

THE IMPACTS OF LEARNING ORIENTATION DIMENTION AS THE RELATION ANTECEDENT BETWEEN THE CAPABILITY OF INFORMATION TECHNOLOGY TOWARDS THE INFORMATION QUALITY OF ACCOUNTING MANAGEMENT AND UNCERTAINTY OF TECHNOLOGY AS THE MODERATION VARIABLE

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ABSTRACT

This study aims to determine the effect of learning orientation dimensions as antecedent of the relationship between information technology capability and quality of management accounting information with technological uncertainty as moderating variable. This study concerns on the importance of management accounting information for decision making in the organization. The highest business competition requires companies to be able to optimize their resources. Changes in the external environment related to the rapid development of technology and uncertain technology require companies to be able to respond precisely. Thus, organizational learning becomes an essential foundation for the company's success in managing their resources and facing the uncertain external environment amid the tough business competition. Data were collected from companies that listed in Indonesia Stock Exchange. Respondent represented by accounting manager as of 95 people were participated in filling out the questionnaire. Then, the data collection processed using SEM analysis technique. The screening stage of the data generated 94 responses that were used for decision making of the results study. Data processing has been done using the software SPSS 16.0 and WarpPLS 3.0. The result of this study provides support for the proposed hypotheses. There are four hypotheses supported partially. One hypothesis about the role of technological uncertainty as moderating of the relationship between information technology capability and quality of management accounting information is not supported. This study is limited to the lack of connection between the variables in the study due to the lack of the data and heterogeneous of the sample type selection of industry. Future research is expected to provide more robust findings regarding the relationship between the observing variables in the research.

Keywords: learning orientation, information technology capability, technology uncertainty, quality of accounting management information

Introduction

Information quality is a competitive advantage for an organization. Information is one of the business resources, like other resources, information important to the survival of the organization (Hall, 2001). The fast industrialization at the end of the nineteenth century has made accounting management information an alternative management tool to control the working performance. Accounting management information plays a dominant role in management in the early twentieth century.

Business competition has grown tighter because of uncertainty, obscurity, and fast business environment that rapidly grow. Companies make efforts to reduce the obstacles and get the competitive advantages through investment and implementation of information technology. Therefore, information technology plays a significant role in the social and economic changes.

An organization keeps trying to find opportunities to use technology materials and more advanced information system to obtain more effective strategies. To be able to design and manage the technology structure and information system well, learning processes are required. Organization learning is now becoming an important process to be carried out.

Information dissemination process will be very easy if supported by adequate information technology. Advanced information technology today is relatively easy to reach by all people. However, it does not mean ease of technology will always have a positive impact for users. In the uncertain environment, technology can provide mediation effect that strengthens or weakens the company's success. Technological uncertainty as mediator variables could be weakened relationship between information technology capabilities to the quality of management accounting information.

Research Objective

This research is aimed to:

1. Investigate the impacts of three components of learning orientation on the information technology capability.
2. Investigate the impacts of information technology capability on the quality of accounting management information.
3. Investigate the impacts of moderation of technology uncertainty towards the relation of information technology capability on the quality of accounting management information.

Theoretical Framework

Levels And Perspective In Organizational Theory

Barney and Griffin (1992) argues that the organization is a collection of people working together in a coordinated and structured style to achieve one or more objectives. Organizations play an important role in the society. Organization has been around a long time, the organization exists because two people working together can earn more than what they get than when they work alone.

Today, many organizations are established, and generally experiencing rapid growth, which produces goods and services that are linked in some way to the new information technologies. The increase of the use of computers and new information technologies such as the Internet will revolutionize the way organizations operate (Jones, 2004).

Jorgen Laegaard and Mille Bindslev (2006) who has experience in analyzing organizations found that organizations should be more extensive. Organizations may be relevant to engage with society and influence on and from other organizations, and naturally there is also a relationship between an organization and a team of individuals. Thus, an organization can be viewed from various perspectives.

Each organization theory has its main perspective in which Scott (2005) divides into a rational perspective, natural, and open. A distinction is made between these three perspectives through three main focus areas for the organization of existing theories, namely:

1. Focus on task performance

This contribution was made in conjunction with the start of the industrial society and large industrial groups, which creates a need for management theory and more people gathered around industrial tasks. Major industry groups designed to achieve specific goals with the formalization of a strong culture. Resulting in the development of organization theory with normative rules for structuring the work, in which the organization is an instrument, or a machine constructed for the purpose of achieving the goals that were set.

