

How Internal Control and Organizational Structure Impact on Accounting Information Systems

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Abstract: This study was conducted based on the facts on the research findings that indicate to the present system accounting information on the various organizational units in Indonesia has not been qualified, marked with information systems are not yet integrated and yet secure, difficult to use, difficult to access not flexible and efficient and still often impaired/error. Similarly, the condition of the organizational structure in various organizational units in Indonesia are not much different and arguably not adequate because until now there is still a division of labor, grouping the work and the provision of instruction job is unclear and their complex bureaucracy. All organizations require information as a basis for decision making. Information has become a major resource for most organizations in both the for-profit and non-profit. In recent years, the Accounting Information System (AIS) is a system that is very important in the organization because SIA is a source of important information for the organization. To prevent and minimize errors and fraud in the implementation of the SIA it is very important to consider the internal control and organizational structure within the organization. The purpose of this study was to determine the effect of internal controls over the quality of accounting information 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 and organizational structure have a significant effect on the quality of accounting information systems in college.

Key words: Internal control, organizational structure, accounting information, accounting information system, quality, structure

INTRODUCTION

The purpose of this study was to determine the effect of internal control is the quality of the fit between the required specifications compared with the specifications generated (used) by the company. High quality decisions that require high-quality information (Susanto, 2015; Meiryani, 2016). Quality accounting information is information that can help users to perform the desired action. The information required in decision-making. 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. In addition to improving the links between activities in 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. Quality information is the information that is accurate, reliable, current, complete,

delivered with the proper format. Quality information having dimensions between other accuracy, integrity, consistency, completeness, validity, timeliness and accessibility. Quality information has the characteristics of relevance, timeliness, accuracy, completeness and summarization. Look at the role of information is very high for the organization, so, organizations are increasingly dependent on information systems/accounting information system.

That the system can generate accounting information necessary to expect the internal control. Internal control objectives include safeguards against asset and is able to ensure that everyone involved in the organization can follow the procedures established organization without solid internal controls in accounting information system will give rise to irregularities in the organization. One of the main objectives of accounting information system is to control the organized business organizations, where accountants can help achieve this goal by designing effective control system. Effective internal control system must exist in every organization to help achieve the mission, performance and increase profitability and minimize the risk. 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.

Accounting information system is an integration of various transaction processing system (Azhar, 2013; Meiryani, 2017). Accounting information systems is one of the most important information systems within an organization (Wilkinson *et al.*, 1999). Accounting information systems exist in all forms of organization (Boockholdt, 1999). Accounting information systems used by the company in carrying out various activities related to financial transactions from internal and external company (Azhar, 2013). The accounting information system is a set of resources such as people and equipment designed to transform data into information accounting accounting can be used in the process of decision-making by various users (Bodnar and Hapwood, 2014; Susanto, 2016a, b; Meiryani, 2018). The system accounting information will generate accounting information (Boockholdt, 1999). One of the challenges in accounting information system is to produce quality accounting information (Gelinas and Dull, 2012).

Information systems and organizational influence each other, the company will not be successful designing a new system or to understand the existing system without understanding the business activity of an organization ongoing (Laudon and Laudon, 2014). understanding will flow patterns of responsibility, authority and accountability (accountability) are important in assessing the information needed by its users (Hall, 2010; Susanto, 2017a, b, 2018; Meiryani, 2017). Every manager in various levels and parts of an organization have different roles to each other because the management of an organization's various levels and sections will require different information. The greater the level of the hierarchy in the organizational structure of the company, the information system will be more complex built accounting.

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. 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. Implementation of controls aimed at implementing policies and ensure that the data is "wrong" is not entered into the database of companies. 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.

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. 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. Internal control is a process conducted by the board of directors, management and people under their direction to provide reasonable assurance. Internal control is the control of members of the organization management to achieve organizational goal attainment (Susanto and Meiryani, 2018).

Internal controls are the methods and procedures related to the activities of the organization that has the objective to safeguard the assets and to improve the accuracy and reliability of accounting records. 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. Internal control system is structured is also the processes and procedures in an effort to provide adequate confidence that an organization is able to achieve the objectives in the business process. 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.

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.

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.

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.

Based on the before, 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.

Organizational structure: Organizational structure as proposed by Gibson *et al.* (1991) is a pattern of assignments and group tasks within an organization that is a major cause of the behavior of individuals or groups. Furthermore, Ivancevich *et al.* stating the organizational structure is a formal pattern of activity and describe the relationship between the various sub-units within an organization. Similarly, according to Robbins and Judge (2014), the organizational structure is how job tasks are formally divided, grouped and coordinated defined. Similar opinion by Gibson *et al.* (1991), Susanto and Meiryani (2018) and Ivancevich *et al.* also argued by McShane and Glinow (2010) that the organizational structure refers to the division of labor and patterns of coordination, communication, workflow and formal authority who directs the organization's activities).

