

## How Accounting Information Systems Quality Influenced by Internal Control

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**Abstract:** Information has become a major resource for most organizations in both the for-profit and non-profit. In recent years, Accounting Information Systems (AIS) is a system that is very important in the organization because SIA generate important information for the organization. To prevent and minimize errors and unfairness in applying the SIA in order to produce the information it needs to apply internal controls in the accounting information system. The purpose of this study was to determine the effect of internal control on the quality of accounting information. The unit of analysis in this study is the head of the Finance Department and the staff college in Bandung, Indonesia. The results showed that the internal control has an influence on the quality of accounting information system in college.

**Key words:** Internal control, accounting, information, system, accounting information system

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### INTRODUCTION

Regular internal control in a company will be able to minimize the possibility of error or fraud on the purchase itself. Basically, internal control is not intended to negate all possibility of error but the internal control system applied to emphasize the occurrence of errors and fraud within reasonable limits so that if something goes wrong on their purchases can be known. According to Mulyadi internal control structure includes organizational structure, methods and coordinated measures to safeguard the wealth of the organization, check the accuracy and reliability of accounting data, encourage efficiency and promote compliance with management policies. From the definition of the purpose of internal control systems can be grouped into two, the first internal accounting controls (internal accounting control) that includes organizational structure, methods and measures are coordinated primarily to keep the wealth of the organization and check the accuracy and reliability of accounting data. Both administrative internal control that includes organizational structure, methods and measures are coordinated primarily to encourage efficiency and compliance with management policies.

Quality is the compatibility between the required specifications compared with the specifications generated (used) by the company (Susanto, 2013a, b). High-quality decisions that require high-quality information (Laudon and Laudon, 2012). Quality accounting information is information that can help users to perform the desired action (Hall, 2010). The information required in decision-making (O'Brien and Marak, 2010). The type of information required to be directly related to

the structure and the decision that will be generated such as information for directors, executives, managers and team members where different information will be routed directly related to the level of management decisions involved (O'Brien and Marak, 2010). In addition to improving links between parts of the organization, quality information will improve also the quality of understanding the organization's managers to see the changes that occur both inside and outside the organization, so that the organization's managers will quickly and accurately respond to changes that arise (Susanto, 2013a, b). Quality information is the information that is accurate, reliable, current, complete, delivered with the proper format (Stair and Reynolds, 2010). Quality information having dimensions between lainaccuracy, integrity, consistency, completeness, validity, timeliness and accessibility (Laudon and Laudon, 2012). Quality information has the characteristics of relevance, timeliness, accuracy, completeness and summarization (Hall, 2010). Look at the role of information is very high for the organization so organizations are increasingly dependent on information systems/accounting information system (Susanto, 2013a, b).

So that, the accounting information system can generate accounting information necessary to expect the internal control (Susanto, 2013a, b). Internal control objectives, among others to secure the asset and is able to ensure that everyone involved in the organization can follow the procedures set out the organization without the internal control integrated in accounting information systems that will mendorong timbulnya berbagai fraud within the organization (Hurt, 2008). One of the main objectives of accounting information system is to control

the business held by the organization where accountants can help achieve this goal by designing an effective control system (Romney and Steinbart, 2006; Susanto, 2010). Effective internal control system must exist in every system of accounting information to help achieve the mission of the organization, performance and increase profitability and minimize the risk (Romney and Steinbart, 2006). Internal control is a process designed under the supervision of chief financial officer and president of the company and implemented by all the directors in the company, management and other personnel to provide reasonable assurance that the reliability of financial reporting and the preparation The financial statements for external purpose in accordance with the principle generally accepted accounting (Lander, 2004).

#### **Literature review**

**Internal control:** Control is the process of ensuring that all activities of the organization in accordance with the plan, the process is done by comparing the actual performance with the standards or goals that have been set and then take action to correct the deviations that occur (Rue and Byars, 2007). Control of the limits assigned to the user and the system, it aims to safeguard the system against risk or to reduce the damage that occurs in the system, applications and data (Oz, 2009). Implementation of controls aimed at implementing policies and ensure that the data is “wrong” is not entered into the database of companies (Oz, 2009). Control is an activity that is able to evaluate and make adjustments as needed from data input, processing and ensures that the resulting output is a corresponding output (O’Brien and Marak, 2010). Internal controls can be defined as a process that is influenced by the board of directors, management and employees are designed to provide assurance and capable of ensuring that organizational goals will be achieved through the efficiency and effectiveness of operations, the presentation of financial statements that are trustworthy and compliance with laws and regulations (Susanto, 2013a, b). Internal control is a process designed to provide reasonable assurance about the achievement of the objectives: the reliability of financial reporting, the effectiveness and efficiency of operations, compliance with laws and regulations (Bodnar and Hopwood, 2010).

