Factors That Affect Accounting Information System Success and its Implication on Accounting Information Quality

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Abstract: Accounting Information System provides financial information and supports decision tasks in the coordination context organizational activities control and strategic decision-making. The purpose of this study is to investigate factors that affect accounting information system success and accounting information quality. It examines the influence of organizational commitment and culture on accounting information system success and its implication on accounting information quality. This study employed a survey conducted in Muhammadiyah higher education in Central Java, Indonesia. The data analysis for hypothesis testing was Structural Equation Modeling with Smart PLS (Partial Least Square). The main findings indicate that organizational commitment and culture have positive and significant affect on accounting information system success. Furthermore, the relation between accounting information system success is significantly related to accounting information quality.

Key words: Organizational commitment organizational culture, accounting information systems, accounting information quality, Central Java, Indonesia

INTRODUCTION

In managing an organization and implementing an internal control system the role of accounting information is crucial. An important question in the field of accounting and management decision making concerns the fit of accounting information with organizational requirements for information communication and control (Nicolaou, 2000). An accounting information system is one of the most effective decision making tools in dealing with this complexity and uncertainty. Accounting information may help managers to understand their tasks more clearly and reduce uncertainty before making their decisions (Chong, 1996). Uncertainty here implies the lack of information compared to what a decision-maker needs to make a decision and the fewer managers are able to predict the outcomes from their actions, the more uncertainty there is.

Accounting information system is defined as a computer-based system that processes financial information and supports decision tasks in the coordination context organizational activities control (Nicolaou, 2000) and strategic decision-making (Spathis and Constantinides, 2003). According to Sabherwal et al. (2006), information system success constructed from four aspect of information system success including system quality, perceived usefulness, user satisfaction and system usage. The effective accounting information system will enhance financial statement quality. Implementation of accounting information systems at these companies caused the improvement of managers’ decision making process, internal controls and the quality of the financial reports and facilitated the process of the company’s transactions (Sajady et al., 2012).

This study has focused on the perception of accounting staff about the factors that contributes to accounting information system success and information quality. The objectives in this study is to measure the influence of organizational commitment and culture on accounting information systems success.

Literature review
Organizational commitment: Organizational commitment is defined as the degree to which an employee identifies with a particular organization and its goals and wishes to maintain membership in the organization (Kreinter and Kinicki, 2001). Mathis and Jackson defines organizational commitment as the degree to which employees believe in and accept organizational goals and desire to remain with the organization. According to McShane and Glinow, organizational commitment refers to the employee’s emotional attachment to identicfication with and involvement in a particular organization.

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Organizational commitment reflects employees' general response to the values and goals of the organization which gives the management a general idea of the majority's attitude (Meyer et al., 2007). Mathieu and Zajac (1990) discovered that organizational commitment was composed of two components, attitudinal and behavioral. Attitudinal commitment is related to how people view their values and goals in relation to their organizations. Whereas, behavioral commitment refers to a person's attachment to an organization no matter the consequences associated with that attachment (Cistulli et al., 2012). Hunt and Morgan (1994) identified three characteristics of organizational commitment which include: a strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization and a strong desire to maintain membership in the organization.

Meyer et al. (2007) indicated that there are three components of employee's commitment to the organization: first, affective commitment that is defined as the employee's positive emotional attachment to the organization. This employee commits to the organization because he/she “wants to”. Chang (1999) and Somers and Birnbaum (2000) state that affective commitment is the rate at which individuals are psychologically linked to the organization through feelings of loyalty, care and sense of belonging.

Second, continuance commitment defined by Meyer et al. (2007) is the need component or the gains versus losses of working in an organization. It is the commitment of the employees will stay or leave the organization because they see any rational consideration. Somers and Birnbaum (2000) and Burr and Girardi (2002) suggest the continuance commitment is an attachment to the organization due to the employee's perceived investment psychologically or economically that it is more advantageous to stay than to leave and to work in another organization.

Third, normative commitment is defined as the individual commits to and remains with an organization because of feelings of obligation, the last component of organizational commitment. The employee stays with the organization because he/she “ought to” (Meyer et al., 2007). Chang (1999) and Burr and Girardi (2002) argued that normative commitment is included in moral component because it deals with a sense of duty and responsibility of employees in the organization.

Organizational culture: Organisational culture is often defined in terms of shared meanings, patterns of beliefs, rituals, symbols and myths that evolve over time, serving to reduce human variability and control and shape employee behaviour in organizations and it solved its problems of external adaption and internal integration (Schein, 2010). According to Weiss, organizational culture is the shared values, beliefs, norms, expectations and assumptions that bind people and systems together. It gives people a sense of identity; facilitates commitment, initiative, communication and provides a basis for stability, control and direction.

