The Influence of Information System User Competency and The Quality of Management Accounting Information Systems on User Satisfaction

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INTRODUCTION

Accounting is information system (Needles & Powers, 2007:4; Weygandt et al, 2012:4; Horngren, 2012:2). Albrecht et al (2011:4) also say that accounting is a system to provide quantitative information, especially of a financial nature, of the economic entity that is intended to be useful in making economic decisions. While the process of providing information both financial and non-financial relevant to managers and employees in an organization to make decisions, allocate resources, monitoring, evaluation useful performance that is referred to as management accounting (Atkinson et al, 2012:2).

Technically, the information system is a set of interrelated components to collect, process, store, and distribute information to support decision making and control in an organization (Laudon & Laudon, 2012:15). The information system also integrates sub-systems both physical and non-physical are interconnected (O’Brien & Maracas, 2010:26) and work together in harmony to achieve a goal of process data into useful information (Susanto, 2008:52).

Accounting information system of an organization has two main sub-systems, namely the financial accounting information systems and management accounting information systems (MAIS) (Wilkinson et al, 2000:15; Hansen & Mowen, 2007:7; Susanto, 2008:84). Both subsystems are differentiated on the objectives, the nature of the input and the type of process used to transform inputs into outputs (Hansen & Mowen, 2007:7). Financial accounting information system to collect and process the transaction data and then disseminate financial information to interested parties (Kieso et al, 2011:88). MAIS produce information to help managers, executives and workers in decision-making for managing organizations (Kaplan & Atkinson, 1998:1).

MAIS refers to the normative, MAIS quality can give satisfaction to the user when using MAIS of managers for decision-making, both short-term decisions and long-term (Mia & Patiar, 2001; Hamdan, 2012). But when MAIS implemented have

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unintended consequences or unforeseen, this is because in the context of social organization and is not well understood by the user (Lawrence et al., 1997). To avoid misunderstanding of the user, resulting in the quality of information systems, the competence of users of information systems to bridge these problems. Thus, the problems that arise in this study are: first, the competence of information system users affects the quality of MAIS. Second, the quality of MAIS effect on user satisfaction of information system.

**Literature review:**

**Management Accounting Information System (MAIS):**

MAIS alike with information systems in general are able to support and serve the purpose of corporate strategy (Kaplan, 1984). The managers use of MAIS to seek more specific information that helps them to strengthen of information about strategic issues of formal and informal sources (Ährlström & Karlsson, 1996; Heidmann et al., 2008), can also be used to give the company a competitive advantage (McLeod & Schell, 2009:51). The scope of the MAIS is positively related to changes in organizational strategy (Naranjo-Gil & Hartmann, 2007), to fulfill the specific management objectives, as well as to the success of economic decision making in the long term (Hoque, 2003:6). All are easy to obtain when an entity has the concept of an integrated MAIS, both physical and non-physical harmoniously interconnected, so as to improve the performance of the business unit (Chapman & Kühn, 2009) and can be enhance the company's ability to stay ahead of the competition (Susanto, 2008:15). Characteristics of quality of information system include efficiency (Stair & Reynolds, 2010:57), reliability, integration and flexibility (Ong et al., 2009; Wixom & Todd, 2005).

The concept of integrated information systems increasingly important role in business entities (Nookabadi & Middle, 2006), as an integrated information system that shows the success of an organization's information systems (Whitten & Bentley, 2007:73). An integrated information system has simplify the process of formulating strategies and improving the complementary relationship within the organization and supervision activities (Nicolaou, 2011). An integrated information system built from diverse components, the software is purchased or constructed specifically, hardware, and networks (Whitten & Bentley, 2007:26).

