

The Antecedents and Consequences of Accounting Information System Implementation: An Empirical Study on MSMEs in Semarang City

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Abstract-This study examines the implementation of accounting information system in Micro, Small, and Medium Enterprises (MSMEs) and its implications on the quality of information and decision-making. The purpose of this study is to investigate the factors that influence the implementation of an accounting information system and its consequences on the quality of information (output) for MSMEs users in Semarang City. The results show that there is a positive and significant influence between the manager's knowledge and the manager's commitment to the implementation of an accounting information system. Consequently, the implementation affects the quality of accounting information for MSMEs.

Keywords-User Knowledge, User Commitment, Implementation of Accounting Information System, and Quality of Accounting Information

I. INTRODUCTION

The fundamental role of accounting information system in organizations is holding and processing accounting data to produce qualified accounting information in an effort to support the company's internal activities carried out by companies with outside parties such as consumers, government, suppliers, and others (Susanto, 2013). Accounting information resulted from a qualified accounting information system is one of the organizational competitive advantages (Baltzan, 2012). Qualified accounting information is useful to assist information users in making useful decisions (Gellinas, 2012). Qualified information is obtained at the right time for decision-making and more optimal resources allocation as well as better response time so that it can reduce costs and increase profits (Laudon and Laudon, 2007). Conversely, poor accounting information can cause bad decision-making for users and as a result, it may cause inefficiencies/losses (Huang et al, 1999).

The quality of financial statements is the extent to which the financial statements presented show fair and honest information. This is important as a basis for making economic decisions for the parties involved. Financial statements with various measurements are generally used in investment decisions, compensation agreements, and debt requirements. In regard to tax regulations, MSMEs

also need to present financial statements or a minimum record of sales.

In general, MSMEs in Indonesia rarely carry out accounting practices in the management of their businesses (Pinasti, 2001). In consequences, the quality of accounting information produced by MSMEs is still low (Rudiantoro & Siregar, 2011). Accounting practices for MSMEs in Indonesia have many weaknesses (Suhairi et al., 2004). Broadly speaking, these drawbacks include low levels of education and overload accounting standards that have been used as guidelines for financial reporting preparation (William et.al., 1989; Knutson and Henry, 1985; Nair and Rittenberg, 1983; Wishon, 1985; Murray et. al, 1983).

The absence of implementation and use of accounting information in most MSMEs management is determined by the perception of MSMEs actors on accounting information. For most MSMEs, it is not necessary to use accounting information as it is seen unimportant (Hariyanto, 1999). They also find accounting as something that is very difficult to implement (Idrus, 2000). In addition, accounting practices have not been implemented optimally by most MSMEs since they have never been benefited from accounting information.

The lack of accounting information among MSMEs has an impact on the narrow access of MSMEs in banking. Generally saying, the limited access to MSMEs capital is due to the limited information that can be used by the management, potential investors, or creditors in assessing and monitoring the development of these MSMEs. MSMEs need accounting practices because proper accounting practices can provide more complete and structured information regarding the business and financial position.

From previous studies (Pinasti, 2001; Rudiantoro & Siregar, 2011; and Suhairi et al., 2004), it can be obtained that there are many MSMEs that have not held accounting practices such as using accounting information system maximally in managing their businesses. There still many MSMEs that use traditional records without adapting to Financial Accounting Standards (SAK). A number of MSMEs stated that the preparation of financial statements based on IFRSs tends to be costly and complicated. They

assume that the value of the benefits generated is not comparable to the cost of preparation. In fact, the implementation of good accounting practices will add value to information and play an important role in the decision-making process (Suhairi, 2006). Through the preparation of financial statements, business actors will achieve a structured and systematic overview of business activities and financial position so that rational decision making will be easily obtained. The implementation of accounting practices will increase the access of MSMEs to financial resources because financial statements are an absolute part that must be owned by MSMEs if they want to make capital proposals to creditors which in this case, is formal financial institutions. In this study, accounting practice is reflected in the implementation of the accounting information system which can be influenced by the knowledge and commitment of MSME users.