Saffold (1988) states that organizational culture permeates organizational life in such a way as to influence every aspect of the organization. It has been suggested that culture affects such outcomes as productivity, performance, commitment, self-confidence and ethical behaviour (Denison, 1984; Posner et al., 1985).

Cultural organizations play an important role in building managerial behavior because it is the foundation of the organization's internal environment (Griffin and Moorhead, 2012). Hofstede and Hofstede add that the culture is built essentially on the human nature (universal) and of the individual's personality (specific to individual). According to Robbins (1997), organizational culture is a system of shared meaning held by members that distinguishes the organization from other organizations. There are seven characteristics of the organizational culture, namely: innovation and risk taking, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness and stability.

Accounting information system: According to Romney and Steinbart, an accounting information system is a system that collects, records, stores and processes data to produce information for decision makers. O'Brien (1995) states that an accounting information system is an integration of resource such as people and equipment, designed to transform financial and other data into information. Sajady et al. (2012) state that effectiveness of accounting information system depends on the perception of decision-makers on the usefulness of information generated by the system to satisfy informational needs for operation processes, managerial reports, budgeting and control within organization.

Sabherwal et al. (2006) state that information system success constructed from four aspect of information system success including system quality, perceived usefulness, user satisfaction and system usage. According to DeLone and McLean (1992), a model of IS success that included six constructs: system quality, information quality, use, user satisfaction, individual impact and organizational impact. DeLone and McLean (2003) update the model and refer to it as Updated D&M IS Success Model, applying the dimensions of system quality, information quality, service quality, system use, user satisfaction and net benefits.

Davis (1989) makes a model of the Technology Acceptance Model (TAM) to measure information
systems success. The behavior using information systems is initiated by perceived usefulness and perceived ease of use. These perceptions affect individual attitude towards the use of information systems which in turn will determine whether or not they will continue to use information systems.

**Accounting information**: Information is defined as a collection of facts that have been organized and processed to provide meaning to a user. Information is useful in a decision making activity (Stair and Reynolds, 2001). According to Romney and Steinbart benefits of information may include: reduction of uncertainty, improved decisions and improved ability to plan and schedule activities. One of the information systems functions is to provide important information to help managers in controlling activities and reducing an uncertainty (Anthony and Govindarajan, 2003).

Characteristics that make information useful are relevance, reliability, completeness, timeliness, understandability and verifiability. Gelinas and Dull state that qualities of information: effectiveness, efficiency, confidentiality, integrity, availability, compliance, reliability. Hall suggest that useful information has the following characteristics: relevance, timeliness, accuracy, completeness and summarization. O'Brien (1995) summarizes the important of information and groups them into three dimensions, namely: time dimension: timeliness, currency, frequency, time period, content dimension: accuracy, relevance, completeness, conciseness, scope, performance, form dimension: clarity, detail order, presentation, media.

The dimensions of the quality of accounting information consisting of relevancy, accuracy, timelines and completeness (McLeod and Schell, 2007). According to Gelinas and Dull, information has relevance when it is capable of making a difference in a decision making situation by reducing uncertainty or increasing knowledge for that particular decision. Information that available to a decision making before it loses its capacity to influence a decision has timelines. Lack of timelines can make information irrelevant. Stair and Reynolds (2001) state that accurate information is error free. Completeness information is no piece of information essential to a decision or task should be missing.

**Conceptual framework**: Organizational commitment is the loyalty of employee to their organization and is a continuous process in which the employees are also participating in declaring their attention on the existence and the success of the organization. Employees with a high level of commitment try to be part of and contribute to the success of the organization. Employees who have a high commitment to the organization will demonstrate positive attitudes and behaviors towards the organization, employees will have a spirit to defend his organization, seek to improve achievement and have a willingness to help in realizing the goals of the organization. According to Meyer and Allen (1991), a committed employee is the one who stays with the organization through thick and thin, attends work regularly, puts in a full day (and maybe more), protects company’s assets, shares company goals and others. Thus, having a committed workforce would be an added advantage to an organization.

Organizational commitment constitutes an attitude which can be divided into three basic components: emotional, informational and behavioral. Greenberg and Baron (1993) state that the staffs having high organizational commitment are more stable and more productive. Employees who have a high commitment to the organization have a longer working time and tend to work harder and show a better performance. Thus, the organizational commitment has led the employees to implement a system built in an organization in a better way including in the accounting information systems. Choe (1996), Larsen (2003), Seyal and Rahman (2003), Ismail and King (2014) state that organizational commitment is one of the critical success factors in the implementation of information systems in organizations. Basu et al. (2002) also concluded that organizational commitment has a positive impact on the achievement of the objectives of strategic information systems planning. Tee et al. (2007) state that managers participating in the organization is committed to the achievement and maintenance of high-quality data generated from information system. On this basis this study proposes first hypothesis:

- $H_i$: organizational commitment has effect on accounting information system success positively.

