation and organizational memory with maximum results for the organization, although conditions of the company is in chaos environmental conditions, but also when company's environment conditions are not volatile. Ruiz-Mercader et al. (2006) argued that individuals and Organizational Learning showed a significant and positive impact on Organizational Performance. The fifth hypotheses can be formulated as follows:

H5: Organizational Learning has a significant influence on Organizational Performance

Method

Type of Research

Based on the research objectives, the nature of this research study is explanatory, which describes the nature of a particular relationship, or to determine the differences between groups or freedom (independence) two or more factors in a situation. Hypothesis testing is done to examine the variance in the dependent variable or to estimate output organization (Sekaran, 2006)

Scope of Research

This study is intended to examine and explain the influence of Information Technology Capability on Organizational Learning, Information Technology Capability on Knowledge Management Capability and Information Technology Capability on Organizational Performance, as well as to examine and explain the influence of Organizational Learning on Knowledge Management Capability, Organizational Learning on Organizational Performance, as well as to test and explain the influence of Knowledge Management Capability on Organizational Performance.

Research Site

Location of the study was in Southern Kalimantan Province with an object on branch companies of banking state-owned companies, enterprises, and private commercial banks that already exist in Southern Kalimantan, the number of regional offices was 25 but the number of bank branches spread over in 13 districts, 72 were bank branches, which consisted of 26 state-owned bank branches, 14 branches of enterprises, 32 private banks branch offices, however, there were only 69 questionnaires collected.

Population and Sample

Population in this research consisted of branch offices of Private-Owned Commercial Banks or Government-Owned Commercial Banks in Southern Kalimantan, with the total number of 72 banks. The following is the data collected from the 69 questionnaires returned by 69 branch offices in Southern Kalimantan Province

Table 1 Research Population

No	Bank Type	population
1	Government-Owned Bank	26
2	Private-Owned Bank	32
3	Local-owned	14
Population Total		72

Source : Southern-Central Kalimantan Regional Bank Indonesia

Research Variable and Measurement

There are four variables in this research. Operational definition of the research variables are as follow:

Variable : Information Technology Capability

Information Technology Capability is the special ability of the company in developing, implementing and

managing Information Technology products influence and incorporating available resources in the form of innovation and business strategies to sustain superior performance. Each dimension of Information Technology Capability is defined as follows:

1. Information Technology Knowledge is the extent of employees' knowledge about the use of Information Technology technically
2. Information Technology Operation is the extent of Information Technology in supporting company's operations influence and efficiently
3. Information Technology is the infrastructure that supports the Information Technology activities in the company

Variable : Organizational Learning

Organizational Learning is an act of individual learning in organizations continuously, to create the desired results, with a new mindset supported by the organization and aspirations of the group are given the freedom to provide useful ideas for the organization with the purpose of improving performance. Organizational Learning is measured by four dimensions, namely:

1. Management Commitment is the relevance and recognition by the company management toward the learning outcomes of the employee, so the involvement of staff in decision-making and new ideas valued by the organization and the organization considers learning as an investment and learning is considered as a key factor for the success of the organization.
2. System Perspective is the importance of engaging members of the organization together to understand the purpose of the organization.
3. Openness and experimentation is an atmosphere of openness of the company to new ideas that arise either from employees or external resources for the betterment of the organization so organizations management gains knowledge continuously, and the trial placement of employees in the new division with the goal of improving the ability of the employees in other fields.
4. Integration and Knowledge Transfer refers to two closely interrelated processes between integration and knowledge transfer, management always analyze any errors that occur, and give freedom of speech to fellow employees, so they can share knowledge and stored in a database that can be used for other people and work together in a team.

Knowledge Management Capability

Knowledge Management Capability is an organizational skill, experience and knowledge or what is better known that is used by organizations to identify, create, explain, and distribute knowledge creating processes that facilitate the transfer of knowledge and use that knowledge to make decisions. Variables dimensions of the Knowledge Management Capability variables are:

1. Structure Knowledge Resource is a structural knowledge resource that assess the extent to which an organization depends on the interaction among employees, the importance of knowledge sharing and creation of new knowledge. Thus, this measure reflects the structural organization's knowledge management capabilities.
2. Cultural Knowledge Resource, knowledge of cultural resources is to assess the extent to which organizations to support and encourage knowledge-related activities: the importance of knowledge to the company's success, learning valued, respected individual skills, interaction with other groups, and a clear vision of the organization.
3. Human Knowledge Resource, a resource of knowledge that employees have to assess the understanding of the tasks of product-specific knowledge.
4. Technical Knowledge Resource is a technical skill-oriented knowledge resource of the organization that based on studies in which knowledge plays a role in the organization at the time the study is conducted. Items are adapted to assess the ability of current technical knowledge that contribute to day-to-day operations, as well as the ability to retrieve and use the knowledge.