The relationship between information technology and accounting related to accounting management and control is still very limited (Granlund, 2011). In this context, many MSMEs have aligned technology applications with business operations but only a few that managed to integrate information technology into their business units (Chen and Wu, 2011). The purpose of this study is to analyze the factors that influence the implementation of accounting information systems and how they affect the quality of accounting information on MSMEs. The factors in question are the knowledge of the perpetrators and the commitment of MSMEs actors as well as the implementation of an accounting information system on the quality of information utilized in MSMEs. It is expected that this study can give empirical evidence about the use of SIA in MSMEs.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

User Knowledge and Accounting Information System

According to Marbun (1997), one of the weaknesses of MSMEs in Indonesia is that these entities generally do not master and practice an adequate financial system. In general, MSMEs do not or have not had the knowledge and ability to adequately manage accounting records which are disciplined with daily, weekly, monthly, or annual bookkeeping so that many MSMEs do not understand the importance of recording and bookkeeping for business continuity. This is due to the lack of quality of human resources owned by MSMEs. The quality of human resources is the ability to carry out the tasks and responsibilities given with adequate education, training, and experience (Arfianti, 2011). With the existence of adequate education, training, and experience, users can gain knowledge thus will encourage the implementation of an information system to obtain financial reporting that can assist users in carrying out MSMEs business processes. Based on these assumptions, the hypothesis can be proposed as follows:

H1. User knowledge has a positive effect on the implementation of an accounting information system

User Commitment and Accounting Information System

According to Cooper (2006), commitment is “being involved and maintaining behavior to achieve goals”. The commitment of MSMEs as users of an accounting information system can affect the implementation of the system in question. Thong et al., (1996) argued that if the top management support is low, the top management might not be involved in implementing the information systems. Conversely, if the top management is committed to information systems (such as recommending consultants, participating in decision-making, monitoring projects, or approving the purchase of computer systems), management commitment will increase the effectiveness of information system implementation because they provide the resources needed for the information system project. Rahayu (2012) examined the effect of management commitment on data quality and Accounting Information Systems, the study found that management commitment and data quality together had an adequate effect on Accounting Information Systems. From here, it is predicted that the commitment of MSMEs, as users who understand the importance of accounting information, can encourage the concerned parties to implement accounting information systems. Therefore, the next hypothesis proposed in this study is:

H2. User commitment has a positive effect on the implementation of an accounting information system

The Implementation of Accounting Information Systems and Quality of Accounting Information

Accounting Information Systems (AIS) was developed with the main objective to process accounting data from various sources into accounting information needed by various types of users to reduce risk when making decisions (Susanto, 2013). In developing a system, the implementation stage or system usage is a crucial stage in producing qualified accounting information. Laudon and Laudon (2007) emphasized that the application of accounting information systems will produce the quality of accounting information needed by users in making decisions. Mulyani (2009) also added that to calculate operational costs, companies use accounting information systems as a medium to generate information so that managers in the management level can make decisions such as the costs of food spent on each worker as well as the costs of telecommunications, coordination, installation, maintenance, and others. In addition, with SIA, companies can find out the advantages and disadvantages of a project so that managers will make decisions appropriately and according to the project conditions.

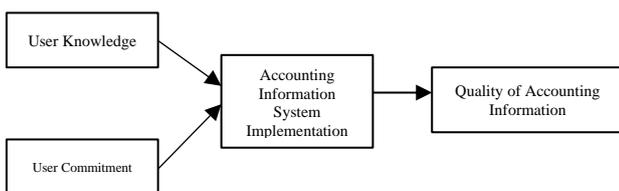
Furthermore, Weber (1999) said that the quality of accounting information systems can be seen from the relationship between the users and staff of the information system. A qualified accounting information system will provide excellent information. O’Brien (2004) underlined that accounting information systems can help users achieve each managerial function through the provision of accounting information. Besides that, accounting information systems can help users by providing accounting information for the needs of internal and external sources. It can help managers organize

organizational staff and direct the organization with the existing human resources. Last but not least, accounting information systems play a major role in the control function of management. Gelinas (2012) also wrote that the quality of accounting information systems is very important for the success of an organization by facilitating daily operational processes and accounting information that is useful for the users or management of an organization.