2. Focus on motivation

Studies on motivation are a search for understanding the nature of human. Result study from David C. McClelland and John W. Atkinson pointed on the connection between an employee's motivation and his performance. The main conclusion of their study is that employees are not motivated when the objective is difficult or almost unrealistic to reach, or when it is relatively easy to reach. Furthermore, human behavior and motivation are individual for each person and influenced by other conditions within the organization. Thus, motivation may be different from organization to organization.

3. Focus on adjustment to the external environment

There are possibilities of combining the two focus areas of the organization. Focus on task performance and focus on motivation possible to combine using theories which open the organization towards its surroundings. The combination of theories with emphasis on adjustment to external environment should be represent the most recent organizational theories that therefore very relevant to understanding of organization today and in the future. Those theories characterized with the highest level of abstraction, which provides an opportunity for many different contributions within the open perspective. This was illustrated by the review of the Contingency Theory, which has a very deterministic approach and the surroundings as the only determining factor when designing the organization's structure and functions.

The Contingency Theory– Lawrence and Lorsch

The contingency theory focuses on the organizational structure's dependence on the surroundings, and its main hypothesis is:

Those organizations having an internal structure that matches the demands from the surroundings best have the best chance to survive.

Lawrence and Lorsch pointed on the fitness of organization with its surroundings in two levels:

- Each organizational unit must be adjusted to the surroundings they relate to.
- The differentiation in the organization as a whole must express the surroundings it operates in.

The most important conclusion of study is that the most effective organization had develop coordination and conflict-solving systems, which ensured the company was not weakened on differentiation-neither from acute long term problems.

Learning Orientation And Information Technology Capability

Learning in organizations is an important process that is managed by the organization. The rapid changes in the business environment can affect any development organization. Nonaka (1994) states knowledge as a special source of lasting competitive advantage. Organizational learning is increasingly becoming recognized as an important prerequisite for the survival and success of the organization's current and future (Dodgson, 1993).

Learning within the organization recognized as an important prerequisite for the survival and success of the organization's current and future (Dodgson, 1993). Organizational learning theorists have often argued that organizational learning is beneficial to employees because it will increase the sense of inclusiveness and autonomy (Remedios and Boreham, 2004). Organizational capabilities emerge over time through a process of organizational learning (Levitt and March, 1988). Capability of the knowledge based is considered to be one thing that is strategically important to create and sustain a competitive advantage (DeNisi et al., 2003).

Sinkula et al. (1997) found there are three components of learning orientation is a commitment to learning, shared vision, and open-mindedness. Knowledge-Based View theory as a theory which views knowledge as an important asset in the company so it can be submitted three hypotheses regarding the relationship between learning orientation on information technology capabilities.

H1a: The commitment for studying has positive impacts on the information technology

H1b: Sharing visions have positive impacts on the information technology capability

H1c: Open mindedness has positive impacts on information technology capability

Information Technology Capability And Quality Of Accounting Information Management

Wang, et al. (2006) argue that the technological capability refers to the ability to develop and design new products and processes and increase knowledge about the physical world in a unique way, thus transforming this knowledge into the design and instructions for the creation of outcomes expected. Technology capability helps to improve the company's ability to recognize and apply new external knowledge to further the development of competencies, which can result in superior performance. IT capability was found to be an important differentiator of good banks in the mid-1980s, when compared with banks that are less good (Nolan, 1994).

IT resource base view shows that the company is not only able but also to differentiate themselves on the basis of their IT resources. Infrastructure of an enterprise, namely IT human capability, and the ability to improve IT for intangible benefits provided as a special resource for companies, which when combined will create vast IT capabilities. When each individual's complex IT resources to obtain and difficult to imitate, the company reached a competitive advantage through IT will also learn to effectively combine their IT resources to create an overall IT capability (Bharadwaj, 2000).

Rattanaphatham and Ussahawanitchakit (2008) examine the relationship between information technology capability toward the quality of management accounting information. Rattanaphatham research results and Ussahawanitchakit (2008) found no significant effect between the capabilities of information technology on the quality of management accounting information. Moorthy, et al. (2012) in the context of human resource examines the importance of the application of information technology in management accounting decisions to find the importance of the role of information technology for the efficiency of the accounting department.

H2: The information technology capability has positive impacts on the quality of accounting management information

Uncertainty Of Technology In Information Technology

Contingency approach to organization design will create a fit between the organization and the environment. Organization will be more effective if it is able to meet the demands of the situation. Implementation of contingency approach in organizational design is first done by estimating the degree of environmental uncertainty, and then the combination of a variety of design configurations organization (Kreitner and Kinicki, 2001).