In hospital industry, integration becomes success determinate factor in supporting the work to cooperate among the healthy service provider (Hasselbring, 2000), managing administration, defraying/funding and processing of patients care (Yucel et al., 2011). In the venture financial capital industry, integration makes the development of partnership management easy (Davila & Foster, 2005). In manufacture industry and food industry, the qualified system is produced from the integration among the sub-system (Nookabadi & Middle, 2006), is done for the logistics, production, and the whole supply chain (Gimenez, 2006). The process of integrating supply chain is valuable capability which aims to the increase of business value (Ghobakhloo et al., 2011). Practically, there are so many problems of information system which is not integrated and not efficient in a business entity (Karlis, 2011; Rochmat, 2012; Anand, 2012). The lack of integration of information system has a bad impact in business performance, income and measurement quality (Georgantzis & Katsamakas, 2010).

**Information System User Competency and The Quality of Management Accounting Information System:**

Users competency of information systems is an important factor in the success of accounting information system (Daoud & Triki, 2013). Human resource competence consists of knowledge, skills and abilities (Yukl, 2010:419; Moeller, 2011:161; Stewart & Brown, 2011:22). If the human resources involved are not qualified, then the information system is not able to follow the normal procedure in a company's development (Tait and Vessey, 1988).

The results of the Thong (1999) demonstrate knowledge of employees about of information system becomes a deciding factor increasing the quality of information systems within an enterprise. Seder et al (2010) also said that knowledge has a positive relationship with the success of the business of information system. Thus, the knowledge, skills and ingenuity of individual staff involved will be very important (Ward & Peppard, 2002:529), because the competent personal as important as appropriate information systems for the company (Xu, 2009). Combining the knowledge of users and user expertise leads to better solutions (Laudon & Laudon, 2012:541), so that information systems can be advantageous an organization if employees contribute knowledge (O'Brien & Maracas, 2010:68). Another study found that the use of information systems can be affected because their personal ability in the development of information systems (Choe, 1996). Profitable for the company if it has at least one personal with high ability in accounting information systems that are used, where personal presence can help other users to use information systems properly (Soegiharto, 2001). The successful implementation of accounting information systems can be described as a series of complex, interconnected activities require participants to have the technical and managerial skills to solve problems that arise (Sori, 2009).

**H:** The Users competency of information systems affect on the quality of the management accounting information systems (MAIS).
The Quality of Management Accounting Information System and User Satisfaction:

Other than integration, information systems combining technical efficiency with sensitivity to the needs of organizations and users, so it can affect job satisfaction and higher productivity (Laudon & Laudon, 2012:548). If users are not satisfied with the integration of information systems, the information systems organization and the user will not use the information generated is not used correctly (Ribiere et al, 1999). As well as the information systems that are not flexible will affect user satisfaction, because information systems that are not easy to use will hinder the effectiveness of the complete work (Wixom & Todd, 2005). Thus, information system design should be useful for all those who need it (Kendal & Kendall, 2011:169).

The quality of information system impact on user satisfaction of information system (Melchor & Julian, 2008; Stair & Reynolds, 2010:74). User satisfaction is important and is the main idea to look at the quality of the information system (Melchor & Julian, 2008). The quality of information system if the users using information systems available in the company and feel satisfied with the information systems used (Bukhari, 2005). Measuring the user satisfaction of information system can be done by looking at harmonizing relations with staff users of information systems, information quality and reliability of the information system itself to assist users in completing the work (Weber, 1997:890; Ong et al, 2009).

Research that shows the quality of the information system affects user satisfaction, as DeLone & McLean (1992,2003); Seddon and Kiew (1996); Rai et al (2002); Wixom & Todd (2005); Dastgir & Mortezaie (2012) and Chang et al (2012). Specifically in the context of MAIS, said to be if the quality can deliver the end result with the objectives set by management (Laudon & Laudon, 2012:530; Post & Anderson, 2003:5). Thus, MAIS user satisfaction increased when properly distributed of information system (Curtis & Cobham, 2005:169) and can assist in the completion of user tasks (Weber, 1997:907), and able to help managers in decision making, both short-term decisions and long-term (Mia & Patiar, 2001; Hamdan, 2012).