Internal control is a process conducted by the board of directors, management and people under their direction to provide reasonable assurance (Romney and Steinbart, 2006). Internal control is the control of the accounting information system of an organization that is used by management to achieve organizational goals (Nash and

Heagy, 1993; Susanto, 2010). Internal control is the methods and procedures related to the organization’s activities in the field of accounting has the objective to safeguard the assets and to improve the accuracy and reliability of the accounting records (Weygandt *et al.*, 2008a). Internal controls include policies, procedures and information systems are used to protect the company’s assets from loss or fraud and to maintain accurate financial data (Jones and Rama, 2003). Internal control is a system that is structured is also a proseddan procedure in an effort to provide adequate confidence that an organization is able to achieve objectives through business process undertaken (Gelinas *et al.*, 2005). Internal control system consists of policies, practices and procedures undertaken by the organization to achieve the four general objectives, namely: to protect the company’s assets to ensure the accuracy and reliability of accounting records and information to improve efficiency in operations companies to measure compliance with prescribed policies and procedures management (Hall, 2010). Internal control has four basic objectives, namely: to maintain assets to ensure the reliability of financial statements to enhance the operational efficiency to encourage compliance with management (Hurt, 2008).

Control objectives, namely: security assets including to prevent or detect on a timely basis to prevent the acquisition of unauthorized, securing the use or disposition of corporate assets maintain records in sufficient detail to accurately and fairly reflect the company’s assets provide information that is accurate and reliable provide reasonable assurance that the financial statements prepared in accordance with GAAP promote and improve operational efficiency including ensuring the company’s revenue and expenditures made under the authority of the board of directors and management encouraging adherence to the managerial policy specified and comply with laws and regulations (Romney and Steinbart, 2006).

Control objectives are to keep the information systems function maintaining the confidentiality of information The integrity and availability of data and resources to master the application Compliance with the laws of data security and privacy (Oz, 2009). Based on the above, the dimensions and indicators used for each component of internal control in this study were Preservation padaasset: compliance with data security assets and privacy laws, prevent or detect fraud assets to ensure the accuracy and reliability of accounting records and information: to maintain the information systems function. Identify and record all financial transactions are valid. Provide reasonable assurance that the financial

reporting prepared in accordance with GAAP, improve operational efficiency: proceeds received in accordance with management's calculation record company expenditures are made in accordance with management policies.

## MATERIALS AND METHODS

**Accounting information systems:** Systems understanding the system according to the experts: a system is a set of interrelated components and the components interact to achieve a goal. The system consists of subsystems smaller, each sub-system perform certain functions that are important and supports a larger system (Romney and Steinbart, 2006), the system is a collection of sub-systems/parts/components of both physical and non physical are interconnected each other and work together in harmony to achieve a particular goal (Susanto, 2013a, b) the system is a set of interrelated components with clear boundaries, work together to achieve one goal (O'Brien and Marak, 2010). Definition of information according to the experts: information is data that has been organized and processed to provide benefits to the users (Romney and Steinbart, 2006), information is presented in the form of data that is useful in decision-making activities. Information has value to decision makers because it reduces uncertainty and increase knowledge about a matter of concern (Gelinas *et al.*, 2005), the information is data that has been processed that gives meaning and benefits (Nash and Heagy, 1993). Information systems, understanding of information systems according to the experts is the information system is a collection of sub-systems both physical and non physical are interconnected with one another and work together in harmony to achieve one goal of process data into useful information (Susanto, 2013a, b), the information system can be defined technically as a set of interrelated components starting from collect, process, store and distribute information to support decision making and control in an organization (Laudon and Laudon, 2012), the information system depends on resources human, hardware, software, data and media communication network (O'Brien and Marak, 2010).

Accounting: accounting experts say accounting is an information system that measures, process and communicate financial information about the economic entity (Needles *et al.*, 2008), accounting is a system to collect and process financial information about an organization and providing information to decision makers (Libby *et al.*, 2009), accounting is an information system that identifies and communicates the economic events of an organization to the users (Weygandt *et al.*, 2008b). Accounting information systems: understanding the accounting information system according to the Hali is the accounting information system is a system that

collects, records and processes the data to produce information to decision makers (Romney and Steinbart, 2006), the accounting information system is a subsystem of management information systems which provides accounting and financial information and other information obtained in the process of routine accounting transactions (Jones and Rama, 2003), the accounting information system is a subsystem of the information system, the purpose of accounting information system is to collect, process and report information relating to the financial aspects of business events (Gelinas *et al.*, 2005). The success of the accounting information system (Romney and Steinbart, 2006):

- Usefulness: output of information management and will help users make decisions
- Economy: benefits from the use of the system, exceed the costs to manufacture the system
- Realiability: the system is able to process data accurately and completely
- Availability: access system for users can be carried out either
- Timelines: the required information can be produced by the system when needed
- Customer service: customer service can be carried out efficiently
- Capacity: the capacity of the system must be able to handle all of the company's operations
- Ease of use: the system must be user-friendly
- Flexibility: the system should be able to handle the operational and operational changes that arise
- Tractability: the system should be easily understood by users and facilitate problem solving and the development of future systems
- Auditability: auditability supposed to be built at the beginning of the manufacturing system
- Security: only authorized users who have granted access or allowed to change the data system