Technological uncertainty is expressed as the change in size and can not diprediksinya technological developments in an industry organization (Li and Lin, 2006). Organizations working with new technology that will quickly change tend to gain competitive advantage through technology innovation. With a PhD candidature, further problems arise on how to stay abreast of technology trends by enhancing, strengthening, and improving technological capability. Then, only company with a strong technology capability, which can create quality information for decision making, achieve high performance and survive the uncertainty of the technology (Wang, et al., 2006).

Research Li and Lin (2006) conducted in the context of information systems technology management discovered that uncertainty does not affect the quality of the information. Research Wang, et al. (2006) conducted in the context of marketing found that technological uncertainty is a positive moderating the relationship to the overall performance capabilities of the technology business. However, research Rattanaphaphtham and Ussahawanitchakit (2008) conducted in the context of accounting shows that the results are not significantly influence technological uncertainty as moderating the relationship between information technology capabilities with quality management accounting information.

Wang, et al. (2006) who found that the uncertainty of the technology is able to moderate the relationship with the performance capabilities of the technology, explained that in an environment of uncertainty would likely spur high-technology companies to be able to utilize the technology capability dimiliknya to improve performance. Meanwhile, Rattanaphaphtham and Ussahawanitchakit (2008) were not able to find technologies uncertainty moderate the relationship of information technology capabilities with the quality of information, explaining that the uncertainty of high technology was not able to spur the company to further enhance its technological capabilities to produce quality information quality.

H3: The high uncertainty rate of technology strengthens the relation between the information technology capability and the quality of accounting management information

Research Method

In this study, primary data were collected from the answers of the distributed questionnaires. The research population was 443 go public companies listed in the Indonesian Stock Exchange (www.idx.co.id). Respondents who were represented by the accounting manager participated in the questionnaire completion.

The analysis used to examine the hypothesa is the structural equation model (SEM). Data were analyzed using the *SPSS 16.0 software* and *WarpPLS 3.0 software*. *SPSS 16.0 software* was used to analyze the data characteristics, meanwhile the *WarpPLS 3.0 software* was used to analyze the research model of SEM.

In this study, hypothesis testing was carried out using the *Partial Least Squares-Structural Equation Modeling (PLS-SEM)*. This PLS is a powerful analysis method and is often called as *soft modeling*. PLS can also be used to confirm theories (Kock, 2014).

Empirical Results

Summary of research variable description is as on table below:

Table 1: Summary of Research Variable Description

Variable	Expectation Average	Real Average	Ferdinand's Index Number	Theoretical Mean	Real Mean	Category
KOM	4-20	9-20	81.99	12	16.41	High
VIS	4-20	8-20	75.66	12	15.14	High
OPN	3-15	3-14	69.00	9	10.34	Medium
KTI	10-50	16-44	65.59	30	32.71	Medium
TUN	4-20	4-18	68.67	12	13.73	Medium
KIAM	10-50	24-50	75.80	30	37.83	High

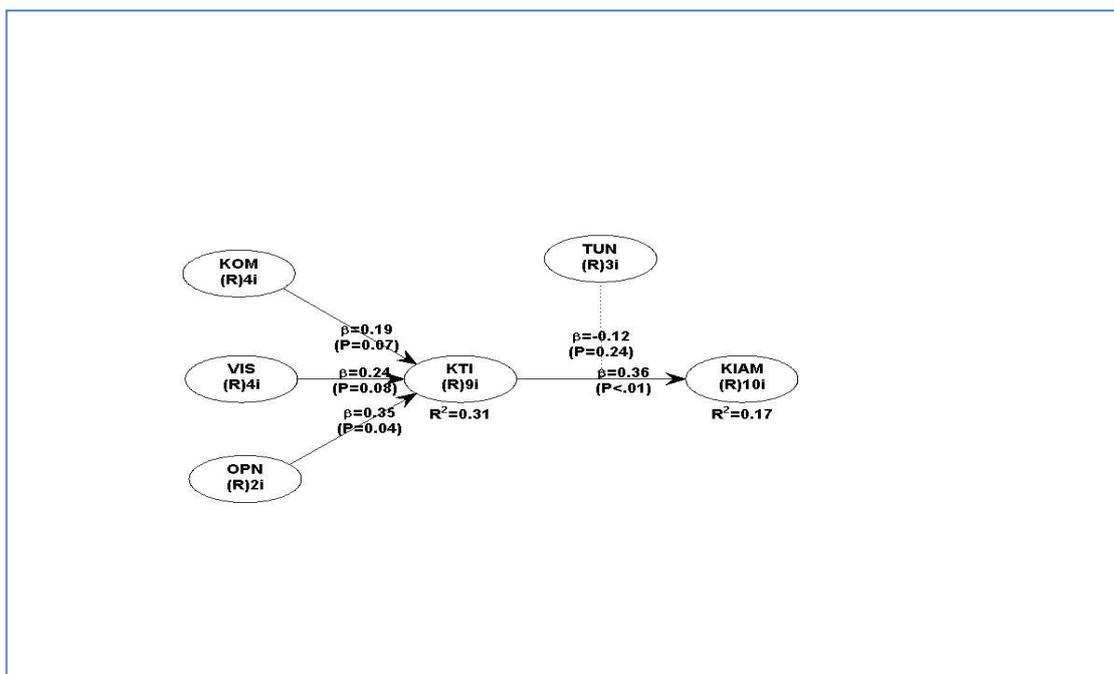
Source: analyzed using *output SPSS 16.0* and Ferdinand's index calculation