Robbins and Judge (2014) states there are six key elements that need to be considered when designing the manager of the organizational structure are: division of Labour or work Specialization, departementalization, chain of command, span of control, centralization and decentralization as well as the formalization. Similarly, Gibson *et al.* (1991) measures the dimensions into the organizational structure of the division of labor or work specialization, departementalization, chain of command, Span of Management, centralized and decentralized

authority and coordination. Furthermore, to measure the concept of organizational structure in this study used the dimensions and indicators as follows: division of labour, departementalization, chain of command, formalization (Robbins and Judge, 2014).

Accounting information system quality 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, 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. The system is a set of interrelated components with clear boundaries, work together to achieve one goal. Definition of information according to the experts: Information is data that has been organized and processed to provide benefits to the users, 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, the information is data that has been processed where the data is specific to a person, organization or anyone who needs. System information, understanding information system according to 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, 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, the information system depends on resources human, hardware, software, data and media communication network.

Accounting is accounting is an information system that measures, process and communicate financial information about the economic entity, accounting is a system to collect and process financial information about an organization and providing information to decision makers, accounting is an information system that identifies and communicates the economic events of an organization to the users. According Bagranoff *et al.* (2009) accounting information system is a collection of data and processing procedures that create the necessary information for its users. The accounting information system is a set of components that collects accounting data, store it for future use and the process for the end user. Furthermore, Romney and Steinbart (2003) states

accounting information system is a system to collect, record and process the data to produce information to decision makers. Similarly, according to Bodnar and Hopwood (2014), accounting information system is a collection of resources such as human and equipment designed to alter financial data and other data to generate information that can be used as a basis for decision making (Handoko *et al.*, 2017).

The terms of quality, effectiveness and kesuksesan accounting information system has been put forward by experts. Gelinas and Dull (2012) used the term “effectiveness” of information systems as a measure of the success of information systems in achieving the goals set. Effectiveness of information systems as stated by Nicolau (2000) is a condition of satisfaction of users of information systems or the perception of the users of the system to the desired information. Delone and McLean (2003) states the use of the system, user satisfaction, influence individual and organizational influence measure the effectiveness of information systems (Meiryani, 2016, 2018; Meiryani and Lusianah, 2018).

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, 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, the accounting information system is a subsystem of the information system, the purpose of the accounting information system is to collect, process and report information relating to the financial aspects of business events. The success of the accounting information system (O’Brien and Marak, 2010):

- Usefulness: output of information management and will help users make decisions
- Economy: benefits from the use of the system, exceed the costs for the manufacturing 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 in the
- 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:

- 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. Based upon the dimensions used in this study were flexibility: easy of learning, user friendly/ease of use, realiability, sophistication: accessible, usefulness well integrated/integration, flexible to the make changes easily (Susanto and Meiryani, 2018).

MATERIALS AND METHODS

Internal control on 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. 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. 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. Effective internal controls must exist in all organizations to help achieve the mission and performance and profitability objectives and minimize risk in business activities. Control over information systems must be developed to ensure that the proper data entry, processing techniques, methods of storage and output information. Thus, control over the information system designed to monitor and maintain the quality and safety of input, process, output and storage activities of information systems. Internal control is closely related to the integrity of financial and administrative information systems. Performance of operations, reliability of financial reporting and legal compliance, internal control mechanisms must gradually be built into enterprise information system. Strong internal control system is highly relevant for organizations because organizations are particularly vulnerable to fraud and is closely related to information systems used. 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.

Organizational structure on accounting information system: Laudon and Laudon (2014) argues organizational structure effect on accounting information systems in facilitating information by expanding the distribution information for various levels within an organization, so that, the employee/employees who are on the label of the most under even can give a boost/contribution to decision-making process. Scott states also that the organizational structure affect the accounting information system.

A similar opinion was expressed also by Wilkinson *et al.* (1999) that the organization structure significantly influence information systems along with its components. Furthermore, organizational structural formal company provides a close relationship between the company’s accounting information systems with business partner companies. Based on various theories have been put forward before it can be said that the effect on the organization structure of the accounting information system in expand distribution information until level/bottom level of the organization with the purpose to be used by the officials on low level decision-making process. Empirical evidence relating to the effect of organizational structure on Accounting information systems has generated a lot of various studies conducted by researchers around the world.