An understanding of culture is important to the study of information technologies in that culture at various levels including national organizational and group can influence the successful implementation and use of information technology. Culture also plays a role in managerial processes that may directly or indirectly, influence information technology. Variations in cultural values can lead to differences of perception and approach in information systems implementation (Leidner and Kayworth, 2006). Jones and Alony (2007) state that information system design needs to accommodate the cultural variances that exist around the world to provide a more homogenous solution. According to Romney and Steinbart to function accounting information systems in an organization, it should be designed to reflect the values of organization.
Organizational culture. It will not be able to run well, if it is not supported by organizational culture and adequate human resources.

Nickels and Janz (2010) suggest that organizational culture change initiatives may hold the potential to contribute to the achievement of an optimal level of information technology business alignment. Indeje and Zheng indicate that organizational culture has a strong influence on financial information systems development and implementation. The identification and understanding of meanings, norms and power in organizations is an important consideration when developing and implementing an information system. Likewise, Laudon and Laudon state that the organizational culture is one of the important organizational factors to consider when designing information systems. The system designer should be able to do something that will make the system information more acceptable. I decided to include the theories as the basis as the model in the form of hypotheses 2:

- $H_2$: organizational cultural has affect on accounting information system success positively.

The increasing emphasis on information for competitive advantage means that organizational growth and survival now depend on the organization’s ability to implement effective information systems (Borthick et al., 1990). According to Spathis and Constantinides (2003), accounting information systems are capable of producing real-time information for management to respond to thus improving control and strategic decision-making. Mia and Chenhall (1994) argued that failure to adopt and implement accounting information system is the reason why most companies fail to make sound decisions as their information keeping tend to be haphazard as the firm grows.

Information systems has defined system effectiveness in terms of user information satisfaction or perceptions of system users about the extent to which the information system available to them meets their information requirements (Ives et al., 1983). According to Nicolaou (2000), accounting information system effectiveness is defined in terms of the perceptions of decision-makers that the output information available to them through transaction processing, management reporting and budgeting systems meets their requirements for organizational coordination and control. Benefits of accounting information system can be evaluated by its impacts on improvement of decision-making process, quality of accounting information, performance evaluation, internal controls and facilitating company’s transactions (Sajady et al., 2012).

The quality of information generated from AIS is very important for the management of accounting information as management is engaged with different types of activities which require good quality and reliable information (Ogah, 2013). The quality of information is directly linked to how it helps decision makers achieve their organization’s goals. McLeod and Schell (2007) state that the quality of accounting information consisting of relevancy, accuracy, timelines and completeness. In this context, hypotheses 3 in put forward:

- $H_3$: accounting information system success has affect on accounting information quality positively. Based on the above, the framework of this study can be depicted as Fig. 1.

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Fig. 1: Conceptual framework
MATERIALS AND METHODS

Research methodology used in this study is survey method by means of a questionnaire measuring. Respondents of this study are accounting staff from Muhammadiyah Higher Education in Central Java, Indonesia. Techniques of questionnaire have used for gathering primary research data at statistical society simultaneously and questionnaire has used by Likert five choices spectrums perfectly agree or disagree. Analysis of the data in this study using Structural Equation Modeling with Partial Least Square.

RESULTS AND DISCUSSION

The response rate from all distributing questionnaires was 59.3%. Slightly two third of the respondents (75%) were female. Approximately, a half of the respondents (46.9%) were between 36-40 years old followed by 40.6% who were <35 years old and 12.5% who >40 years old. The majority of the respondents (56.2%) had a undergraduate certificate or higher and 43.8% having a diploma certificate. The users’ background ranges from accounting (78.2%) and other (21.8%).

Based on the results of data processing by using the PLS approach, it is known that the model has met the convergent validity, discriminant validity and reliability of the instrument. It was then followed by testing the goodness of fit of inner models using the $R_{m}^{2}$, dependent latent variables. $R_{m}^{2}$ value for accounting information system and for accounting information are equal to 0.6144 and 0.6533. This means that the success of the accounting information system can be explained by organizational commitment and organizational culture with a value of 61.44% and the accounting information can be explained by accounting information system with a value of 65.33%. $Q_{m}^{2}$ value is equal to 0.6432. This means that organizational commitment organizational culture and accounting information system have a good level of prediction of the quality of accounting information.

Organizational commitment and culture have a positive affect on accounting information system success significantly. Positive affect has also a part of accounting information system success and accounting information quality.

In implementing the system, it requires information technology covering hardware, software, databases and telecommunications network. Information technology continues to change and it has an impact on the changes of the accounting information systems. This indicates that the accounting information system development is continuously done. Therefore, to make it successfully functioned, it needs the support of the employees who are open, well prepared and ready for change. The concept of readiness for change describes employee belief in the benefits of a change to the organisation and work processes and that these changes have a high likelihood of being successfully implemented (Eby et al., 2000).

