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Empirical Study on the Quality of Accounting Information Systems and its Relation to the Research Leadership on Pharmaceutical Wholesalers Companies in Bandung

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Abstract: Leadership is a complex concept that is identified as a factor that can succeed or thwart the achievement on the quality of accounting information system. The phenomenon that occurs on pharmaceutical wholesalers companies in Bandung is the low quality of AIS as a result of non-integrated information systems. The purpose of this study is to seek the truth through testing (confirmation) of the leadership influence on the quality of AIS. The data were obtained through a survey by distributing questionnaires to 57 company in Bandung. It was statistically processed using simple regression analysis. The research method used explanatory research method to get basic answers of causation by analyzing the causes of the problems on the quality of AIS. The results of this study show that leadership influences the quality of accounting information systems and the problems of accounting information systems which has not qualified occur because of the AIS which are less qualified, less integrated, less efficient and have not achieved optimal access. The AIS which has not qualified has been happening because of the leadership that does not fully guarantee the implementation of AIS.

Key words: Leadership and the quality of accounting information systems, simple, method, company, optimal access, Indonesia

INTRODUCTION

Accounting is an information system and that sets of accounting as an information system with other information systems is that accounting information system is only concerned with accounting function and process data about the activities of corporate organizations that have economic value (Susanto, 2013). Simply, Bagranoff *et al.* (2007) states that, accounting information system is a set of data and procedures that generate information for its users which can be used in decision making processes (Laudon and Laudon, 2007).

The fundamental role of accounting information systems in an organization is to produce the quality of accounting information (Susanto, 2013). The quality of information systems can mean a successful information system (works) or effective (DeLone and McLean, 2003) in which the quality of accounting information systems that will produce accounting information into a competitive advantage within organization (Baltzan and Phillips, 2008). The competitive advantage of organizations is that it is superior in decision-making than its competitors (Laudon and Laudon, 2007). According to Sacer *et al.* (2006), the quality of information systems shows the integration of various components of accounting information systems, they are: hardware, software, brainware, telecomunication network and quality of database and quality of work. Furthermore, an integrated information systems is defined by Marcus (2009) as the process of generating the organized information in information systems which consists of hardware, software, databases and telecommunication networks as well as human interaction and communication as a user. In line with Susanto (2013) that the quality of accounting information systems is the integration of all elements and sub-elements, it is also called the accounting information systems components which consist of hardware, software, brainware, procedures, databases and communication networks. To produce the quality of information, companies must make significant investment in its information system (O'Brien and Marakas, 2008).

According to Stair and Reynolds (2010), state a quality of information systems is generally flexible, efficient, accessible and timely. Similar thing is delivered by Horan and Abhichandani (2006) that the characteristics of the quality of information systems consist of utility, reliability, efficiency, customization and flexibility. While Seddon *et al.* (1994) state the successful application of accounting information systems is the use of information systems that can assist the completion of daily work.

In fact, accounting information systems which is applied to public and private sector organizations in Indonesia has not been good. Fauzi (2011) stated that

the financial implementation reporting system of local governments tend to be inefficient both in terms of time and budget. Furthermore, as it is experienced by BUMN in which BPK still finds a number of problematic documents because the information system to access data in management and financial responsibilities of the state still has to be developed (Iskan, 2012). Mitroatmojo (2012) added that the economic potential of Indonesia is many untapped because many people do not have access to the banking information system. The phenomenon of the poor quality of accounting information systems also occur in pharmaceutical companies of where non-uniformity of procedures and irregularities of process (Anonymous, 2008) which occurs as a result of un-integrated information system.

The quality of accounting information systems is influenced by leadership factors. Stone argues that leadership is a factor which significantly influences the success of AIS implementation. Besides, leaders must understand that information systems which will be designed should be designed and implemented effectively (Nye, 2008). Agree with Choe (1996) also revealed that transformational leadership positively influences the success of information systems user. The leadership in this study was defined as the ability to influence the motivation and the competence of the system user to use accounting information systems in situations and is directed through the communication process to produce the accounting information which is suitable to the user's needs (Lussier, 2008). In line with Stuart and Moran (2002) that leader is one who is expected to have the ability to influence, to give directions and also to be able to determine the individual to achieve organizational goals.