Research model and hypothesis: The framework will be presented in schematic form the framework in Fig. 1. Hypothesis of this study as follow:

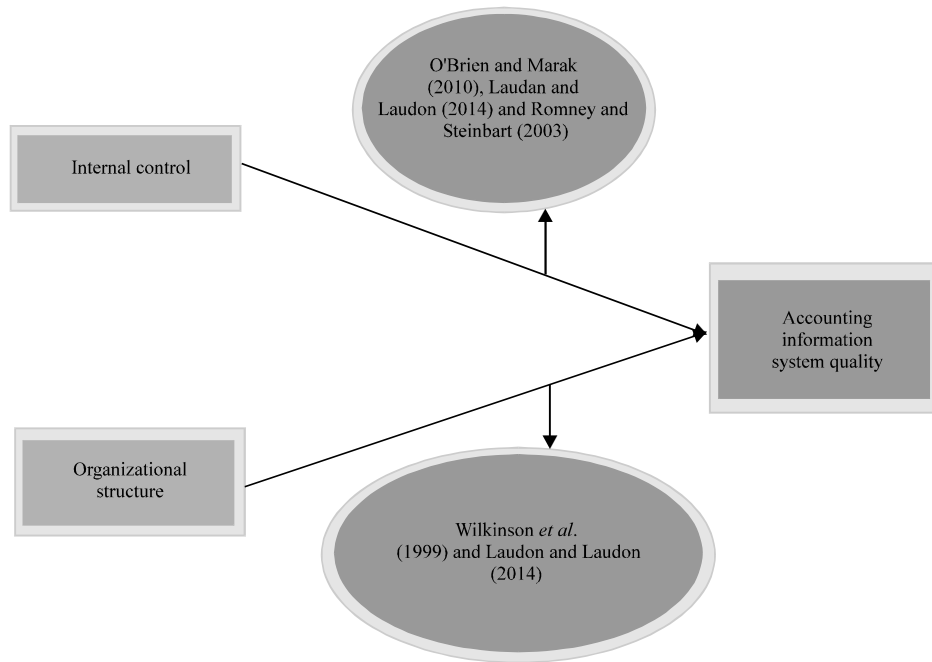


Fig. 1: Theoretical framework

- H₁: internal control affects the quality of accounting information system
- H₂: organizational structure affects the quality of accounting information system

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 R² 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.

Based on the results of this research are known causes of system accounting information is not quality because it is caused by several factors as follows: accounting information system available on the company yet, flexible not easy to use, difficult to access, it is not safe, yet well-integrated and often have error/interference based on the survey results revealed the structure of the organization at a college in the city can be said to be not optimal because still there are universities in the city to place the employee does not correspond to their expertise, there is still a college in the city which employs its employees with various types of work different there is still a section/department that no clear function, there are employees who are not placed on the part which should be, there are still employees who accepted the task is not of his immediate superior, there is still a lack of clarity of instructions from the boss, there are universities in the city who have not have a standard operating procedure/SOP and there are still employees who carry out work not in accordance with his SOP. The amount of influence on the organization structure quality information system amounted to 12.96% with the positive direction of

the relationship, the meaning is the presence of a good organizational structure will improve the quality of accounting information systems at the company. Hypothesis testing results showed that the organizational structure significantly influence the quality of accounting information systems. Upon the acceptance of the research hypothesis of this study reinforces previous research that has been studied by Laudon and Laudon (2014), Susanto and Meiryani (2018) and Wilkinson *et al.* (1999).

CONCLUSION

Based on this phenomenon, the problem formulation, hypothesis and research results, conclusions of this research are internal control system and organizational structure 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.

REFERENCES

- Azhar, S., 2013. Accounting Information Systems: Developing Risk Management Structure. 1st Edn., Lingga Jaya Publisher, New York, USA.,
- Bagranoff, N.A., M.G. Simkin and C.S. Norman, 2009. Core Concepts of Accounting Information Systems. 11th Edn., John Wiley & Sons, Hoboken, New Jersey, USA., ISBN:9780470507025, Pages: 544.
- Bodnar, G.H. and W.S. Hopwood, 2014. [Accounting Information System]. Andi Publisher, Yogyakarta, Indonesia, (In Indonesian).
- Boockholdt, J.L., 1999. Accounting Information Systems: Transactions Processing and Controls. 5th Edn., McGraw-Hill Education, New York, USA., ISBN:9780071160988, Pages: 922.
- Delone, W.H. and E.R. McLean, 2003. The DeLone and McLean model of information systems success: A ten-year update. *J. Manage. Inf. Syst.*, 19: 9-30.
- Gelinas, U.J. and R.B. Dull, 2012. Accounting Information Systems. 9th Edn., Cengage Publisher, Boston, Massachusetts, USA.,