Satisfaction was also felt by the user when MAIS produce information quality, such as the accuracy of the information, timeliness, and relevance (Fleischman et al, 2010), both financial information and non-financial information (Weisenfeld & Killough, 2001). Then, if the user is not satisfied with the quality of MAIS, integrated services in information systems and quality of information produced by the system will not be used properly and efficiently by users of information systems (Ribiere, 1999).

Accordingly, it can be proven that the users satisfaction of information systems from the point of view of the user when it meets user expectations (Fisher, 2001). This is in line with expectations theory of Victor H. Vroom, that the strong tendency to act in a certain way depends on the strength of hope where the action will be followed by a particular outcome and on the attractiveness of these outputs for the individual (Robbins, 2007:238). Output which have an impact on individuals when the user feel the satisfaction of information quality produced by the quality of management accounting information system.

H2 : The quality of the management accounting information systems (MAIS) affect on the users satisfaction of information systems.

Information System User Competency and User Satisfaction:

Hiring and retaining skilled employees can improve customer satisfaction (Stewart & Brown, 2011:10). Furthermore, Stewart & Brown (2011:A1) says that providing training and development opportunities to improve skills can improve employee satisfaction with their jobs and working conditions. In the case of the use of information systems, you will feel the satisfaction of seeing a system that was designed and developed make significant business impact, while knowing that you have unique skills to help make it happen (Dennis et al, 2009:9). Knowledge, personal skills and creativity of individual staff involvement will be crucial to satisfy the users (Ward & Peppard, 2002:529).

User satisfaction in information systems can be seen from the relationship between the users of information systems with information systems staff (Weber, 1999:890). The relationship between users and information systems staff are included competencies required, because that is the interpersonal skills to communicate and resolve conflicts (Daft, 2010:10). This is supported by research conducted Choe (1996), found the results of empirical testing that there was a significant positive correlation between user satisfaction and personal ability of information systems. Mahmood et al (2000) conducted a study to find positive results on the effect of user skills to satisfaction of end users of information technology. Soegiharto (2001) also suggested that the indirect effect between the personal ability of information systems to user satisfaction.

H3 : Users competency of information systems affect on the users satisfaction of information systems.

Research methodology:

The research method used is explanatory survey method, which describes causal relationships and correlations between variables through hypothesis.
The survey was conducted to collect facts through questions to the people who are intended to help answer research hypotheses as a source of information about the users' competency of information systems, MAIS quality, and user satisfaction of information systems.

This research population is the operations manager at a manufacturing company in Medan, Indonesia and surrounding areas who have been using computer-based accounting information systems. Selection of the target respondents operational managers, because in doing so their everyday use of information systems, and the need to take decisions with regard to their daily duties.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>The amount of</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of Questionnaires distributed</td>
<td>268</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Number of Questionnaires returned</td>
<td>139</td>
<td>51.87</td>
</tr>
<tr>
<td>3</td>
<td>Number of Questionnaires that can be processed</td>
<td>97</td>
<td>41.27</td>
</tr>
</tbody>
</table>

To determine significant levels partially between each independent variable and the dependent variable, then the hypothesis must be tested by t-test at the significant level of $\alpha=5\%$. Subsequently, a decision was taken, acceptance or rejection of the hypothesis by comparing the significant value gained from the statistical test result with a significant value specified at 0.05 or 5%.