The phenomenon of leadership is seen from a leadership crisis which is experienced at this time, on various levels that can be one cause of the poor situation in the nation. Even, Pancasila as the state ideology has been forgotten by the leaders (Mahfud, 2013) as evidenced by the lack of integrity as a national leader, less able to escape from corruption, collusion, nepotism, lack of moral and ethical leadership understanding, less able to understand precisely the essence of plural, put forward the interests of the party rather than the people's aspirations (Anonymous, 2013). The same thing with Haris (2013) that the nation's problem now occurs mainly due to leadership factor which is not decisive so that the government is ineffective, it is reflected on the execution of infrastructure that is too late, APBN that is not healthy, slow and the government that is not specifically tackling the problem and it has remained trapped in a conflict of interest (Tanjung, 2012). Therefore, it is necessary to do improvement and what to be improved is the head of state (Nasution, 2009).

Based on the phenomenon and the previous research, this study will focus on the research subject, namely: "The Quality of Accounting Information Systems and its Relation to Leadership (Survey on Pharmaceutical Wholesalers Companies in Bandung City)".

Literature review

Leadership: Robbins and Coulter (2009) define the meaning of leadership: leadership is what leaders do. It's a process of leading a group and influencing that group to achieve its goals. Leader is someone who can influence others and who has managerial authority. In line with Robbins and Coulter (2009) and John *et al.* (2008) argues that leadership as the process of influencing others to facilitate the attainment of organizationally relevant goals. While the leaders themselves according to Stuart and Moran (2002) is one who is expected to have the ability to influence, to give directions and also to be able to determine the individual to achieve organizational goals. Along with that, Spillane (2006) states that leaders are agents of change with the activities to influence people more than the influence of people to him. Daff and Lane (2005) define leadership is an influence that relates between leaders and followers. Then, Gibson *et al.* (2006) state that leadership is an attempt to exert influence to motivate people in order to achieve a goal. Not much different from that is presented by Daff and Lane (2005), Hughes *et al.* (2006) and Lussier (2008) state leadership as the process of influencing others towards achieving group goals.

Furthermore, Yukl (2006) suggests the approach which is taken by a leader is personality, motives, values and skills. In line with, Yukl (2006) and John *et al.* (2008) reveal that the leadership effectiveness is measured from: personality energy lever, stress, tolerance, self confidence, emotional maturity, integrity, motivation socialized power orientation, strong need for achievement, weak need for affiliation skill, technical skill, cognitive skill, ability interpersonal skill, cognitive skill, technical skill.

Accounting information systems: Bodnar and Hopwood (2010) state that, an Accounting Information System (AIS) is a collection of resources such as people and equipment, designed to transform financial and other data into information. This information is communicated to a wide variety of decision makers. AISs perform this tranformation whether they are esentially manual systems or thoroughly computerized. Then, Romney and Steinbart (2012) say the same thing that an accounting information system is a system that collects, records, stores and processes data to produce information for decision makers. Then, Hall (2011) specifically inserts the term of financial and non financial transactions into the understanding of accounting information system, so that,

hall fully states that the accounting information system AIS subsystems process financial transactions and nonfinancial transactions that directly affect the processing of financial transactions.

The quality of accounting information systems is defined as a form of statements about the conditions in which accounting information systems can generate the accounting information which is suitable to the user's needs. The quality of accounting information is obtained from the quality of accounting information systems application (Sacer *et al*., 2006). Still according to Sacer *et al*. (2006) that the quality of accounting information systems is indicated by the integration of various components of accounting information systems, they are: hardware, software, brainware, telecomunication network and the quality of data base and the quality of work and the satisfaction of users. Agree with Susanto (2013) that the quality of accounting information systems is the integration of all elements or components which consists of hardware, software, brain ware, procedures, databases and telecomunication network.

Furthermore, the quality of information system is developed by DeLone and McLean (1992, 2003) it has been used extensively in the research in the field of accounting information systems. In D&M IS Success Model (1992) there are 6 variable components of the information system success: "system quality, information quality, use, user satisfaction, individual impact and organizational impact. These components are not independent variables (independent) but rather as the variables which are mutually dependent (interdependent) of each other (Petter, 2000). Stair and Reynold (2010) state that the quality of information systems generally meets the criteria such as flexible, efficient, accessible and timely. Furthermore, Horan and Abhichandani (2006) state that the characteristics of the quality of information systems are utilities, reliability, efficiency, customization and flexibility.