Variabel Organizational Performance

Organizational Performance is an indicator that measures how well a company achieves the goals of the organization which can be measured by the efficiency of the organization and the achievement of goals influence.

Indicators dimensions in this study are: Operational Performance and Market Performance In this study, the performance measures with the variable dimensions are:

1. Operational performance, is a measure of the performance of the operations carried out by the company that relates directly to the activities of day-to-day company operations, both of which relate directly to the activities of the employee, or in direct contact with the customer.
2. Market Performance is a measure of performance that is measured to the focus of the company's competitors.

Result and Discussion

Variable Profile

Factor loading values (in PLS it is known as outer loading) indicates the weight of each indicator as a measure of each variable:

Tabel. 2 Outer Loading and Mean of Each Indicator from Each Variable

Variable	Indicator	Outer Loading	Outer Weight	Indicator Mean	VariableMean
X1=Information Technology Capability	X1.1	0.825	0.036	4.043	4.109
	X1.2	0.779	0.171	4.198	
	X1.3	0.991	0.844	4.086	
Y1=Organizational Learning	Y1.1	0.860	0.260	3.974	3.910
	Y1.2	0.847	0.257	4.092	
	Y1.3	0.932	0.287	3.844	
	Y1.4	0.954	0.305	3.730	
Y2= Knowledge Management Capability	Y2.1	0.790	0.188	3.783	3.792
	Y2.2	0.960	0.478	3.838	
	Y2.3	0.911	0.353	3.630	
	Y2.4	0.876	0.081	3.916	
Y3=Organizational Performance	Y3.1	0.954	0.594	3.995	4.085
	Y3.2	0.925	0.469	4.174	

Table 2 shows that the dominant indicator of Information Technology Capability variable (X1) is an Information Technology Object (X1.3), with the highest outer loading of 0.991 compared with the other indicators, while the average score of this indicator is 4.086. This indicates that the indicator is considered important by the respondents and conditions (the real situation at the time the study was conducted) is relatively good (mean score is above 4). On Organizational Learning variable (Y1) the one that acts as a measure of the strongest (dominant) measures the indicator of knowledge transfer and integration (Y1.4) with outer loading value greater than other indicators that is equal to 0.954, while the average score of this indicator is 3,730. This indicates that the indicator is considered important by the respondents, when the condition (the real situation at the time the study was conducted) is good.

On Knowledge Management Capability variable (Y2), acts as a measure of the strongest (dominant) is an indicator of Culture Knowledge Resource (Y2.2) with outer loading value is greater than the other indicators that is equal to 0.960, with the average score of 3.838. This indicates that the indicator is considered important by the respondents, while the condition (the real situation at the time the study was conducted) is good. On Organizational Performance variables (Y3), acts as a measure of the strongest (dominant) is an indicator of Operational Performance (Y3.1) with outer loading value greater than the amount of the other indicators that is 0.954, with the average score of 3.995. This indicates that the indicator is considered important by the respondents, while the condition (the real situation at the time the study was conducted) is good.

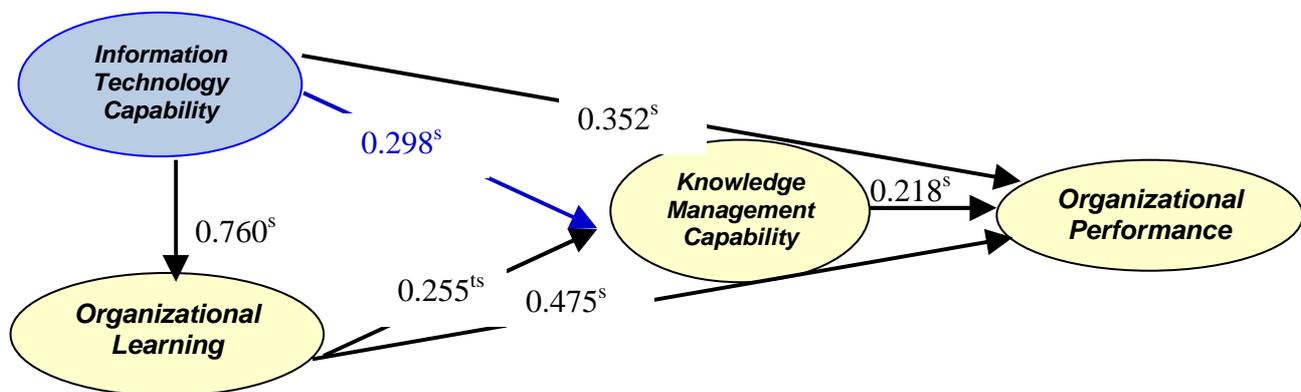
Results of Hypothesis Testing

The results of complete analysis are shown in the PLS analysis results below:

Table 3. Results of Hypothesis Testing

Relation Among Variables (Independent Variable ->Dependent Variable)		Line Coefficient	p-value	Remark
Information Technology Capability (X1)	Organizational Learning (Y1)	0.760	0.0000	Significant
Information Technology Capability (X1)	Knowledge Management Capability (Y2)	0.298	0.0387	Significant
Information Technology Capability (X1)	Organizational Performance (Y3)	0.352	0.0007	Significant
Organizational Learning (Y1)	Knowledge Management Capability (Y2)	0.255	0.1292	Not significant
Organizational Learning (Y1)	Organizational Performance (Y3)	0.475	0.0001	Significant
Knowledge Management Capability (Y2)	Organizational Performance (Y3)	0.218	0.0131	Significant

The results of the hypothesis are also shown in the figure below.



Agenda: s = significant line, ts = not significant line

Figure 1. Path Diagram Of Hypothesis Testing Results

Conclusion, Implication, Summary

In general, Information Technology Capability has enormous benefits for improving Organizational Performance, and also is an important factor in providing support for organizational learning as well as a means to improve knowledge management in banking organizations. Organizational Learning and Knowledge Management Capability in improving Organizational Performance. Conclusions about the influence of each variable can be explained in detail as follows:

1. Information Technology Capability has a significant influence on Organizational Learning. Direction of the influence of Information Technology on Organizational Learning Capability is positive, which means the better Information Technology Capability is, the better Organizational Learning is, the three indicator forming variables Information Technology Knowledge, Information Technology and Information Technology Operation Object, showed good weight factor, therefore it has positive influence on Organizational Learning. Information Technology Capability can influence manage information in a company with the aim to improve Organizational Learning, Information Technology Theory which shows that Information Technology Capability still has an important role to play in various knowledge processes such as knowledge creation, storage / retrieval, transfer and application.
2. Information Technology Capability has a significant influence on the Knowledge Management Capability. Direction of the influence of Information Technology Capability on the Knowledge Management Capability is positive, which means the better Information Technology Capability is, the better the Knowledge Management Capability will be, the three indicator forming variables Information Technology Knowledge,

Information Technology and Information Technology Operation Object, showed good weight factor, therefore it has a positive influence on Organizational Learning. These results indicate that Information Technology Capability has a considerable influence on the increase of company's Knowledge Management Capability and empirically from the results of the study showed the use of hardware, software and human resources available in the Information Technology in managing the company, make it easier for the company to manage knowledge, which leads to the creation of a better employees ability.

3. Information Technology Capability has a significant influence on Organizational Performance. Direction of the influence of Information Technology on Organizational Performance is positive, which means the better Information Technology Capability is, the better Organizational Performance. The three indicator forming variables Information Technology Knowledge, Information Technology and Information Technology Operation Object, show good weight factor, therefore it has a positive influence on Organizational Performance.
4. An interesting thing about this study is the result that Organizational Learning has no significant influence on the Knowledge Management Capability. It means that changes in the Organizational Learning does not have significant influence on Knowledge Management Capability. Results of data analysis and hypothesis testing show that the variable Organizational Learning, with its indicators showed no good teamwork in the learning process, resulting in Organizational Learning variable is not significant in increasing the value of the influence of Knowledge Management Capability.
5. Organizational Learning has a significant influence on Organizational Performance. Direction of the influence of Organizational Learning on Organizational Performance is positive, which means, the better the Organizational Learning is the better Organizational Performance will be. Organizational Learning enhances the organization's ability to innovate, which consequently increases the competitiveness and Organizational Performance
6. Knowledge Management Capability has a significant influence on Organizational Performance the Organizational Learning. Direction of the influence of Knowledge Management Capability on Organizational Performance is positive, which means, the better the Knowledge Management Capability is, the better Organizational Performance. Knowledge Management Capability, with improved learning in the organization, making the organization more influence and efficient therefore increasing the organizational performance.
7. It is also interesting that this study found that the Organizational Performance is more determined by the Operational Performance compared with the Market Performance, although the margin of the loading factor is thin, however it still needs to be further analyzed, and it can serve as a reference for further study.
8. In this study it is found that Information Technology Capability has the highest weight average value compared with the variable of Organizational Learning, Knowledge Management and Organizational Performance Capability. This means that the heads of banking branch offices in the province of Southern Kalimantan consider Information Technology Capability variable as the most important factor among other variables.

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