From several explanations above, it can be inferred that AIS is built with the main purpose of processing accounting data from various sources into qualified accounting information needed by various types of users to reduce risk in decision-making. The quality of accounting information is very important for the success of an organization. The above statement is confirmed by several research results which state that the implementation of a qualified accounting information system significantly influences the quality of accounting information. The implementation of a qualified accounting information system is needed to produce qualified information that is useful in effective decision-making. The benefits of accounting information systems can be evaluated from the impact of improving the decision-making process, the quality of accounting information, performance evaluation, internal control, and company transactions (Hussein and Hasan, 2007; Azleen and Rahida, 2007; Abdolkarim Salehi, 2010; Xu, et al, 2003; Mamic, 2006; Onalapo and Odetayo, 2012; Alzoubi, 2011; Miikka and Josu, 2006; Komala, 2012; Rahayu, 2012).

From some of the statements and findings of the research above, it can be implied that there is an influence between the implementation of accounting information systems and the quality of accounting information. By that, the next proposed hypothesis is:

H3. The implementation of accounting information system has a positive effect on the quality of accounting information



Picture 1. Research Framework

III. RESEARCH METHODS

The focus of this study is to examine the effect of knowledge factors and user commitment to influence the implementation or use of AIS on the quality of accounting information needed by users in Semarang City MSMEs. The research respondents were MSME practitioners covering all fields of business such as trading, services, and industry. Questionnaires were sent online to the MSMEs business communities that are quite active in Semarang. The selection of respondents was based on the activeness and knowledge of each member of the business

community, especially in mastering technology. The data were collected from the distribution of questionnaires on 80 MSMEs.

Variable Measurement

There are four main variables in this study, namely user knowledge, user commitment, AIS implementation, and the quality of accounting information. User knowledge variable was measured using an instrument developed by Komala (2012) which consists of 6 questions that measure the extent of knowledge and experience of MSMEs managers about accounting, accounting information systems, and managerial. Meanwhile, the user commitment variable was measured using the instrument from Rahayu (2012) which consisting of 5 questions with a 5-point Likert scale that measure the level of commitment, strength, and involvement of MSMEs owners in applying technology. On the other hand, the variable of AIS implementation was measured using an instrument developed by Rahayu (2012) that is by looking at the extent to which MSMEs use hardware and software in their business operations in the accounting information system. Last but not least, the quality of accounting information also measured using an instrument from Rahayu (2012) which includes 6 items of questions covering four dimensions such as the range, aggregation, integration, and timeliness.

IV. RESULTS AND DISCUSSION

MSMEs data were collected through online surveys and obtained a sample of 80 respondents which consisted of 21% of MSMEs in the service sector, 50% of MSMEs in the trading sector, and 28% of MSMEs in the production sector. 31% of the respondent’s company has been established for less than 2 years, the other 47% are between 2 to 10 years, and the others are over 10 years. Most of the respondents' companies are small companies with not more than 6 employees. The descriptive statistics of the respondents are illustrated in Table 1 below.

Table 1. Descriptive Statistics of Respondents

Information	Amount	Percentage
Type of business:		
Service	17	21%
Production	23	28%
Trading	40	50%
Length of business:		
<2 years	25	31%
2-10 years	37	47%
>10 years	18	22%
Number of employees:		
1-5 people	68	86%
6-20 people	8	10%
>20 people	4	4%

Source: Processed primary data

Data reliability and validity tests have been conducted to ensure the consistency of respondents' answers in questionnaires and the validity of the questions in questionnaires. The reliability test produced the value of Cronbach's Alpha by 0.70 for the variables of user knowledge, user commitment, AIS implementation, and the quality of accounting information so that all data are declared reliable (Nunnally, 1994). Meanwhile, the validity

value showed a significant number at 0.01. From these results, it indicates that the respondent's answer and the question items in the questionnaires are reliable and valid. The complete reliability and validity test results are presented in Table 2.