Framework and hypotheses: Laudon and Laudon (2007) state that the central organizational factors to consider when planning a new system are the following the type of organization and its style of leadership. Similar thing is delivered by Nye (2008) that understanding and shaping information flows is important in the leadership of small group as well as large organizations Leaders need to understand how to design and monitor effective information systems to implement their plans. Leader who are not aware of the context of how information reaches them are likely to be told and believe what followers think the leaders want to hear.

Furthermore, Eom (2005) reveals that the leadership behavior of the project leaders is likely to be positively related to the participation and involvement of user in the system development.

The same opinion was delivered by Dong *et al*. (2007) that the project winner and leader behavior have an influence on confidence in the use of information technology. Furthermore, Gottsshalk states leadership in Information Systems (IS) and Information Technology (IT) has changed in fundamental ways over the past decade. Ghandour *et al*. in his research that the leadership role of the owners and managers in small and medium enterprises has the key role to the success of e-Commerce System (ECS) and the research by Soja (2009) concludes that leadership is one of the basic requirements that must be met in order to achieve the successful of information systems implementation (ERP).

From the description before, as it is related to the leadership on the quality of accounting information system that has been described previously the framework in this study can be explained in Fig. 1 as on the following page: based on the above framework, the hypothesis which is proposed in this study is:

- H_1: leadership influences the quality of accounting information systems

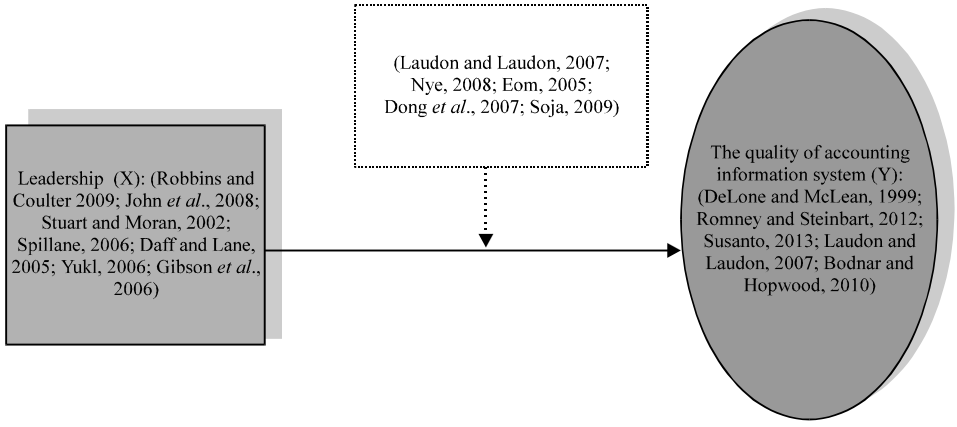

Fig. 1: Framework

MATERIALS AND METHODS

The method in this study is verification method (verificative research) and explanatory (explanatory research) or causality (causal study) because this study aims to find out what and how far the factors that are thought to influence a variable in order to test the hypothesis. This study may explain how much the leadership variable influence on the quality of SIA (causal).

The unit of analysis in this study is pharmaceutical wholesalers companies in Bandung City which have implemented a computer-based accounting information systems in Bandung City area. The respondents in this study are the Branch Managers, Heads of Accounting/Finance and Staffs of Accounting/Finance who must be related to the accounting information systems which is implemented by the pharmaceutical wholesalers companies in Bandung City because they have the role and authority in the implementation of related activities to see the quality of the information systems on each working unit. The target population in this study is as the data which is contained in West Java Province Health Office in 2013 that the number of pharmaceutical wholesalers companies in Bandung City are 67 companies. Furthermore, the minimum sample size is determined by using the Slovin formula as follows:

$$n = \frac{N}{Nd^2+1}$$

Where:

n = Selected samples
N = Population
d = Bound of error or precision values of 5%

Precision values are used by 5% as it is widely used in social science research. Precision values of 5% means that the average value of population will not deviate more than 5%. Based on the equation, the minimum sample can be calculated as follows:

$$n = \frac{67}{67(0.05)_2+1}$$

$$n = \frac{67}{1.67} = 57.38 \text{ (rounded to 57)}$$

Thus, the minimum number of samples are 57 companies. In order to facilitate the interpretation and hypothesis testing, the collected data will be analyzed by using a specific method. The research data was obtained by submitting a list of statements to the respondents through questionnaire, the answers of the respondents on the statement is a measure that will be tested. In obtained data from the respondents, the validity and reliability testing are done, so that, the data can accurately describe as a concept that is measured. To test the used hypotheses, it uses simple linear regression analysis.