Notes:

- KOM = commitment to learning
- VIS = shared vision
- OPN = open-mindedness
- KTI = information technology capability
- TUN = technological uncertainty
- KIAM = quality of management accounting information

Output for the research model is as on figure below:

Figure 1: Structural Model



Source: output Warp PLS 3.0

Notes:

- KOM = commitment to learning
- VIS = shared vision
- OPN = open-mindedness
- KTI = information technology capability
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Summary for the research hypothesis is as on table below:

Table 2: Summary for the Decision on the Research Hypothesis

Hypothesis	Coefficient	P value	Desicion
H1a The commitment for studying has positive impacts on the information technology	0.19	.07*	accepted
H1b Sharing visions have positive impacts on the information technology capability	0.24	.08*	accepted
H1c Open mindedness has positive impacts on information technology capability	0.35	.04**	accepted
H2 The information technology capability has positive impacts on the quality of accounting management information	0.36	.01***	accepted
H3 The high uncertainty rate of technology strengthens the relation between the information technology capability and the quality of accounting management information	-0.12	.24	rejected

Notes:

- *) significant correlation on level .10
- ***) significant correlation on level .05
- ***) significant correlation on level .01

The explanation for the test results for each hypothesis as follow:

1. Hypothesis 1a
Hypothesis 1a states that commitment to learn has positive impacts on information technology capability. The test results indicate that the estimation coefficient is 0.19 with P value 0.07 (significant on level 0.10). The figure means that there is a positive impact of the variable commitment to learn towards the variable of technology information. It can be concluded that with 90 % certainty, hypothesis 1a is accepted.
2. Hypothesis 1b
Hypothesis 1b states that sharing visions has positive impacts on information technology capability. The test results on the hypothesis indicate that there is estimation coefficient 0.24 with P value 0.08 (significant on level 0.10). It means that there

is positive and significant impact on variables of sharing vision on the variable of information technology capability. It can be concluded that with 90 % certainty, hypothesis 1b is accepted.

3. Hypothesis 1c

Hypothesis 1c states that open mindedness has positive impacts on information technology capability. The testing result for this hypothesis shows that there is estimation coefficient 0.35 with P value 0.04 (significant on level 0.05). It means that there is positive and significant impact from the variable of open mindedness towards the variable of information technology capability. It can be concluded that with 95 % certainty, hypothesis 1c is accepted.

4. Hypothesis 2

Hypothesis 2 states that information technology capability has positive impacts towards the quality of accounting management information. The testing results show that there is estimation coefficient 0.36 with P value 0.01 (significant on level 0.01). The figure means that there is positive and significant impact from the variable of information technology capability towards the variable of accounting information quality. Therefore, with 99% certainty the hypothesis 2 is accepted.

5. Hypothesis 3

Hypothesis 3 states that high uncertainty level of technology strengthens the relation between information technology capability and quality of accounting management information. The testing results show that there is estimation coefficient - 0.12 with P value 0.24. The figure shows that there is negative impact but insignificant from the variable of technology uncertainty towards the variable of information technology capability which is moderated by variable of technology uncertainty. It can be concluded that with 25% certainty, hypothesis 3 is rejected.