The quality characteristics of the information system (McCall *et al.*, 1977):

- Correctness: the extent to which the system meets the required specifications
- Reliability: the extent to which the system can be expected to perform the functions as needed
- Efficiency: the amount of computing resources and code used to perform the function
- Integrity: the extent of access to systems or data by unauthorized persons can be controlled
- Usability: effort required to learn, operate, prepare the input and interpret output
- Maintainability: effort required to find and fix errors in the system

- Flexibility: the effort needed to modify the operating system
- Testability: effort required to test a system to ensure that the system has made the appropriate function.
- Portability: effort required to transfer the program from one hardware and/or software system environment to another
- Reusability: the extent to which the system (or part of the system) can be reused in other applications
- Interoperability: effort required to couple one system to another

Characteristics in the quality of the information system is ease of use, ease of learning, user requirements, system features, system accuracy, flexibility, sophistication, integration and customization (Sedera and Gable, 2004).

Based upon the dimensions used in this study were flexibility: easy of learning, user friendly/ease of use, reliability, sophistication: accessible, usefulness well integrated/integration flexible to the make changes easily.

**Theoretical framework (internal control and accounting information system):** Internal controls are needed in the running of information systems to be able to produce accounting information is expected by the management (Susanto, 2013a, b). Internal control refers to the way an organization to safeguard assets and ensure that everyone follows the procedures of the organization. Without a good internal control in accounting information systems organizations will experience fraud (Hurt, 2008). One of the main objectives of accounting information system is to control the business of the organization, an accountant can help achieve this goal by designing an effective control system (Romney and Steinbart, 2006). Effective internal controls must exist in all organizations to help achieve the mission and performance and profitability objectives and minimize risk in business activities (Romney and Steinbart, 2006). Control over information systems must be developed to ensure that the proper data entry, processing techniques, methods of storage and output information. Thus, control of information system designed to monitor and maintain the quality and safety of input, process, output and storage activities of information systems (O'Brien and Marak, 2010).

Internal control is closely related to the integrity of financial and administrative information systems (Halandy and Ghabban, 2009). Performance of operations, reliability of financial reporting and legal compliance, internal control mechanisms must gradually be built into enterprise information systems (Yang *et al.*, 2011). Strong

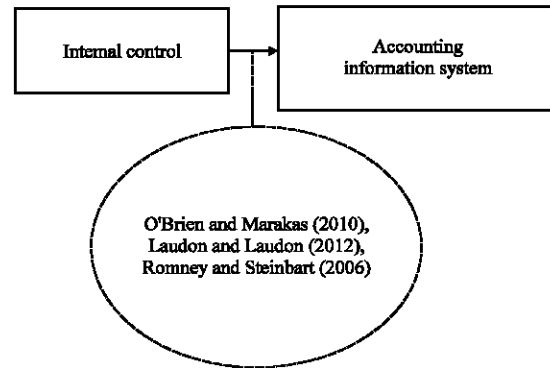


Fig. 1: Theoretical framework hypothesis: internal control affects the quality of accounting information system

internal control system is highly relevant for organizations because organizations are particularly vulnerable to fraud and is closely related to information systems used (Cahill, 2006). Most organizations have adequate security controls, managers and practitioners are expected to improve the security of accounting information systems and security technology for organizational success (Musa, 2010).

**Research model and hypothesis:** Based on above, the model can be described are Fig. 1.

## RESULTS AND DISCUSSION

The population in this study is the chief and staff accounting/finance at state and private universities in the city who use accounting information systems in data processing of accounting transactions. In this study, the minimum sample size taken using power analysis method. With the 5% significance level, statistical power of 80% of the total direction of the arrow pointing towards the highest numbered constructs 3 and  $R^2$  is 0:25 then the minimum sample size taken in this study is 59 samples. In this research there are two types of data are primary data and secondary data. Methods of data collection is done by sending questionnaires by mail in which each unit of analysis will be sent a questionnaire 3-4. The analysis is done through structural equation modeling (Structural Equation Model with the assessment of PLS-SEM) to be able to answer the problem formulation and answer hypothesis. The assessment of PLS is used for the measurement model built number of samples used is <100. In this research model developed in structural models and measurement models. Structural models (inner model) in this study consisted of latent exogenous variables that internal control and the variable quality of the accounting information system is an endogenous variable.

## CONCLUSION

Based on this phenomenon, the problem formulation, hypothesis and research results, conclusions of penelitian adalah: internal control system affects the quality of accounting information. But the quality of accounting information system has not completely good, it is because Flexibility of the accounting information system is not adequate it can be seen from the verification carried out in which the system has not been easy to learn, yet easy to use and yet powerful (frequent occurrence of error). Due to the persistence of the problems in the accounting information system satisfaction (sophistication) also becomes an important part in the implementation of the information system mainly satisfaction in accessing the system and the integration of data from the system.

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