A high level of organizational commitment shows the employees’ attachment and loyalty to the organization; it will encourage them to always work in a variety of situations in the company. According to Visagie and Steyn (2011), the organizational commitment is one of the factors affecting the employees’ readiness to change, especially the affective and normative commitment. Likewise, according to Holt et al. (2007), there is a relationship between affective commitment to the readiness for change. Employees who have a strong affective commitment will continue to work in the organization because they are loyal and they love the organization (Chang, 1999). With a high organizational commitment, the employees trust in the organization’s objectives so that they have a positive perception of the system implementation. The employees have a high perception of the ease of use and the usefulness of the accounting information systems, henceforth they are motivated to use the system to improve their performance in line with organizational objectives.

Newman and Sabherwal (1996) and Cabrera et al. (2001) who argue that organizational culture plays an important role in the management of information technology and the management of the information systems development. Understanding how organizational culture can facilitate how to implement the information systems.

The accounting information system consists of components (hardware, brainware, procedure, databases, software, infrastructure of information technology, internal control and security measures and performance of system developer) which interact and cooperate in harmony to change of economics data for providing accounting information. Therefore in its implementation, the development and the use of information systems will be related to the interaction between the human organization and the technical factors. According to Walsham et al. (1988), information systems are not only seen as a technical system with implications for the behavior but it is a social system in which the technology is only the element. System information can not be understood apart from those related, i.e., social relationships, culture and work practices that they engage in daily life.
Strong organizational culture can support the adoption of technological and organizational growth (Chatman and Jehn, 1994) and becomes a critical success factor in the development and implementation of accounting information systems. With the attachment of the characteristics of organizational culture on the employees will increase the perceived ease, usefulness and use of accounting information systems.

Claver states that the culture of the organization is related to information systems because it describes how people behave in facing the system information. Cultural organization can establish and provide guidance in developing the information systems in an organization. According to Balthazard and Cooke (2004), organizational culture will determine the success or the failure of the development and implementation of the information systems. It plays an important role in the managerial process which directly or indirectly affect the implementation of information systems (Leidner and Kayworth, 2006).

Lewis et al. (2003) and Mao et al. (2005) state that personal innovativeness which is the dimension of organizational culture directly influences the perception of the usefulness and the ease of use. The perception on them is the dimension of the quality of information systems. According to Srite et al. (2008) and Wang et al. (2008), the personal innovativeness has a positive effect on the perceived usefulness and ease of use. An innovative employee will be able to look at alternative ways of using technology and are more capable to identify the usefulness of the application of technology. Organizational culture has a strong influence on the implementation of financial information systems and becomes a success factor in the development and implementation of information systems.

Based on the descriptive analysis showed that the accounting information systems success in Muhammadiyah Universities in Central Java has a very high score. This shows that the employees have a belief that the use of accounting information systems are easy. They can feel the benefits of using accounting information systems because they can save time in completing the work and more time to do other things to improve their performance. So that they continue to increase the use of accounting information systems in completing their tasks. Accounting information system success is reflected in the high confidence of employees towards ease to use, usefulness and usage of the information system. Accounting information systems fulfill the role of gathering, processing, classifying and reporting financial transactions with the aim of recording, attention seeking and decision making by end user of such information. Based on this study can concluded that accounting information system success has positive influence on accounting information quality.

The results are consistent with Kim, argues that usage of accounting information system depends on the perception of the quality of information by the users. Generally, the quality of information depends on the reliability, form of reporting, timeliness and relevance to the decisions. The effectiveness of accounting information systems depend on the quality of output information that satisfy the users (Lewin and Minton, 1986). Simons (1987) explains the main role of accounting information system as providing information in the form of daily or weekly reports for decision-making and performance evaluation. Gelderman (1998) argues that the success of an organization is due to the decisions that are taken and the level of reliability of such decisions is related to the quality of information provided for decision making. The quality of the information is also related to the success of the information system. Nicolaou found that effective accounting information system produces information that can be used to control and decision making in the field of accounting and management.

According to McLeod and Schell (2007), the use of accounting information system will provide a competitive advantage for the company as an effective accounting information system will provide quality information. Romney and Steinbart state that the accounting information system designed can add value to the organization by producing information that is accurate and timely. Sajady et al. (2012) state that effective accounting information system will enhance financial statement quality. Salehi states that any company that has an effective accounting information system has the financial statements more precise and reliable financial statements. According Gelinas and Dull, the successful application of the accounting information system to encourage improvements in the daily business operations and can improve the quality of decision-making companies which are both a major component in the creation of the company’s financial performance.

CONCLUSION

Organizational commitment and culture have a positive affect on accounting information system success significantly. Positive affect has also a part of accounting information system success and accounting information quality.

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system success will enhance accounting information
quality that is relevancy, accuracy, timelines and
completeness.

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