Discussion

1. Hypothesis 1

The result of the hypothesis testing shows that commitment to learn has positive impacts on information technology capability and the hypothesis is accepted. This means that information technology capability is influenced by the commitment to learn. The descriptive analysis results shown in Table 1 indicate that respondents averagely have high commitment to learn but they have merely medium information technology capability. Thus, it can be concluded that learning commitment gives impacts on the information technology capability. The positive and significant results of commitment to learn towards information technology capability indicate it as an important foundation in an organization learning process. Organization will not grow better if they do not have commitment to learn.

The testing on the hypothesis stating that sharing visions has positive impact on the information technology capability indicates that the hypothesis are not accepted. This means that information technology capabilities are influenced by sharing visions. The descriptive results in Table 1 show that respondents frequently share visions but the information technology capability is merely medium. Thus, it can be concluded that vision sharing brings impacts on information technology capabilities. The positive and significant testing results on vision sharing in a company are the elements of important learning orientation for organization learning processes. Learning orientation cannot be separated from vision sharing.

The testing result of hypothesis stating that open mindedness has positive impact on information technology capability indicates that the hypothesis is accepted. This means that information technology capability is influenced by open mindedness and its significant impact. The descriptive analysis result in Table 1 proves that averagely respondents have a high open mindedness and intermediate information technology capability. It can be concluded that sharing visions gives impacts on information technology capability. The positive and significant results on the open mindedness towards information technology capability indicate how important open-mindedness is in organizations. Without open-mindedness, learning processes will not grow well.

2. Hypothesis 2

The testing result on hypothesis stating that information technology capability has positive impact on the quality of accounting management information indicates that the hypothesis is accepted. This means that the quality of accounting management information is influenced by the information technology capability. The descriptive analysis result in Table 1 shows that respondents averagely have medium information technology capability and high quality of accounting information. Therefore, it can be concluded that information technology capability has significant impacts towards the quality of accounting management information. This is due to the fact that although the responses are not very high, they bring significant impacts on the quality of accounting management information. The positive and significant testing result on information technology capability towards the quality of accounting management information indicates the importance of sufficient resources capability for companies. Information technology capability as one type of the capabilities of companies influences the quality of accounting management information. Information technology capability as pieces of significant knowledge requires more intensive attention to increase the working performance of the company. Companies that succeed in creating qualified information technology capability will certainly enjoy the maximum working capital.

3. Hypothesis 3

The testing results on the hypothesis stating that the high uncertainty of technology will strengthen the relation between the information technology capability towards the quality of accounting management information is denied. This means that high uncertainty of technology does not strengthen the relation between the information technology capabilities towards the

quality of accounting management information. This finding shows that technology uncertainty is not appropriate when considered as the relation moderation between the information technology capabilities towards the quality of accounting management information. The descriptive analysis in Table 1 shows that respondents averagely have medium technology uncertainty and high quality of accounting management information. Therefore, technology uncertainty is not able to encourage the information technology capability to become more positively influential towards the quality of accounting management information. Information technology capability and technology uncertainty are two different things. On the one hand, information technology capability is the internal factor. On the other hand, technology uncertainty is the external factor. However, those two factors can be integrated to bring more benefits for companies. The precise action of companies in responding technology uncertainty can optimize information technology they have to generate qualified accounting management information. Therefore, information technology capability and technology uncertainty require more attention and should be positively responded to promote more qualified accounting management information.

Research Findings

The findings of this research entitled the The Impacts of Learning Orientation Dimention as the Relation Antecedent between the Capability of Information Technology towards the Information Quality of Accounting Management and Uncertainty of Technology as The Moderation Variable, can be summarized as follow:

1. The learning commitment and vision sharing have obtained adequate attention in companies. However, open mindedness has not had sufficient attention from the companies. This finding is supported by the high index responses for commitment to learn and vision sharing and the medium index responses of open mindedness.
2. Information technology capability has not had sufficient attention from the company. This result is supported by the medium index responses for information technology capability.
3. Technology uncertainty has not had sufficient attention from the company. This finding is supported by the index responses for technology uncertainty.
4. The quality of accounting management information has had adequate attention from the company. This finding is supported by the high index responses for the quality of accounting management information.

Conclusion

The conclusion from this research findings are in line with the problem identification:

1.
 - a. The commitment to learn has positive and significant impact on the information technology capability.
 - b. Vision sharing has positive and significant impact on information technology capability.
 - c. Open mindedness has positive and significant impact on information technology capability.
2. Information technology capability has positive and significant impact on the quality of accounting management information.
3. Technology uncertainty as the moderation has negative impact yet not significant towards the quality of accounting management information.

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