Research hypothesis can be visualized as shown below:

![Research Model](image)

**RESULT AND DISCUSSION**

**Result:**

Statistical test results showed that the contribution of variable users’ competency of information systems to the quality of MAIS with $R^2$ values of 0.646 (64.6%) and the remaining 35.4% is not described in this study. For a contribution of users’ competency of information system variable and the quality of MAIS on user satisfaction by 0.819 (81.9%). Directly, the variable user competency of information systems on user satisfaction is not significant, and the quality of MAIS on user satisfaction significantly. Summary statistical result of research can be seen in the following table:

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$R^2$ (R Square)</th>
<th>Beta - Standardized Coefficients</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Quality of Management Accounting Information Systems</td>
<td>0.646</td>
<td>0.646</td>
<td>0.000</td>
</tr>
<tr>
<td>User Competency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Satisfaction of Information Systems</td>
<td>0.819</td>
<td>0.085</td>
<td>0.273</td>
</tr>
<tr>
<td>The Quality of Management Accounting Information Systems</td>
<td>0.762</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

From Table 2 can be explained that the effect of user competency of information system to the quality of management accounting of information systems (PY.X) has a value of beta standardized coefficients of 0.646 (64.6%) with a significance value of 0.000. Meanwhile, the influence of the users competency of information systems on user satisfaction (PZ.Y) is not significant, are shown on the value of the beta standardized coefficients of 0.085 (8.50%) with a significance value of 0.273.
For a indirect influence, users competency on user satisfaction through the quality of SIAM can be calculated by multiplying the value of 0.646 (64.6%) with a value of 0.085 (8.50%) obtained a yield of 5.49%. The total value of users competency influence on user satisfaction at 13.99% (8.50 + 5.49). The indirect effect are significant influence, thus the quality of MAIS can be an intervening variable for users competency affect on the user satisfaction.

**Discussion:**

**Information System User Competency and The Quality of Management Accounting Information System (MAIS):**

The results support the results of research conducted Choe (1996) that the use of information systems can be affected due to the ability of personnel. Profitable for the company to have at least one personnel with high ability information systems in the company, because it can help other users to use information systems correctly (Soegiharto, 2001). The manager has insight into the use of the system, meaning that every operational manager in the company has the ability to use information systems that have been built. The manager strongly agree that the of information systems help their work.

For a be a manager, both operational managers (low manager and middle manager) as well as top managers (top manager) required competency are qualified, so many manufacturing companies in the city of Medan-Indonesia using psycho tests and academic potential to look at competency a person to be lifted became manager. As we know that competency is a level of performance that demonstrate the effective application of knowledge, skills and the management (Funk, 2005:33). Where the main competency is the knowledge and ability to carry out certain types of activities which involve a combination of technical expertise and skills of application (Yukl, 2010:419).

Combining the knowledge and skills users will lead to a better solution. So, it is not profitable for the organization if the employee fails to contribute their knowledge, because knowledge, personal skills and intelligence of individual staff involved will be very important. The system is a tool, while the running or the input are human, so the success of the information systems depends on the user will use it appropriately or not (Salim, 2010). When there is a change in the enterprise information system, users often have difficulty leaving the process and old habits into new process, then to overcome it happened and that the process is effective, the company will conduct the training. Training and development of human resources is one of the tools in the company to improve the competence of the user.

**The Quality of Management Accounting Information System (MAIS) and User Satisfaction:**

The positive influence of trends in the value of coefficients has proved the hypothesis that built (H2). User satisfaction depends on the quality or success of an information system that can help the completion of tasks based on those users and amount of use and the nature of the users of the system (Weber, 1997:907). The research results are also in line with DeLone & McLean (1992, 2003) and Stair & Reynolds (2010:74); that user satisfaction can be seen in the quality of information systems and the quality of information produced. In the context of MAIS, this study is in line with research Mia & Patiar (2001); Hamdan (2012); and Fleischemen et al (2010), the satisfaction felt by users on MAIS based on the accuracy of the information, timeliness and relevance.

Results of this study answer the problems that arise, especially the problem of the quality of information systems (MAIS). The operations manager of a manufacturing company in Medan-Indonesia agree that good information system will be able to improve the working relationship between division and were able to increase the company's competitive power. However, the manager said that in the company they are still not well integrated, the reason being the system used is still not able to provide personal data for any who needs without having to deal with personal data or information that is working is needed.