Table 2. Reliability and Validity Test Results

Variable	Cronbach's Alpha	Pearson Correlation
User Knowledge	0,701	0,716-0,796**
User Commitment	0,905	0,844-0,952**
Accounting Information System Implementation	0,972	0,958-0,976**
Quality of Accounting Information	0,846	0,786-0,864**

**level of significance by 001

Furthermore, the classic assumption test was carried out to ensure that all data is free from classic assumption problems. From the results of the multicollinearity test, it is known that the VIF value for all independent variables is below the value of 10 so that there is no problem with multicollinearity. On the one hand, the Durbin-Watson value showed a value that is below 1.76 which means that there is no problem of autocorrelation. The results of normality and heteroscedasticity tests generated a random pattern and thus it can be declared that there are no symptoms of normality or heteroscedasticity. The results of the multicollinearity and autocorrelation tests can be seen in this following Table 3.

Table 3. Multicollinearity and Autocorrelation Test Results

Variable	Tolerance	VIF	Durbi-Watson
Manager Knowledge	0.719	1.391	1.312
Manager Commitment	0.784	1.273	
Accounting Information System Implementation	0.904	1.106	

Source: Processed primary data

After testing the respondent's data, a hypothesis test can be done for each hypothesis. The regression equation to represent the research model is as follows:

$$Y = a + b1X1 + b2X2 + b3X3 + e$$

Where:

Y = Quality of Accounting Information

a = Constant

X1 = User Knowledge

X2 = User Commitment

X3 = Accounting Information System Implementation

The aim of this test is to see the effect of independent variables on the dependent variable. The hypothesis test results support all hypotheses. In details, the results of the hypothesis test are summarized and presented in Table 5.

Table 4. Hypothesis 1 and Hypothesis 2 Test Results

	Adjusted R Square	F Statistic Test	Significant	Statistic test	Significant
	0,913	416.390	.000 ^b		
Manager Knowledge				3.098	.000**
Manager Commitment				12.024	.000
Accounting Information System Implementation				.084	.003

Source: Processed primary data

Table 5. Hypothesis 3 Test Results

	Adjusted R Square	F Statistic Test	Significant	Statistic test	Significant
	0,116	11.333	.001		
Accounting Information System Implementation				13.330	.000**
Quality of Accounting Information				33.66	.001

Source: Processed primary data

Hypothesis 1 and hypothesis 2 state that user knowledge and user commitment influence the implementation of AIS in MSMEs. The test results in hypotheses 1 and 2 show a significance value below 0.05 which means that the knowledge and commitment of MSMEs practitioners as a user system has a positive and significant effect on the implementation of AIS in MSMEs. This indicates that the knowledge and commitment of users is an important asset for a company and MSMEs. Despite limited resources, MSMEs with high user knowledge and commitment can encourage the implementation of AIS in the business activities. Broader knowledge of managers and higher commitment of practitioners are proven to increase the utilization of AIS in companies and MSMEs. The results of this study are in accordance with the study conducted by Ismail and King (2007) as well as Al-Eqab and Ismail (2011).

Whereas, hypothesis 3 points out that the use of AIS affects the quality of accounting information. The results of hypothesis 3 test show a significance value of less than 0.05 which means that it supports hypothesis 3. It can be said that the use of AIS has an effect on the quality of accounting information. These results indicate that the higher use and utilization of AIS in MSMEs will further

improve the quality of corporate accounting information. The implementation of AIS conducted routinely by MSMEs will assist the preparation of various reports in a structured, accurate, and timely manner; consequently, it will produce qualified accounting information. The quality of accounting information system is very important for the success of an organization, namely by facilitating daily operational processes through the provision of accounting information that is useful for the user or management of an organization (Gelinias, 2012). In addition to that, the results of this study are in line with the research of Ismail and King (2007).

CONCLUSION

The hypothesis test results show that there is a positive and significant relationship between all variables. The variables of user knowledge and user commitment also significantly influence the implementation of AIS in MSMEs. Furthermore, the implementation of AIS is proven to have a significant effect on the quality of accounting information produced. The results of this study reinforce the importance of using AIS in managing a business operation in a company to support strategic decision-making based on qualified accounting information.

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