- Gibson, J.L., J.M. Ivancevich and J.H. Donnelly Jr., 1991. Organizations: Behavior, Structure, Processes. 7th Edn., Irwin Publisher, Toronto, Ontario, ISBN:9780256080469, Pages: 774.
- Hall, J.A., 2010. Accounting Information System. 7th Edn., Southwestern Publishing Group, Nashville, Tennessee, ISBN-13:978-1-4390-7857-0, Pages: 812.
- Handoko, B.L., S. Sabrina and E. Hendra, 2017. The influence of leadership styles on accounting information systems quality and its impact on information quality survey on state-owned enterprises. Proceedings of the 2017 IEEE 17th International Conference on Communication Technology (ICCT), October 27-30, 2017, IEEE, Chengdu, China, ISBN: 978-1-5090-3945-6, pp: 1989-1993.
- Laudon, K.C. and J.P. Laudon, 2014. Management Information System: Managing the Digital Firm. 12th Edn., Prentice Hall, Prentice Upper Saddle River, New Jersey, USA., ISBN:9780132142564, Pages: 640.
- McShane, S. and M.V. Glinow, 2010. Organizational Behavior. 5th Edn., McGraw-Hill Education, New York, USA., ISBN:9780073381237, Pages: 672.
- Meiryani and Lusianah, 2018. The influence of business process on accounting information system quality. *Pertanika J. Soc. Sci. Hum.*, 26: 209-218.
- Meiryani, 2016. Influence of uncertainty and risks on the information system. *Intl. Bus. Manage.*, 10: 1575-1580.
- Meiryani, 2017. The influence of business process and management support on accounting information system. *J. Eng. Appl. Sci.*, 12: 7416-7421.
- Meiryani, 2018. The factors that affect the quality of accounting information system empirical testing in the state-owned enterprises. *J. Theor. Appl. Inf. Technol.*, 96: 1858-1867.
- O'Brien, J.A. and G.M. Marak, 2010. Introduction to Information Systems. 15th Edn., McGraw-Hill Companies, New York, USA.,
- Robbins, S.P. and T.A. Judge, 2014. Essentials of Organizational Behavior. 12th Edn., Pearson, London, England, UK., ISBN:9780132968508, Pages: 348.
- Romney, M.B. and P.J. Steinbart, 2003. Accounting Information Systems. 9th Edn., Prentice Hall, Upper Saddle River, New Jersey, USA., Pages: 735.
- Susanto, A. and Meiryani, 2018. The influence of business process and risk management on the quality of accounting information system. *J. Theor. Appl. Inf. Technol.*, 96: 176-183.
- Susanto, A. and Meiryani, 2018. The quality of accounting information system and its impact on the quality of accounting information: User ability and top management support. *J. Eng. Appl. Sci.*, 13: 384-387.
- Susanto, A., 2008. Accounting Information Systems Structure Control Risks Development. 1st Edn., Lingga Jaya, Bandung, Indonesia.,
- Susanto, A., 2009. [Management Information System: A Structured Risk Development Approach]. Lingga Jaya Publisher, Bandung, Indonesia, (In Indonesian).
- Susanto, A., 2010. [Information Technology for Business and Accounting]. Penerbit Lingga Jaya, Bandung, Indonesia, (In Indonesian).
- Susanto, A., 2015. What factors influence the quality of accounting information. *Int. J. Appl. Bus. Econ. Res.*, 13: 3995-4014.
- Susanto, A., 2016. The effect of internal control on accounting information system. *Intl. Bus. Manage.*, 10: 5523-5529.
- Susanto, A., 2016. The influence of accounting information system quality to accounting information quality and its implications to the good study program governance. *Intl. Bus. Manage.*, 10: 5767-5776.
- Susanto, A., 2017. Second order model for measuring the impact of information technology on the quality of accounting information systems research at higher education in bandung. *J. Eng. Appl. Sci.*, 12: 1018-1027.
- Susanto, A., 2017. The emperical testing how the quality of accounting information systems affected by organizational structure research atuniversities in Bandung. *Asian J. Inf. Technol.*, 16: 1098-1105.
- Wilkinson, J.W., M.J. Cerullo, V. Raval and B. Wong-On-Wing, 1999. Accounting Information Systems: Essential Concepts and Applications. 4th Edn., John Wiley & Sons, Hoboken, New Jersey, USA., ISBN:9780471253525, Pages: 608.