The problems that arise during this time as the manufacture industry, integrated information system that is not able to influence the effectiveness of the work process (Rochimat, 2012), the more time it takes to process the data, decision making becomes slow and would hamper the company's growth in the future (Karlis, 2011). In the aviation transport industry, as a result of the system is still not good and the airline has not been able to quickly and easily collect and analyze passenger data, so it can not provide the best service to customers (Anand, 2012). It means that the concept of information systems relate to each other and work together in harmony to achieve a goal yet to be achieved. The condition was consistent with research Georgantzas & Katsamakas (2010) that the lack of integration of information systems have a damaging effect on business performance, income and quality of the measurement.

The results support the quality of information systems that can be used as a basis for decision making. Users say satisfied when MAIS which is used to support short-term decisions and long-term, user satisfaction is also related to the frequency of use of available information systems (Mia & Patiar, 2001; Hamdan, 2012). Fleischemen et al (2010) also states that the satisfaction felt by users on MAIS respect to use based on the interests and based on the accuracy of the information, timeliness and
relevance. Statement Fleischmenn et al supported the results of the answers of the manager who showed that when the information system produce information on time or when information is needed quickly available, the manager showed his satisfaction.

**Information System User Competency and User Satisfaction:**

The users competency to user satisfaction no significant effect. Thus, the results of this study do not support the hypothesis (H3) that have been built. Research results Mahmood et al (2000) found a positive effect between the skills of the users of information technology end user satisfaction significantly. However, in this study shows that the satisfaction felt by the operations manager if they have used the information systems quality. In other words that the quality of the MAIS become an intervening variable in terms of their competence effect the operations manager to the user satisfaction of information system.

The user satisfaction of information systems from the point of view of the user when the information systems meets user expectations (Fisher, 2001). Results of this study has shown, that user expectations of operational managers of manufacturing companies in the city of Medan - Indonesia has been fulfilled, because the information systems used produce output in a timely manner, whenever operational managers need information, information systems can be used to produce the information. The manager is also satisfied that the information system used produce output in an effective and customized information systems used by the workflow managers. An information system to be qualified because of the intervention of the user, as said Dennis et al (2009:9), users will feel the satisfaction of seeing a system that was designed and developed make significant business impact, while knowing that the user's unique skills to help make it happen. In this study support the hypothesis (H4) and research Soegiharto (2001) that the competence indirect effect on the user satisfaction of information system.

The user satisfaction can also be seen from the harmonious relationship between the users of information systems with the company information systems staff. In the case of manufacturing the company Medan-Indonesia shows a harmonious relationship with the staff of information systems (IT team), whereby when the user experience barriers show a swift response. Alertness IT staff has helped to facilitate the operations manager to perform their daily tasks. Harmonious relations and communications made operational managers with IT staff well, it is interpersonal skills including competence section. Interpersonal skills is the ability to work with others, and work effectively as a team member. The skills shown by the ability to motivate, facilitate, coordinate, lead, communicate and resolve conflicts (Daft, 2010:10). These results support the research Choe (1996) which shows a positive correlation between the user satisfaction and personal ability information systems. Thus, hiring and retaining skilled employees can improve the user satisfaction.

**Conclusion:**

Based on the results and discussion of research described, the research concluded. The users competency of information systems, particularly operational managers can improve the quality of MAIS. An information system to be qualified and the increased use of information systems because users have a good competence, especially in terms of understanding on an information system built and used in the company. MAIS quality used by the users will increase user satisfaction of information system. When the system built can help managers complete the work that is the responsibility and when managers obtain timely of information as decision-making, then the company's managers feel the satisfaction to the MAIS used. Users competency are not able to improve the user satisfaction without the use of information systems quality. Thus, MAIS qualified as a very positive intervening between the users competency of the user satisfaction of information systems.

**REFERENCES**