RESULTS AND DISCUSSION

The validity test results demonstrate all of the items have r_{count} value >0.30, so, it can be concluded that all leadership variables items (X) and the statement items of the quality of accounting information systems variable (Y) is valid. Reliability value for each variable is seen more than 0.7 as the limits it is stated that the measurement tool is reliable, so, it can be said that the measurement tool of a statement questionnaire has had a good level of reliability when it is used.

The following is the average score of respondents for six indicators of the three dimensions of leadership variables which can be seen in Table 1. Furthermore, the average score of respondent's for 6 indicators of 3 dimensions of the quality of accounting information systems variable can be seen in Table 2.

To determine the influence of leadership on the quality of accounting information systems, it is calculated the simple linear regression analysis. The result using the SPSS obtains regression coefficient and constant value as in Table 3. The regression equation that describes the influence of leadership on the quality of accounting information systems is:

$$Y = -4.098 + 0.518X$$

The regression coefficient of leadership variable (X) at 0.518 indicates the big change in the quality of accounting information systems (Y) due to the influence of leadership variables on the quality of accounting information systems. A positive sign shows the direction of the relationship is directly proportional (in line). So, every increase of one unit score of leadership variable (X),

Table 1: Recapitulation of respondents average score for leadership variable

Indicators/Dimensions	Average scores	Criteria
Self confidence	4.19	Good
Integrity	4.21	Good
Personality	4.20	Good
The encouragement to cooperate (teamwork)	4.25	Good
Enthusiasm	4.37	Good
Motivation	4.31	Good
Intelligence	3.71	Enough
Creativity	3.65	Enough
Ability	3.68	Enough
Grand mean	4.06	Good

Table 2: Recapitulation of respondents average score for the quality of AIS variable

Indicators/Dimensions	Average scores	Criteria
Integration between components	3.90	Enough
Integration between transaction processing system	3.80	Enough
Integration	3.87	Enough
Using optimal resources	3.90	Enough
HR that is used is suitable to its expertise	3.90	Enough
Efficiency	3.90	Enough
Easy to access	3.50	Enough
Data is easily and quickly available	3.80	Enough
Ease of access	3.65	Enough
Grand mean	3.80	Enough

Table 3: The results of regression coefficients coefficients[a]

Models	Unstandardized coefficients (B)	SE	Standardized coefficients (β)	t-values	Sig.
Constant	-4.098	0.420	3.960	-1.035	0.309
X (Leadership)	0.518		0.210	2.466	0.019

[a]Dependent variable: Y (The quality of accounting information systems)

the quality of accounting information systems will increase by 0.518 with the assumption that other factors are constant (unchanged). So, the higher the leadership (X), the higher (better) quality of accounting information systems will be, it has a positive direction.

The calculation result of t_{count} value for leadership variable (X) is obtained of 2.466 with a significance value (p = 0.019. The obtained calculation results of t_{test} statistic value showed t_{count} on the leadership of the independent variable (X) is greater than the t_{table} value (t = 2.466>2.040), it is obtained that the testing results Ho is rejected. These results are also indicated by the value of statistic test significance (p-value) for leadership variable (X) on the quality of accounting information systems for 0.019 which is less than the acceptable error rate of 5%. So, we can conclude there is significant influence of leadership on the quality of accounting information systems.

The positive influence which is in the same direction and coefficients value have proved the built hypothesis (H_1) in which the leadership influences the quality of accounting information systems. Nye (2008) states the understanding and establishment of information are very important in a leadership in either small groups or large groups which is needed in designing and monitoring the effectiveness of implemented information systems. Leaders need to understand the implemented information system through what is seen and heard. This is in line with the research that is conducted by Eom (2005) that the leadership behavior of the project leaders is likely to be positively related to user's participation and involvement in the system development. The same opinion was delivered by Dong *et al.* (2007) that the project winner and leader behavior have an influence on the confidence in the use of information technology.

In fact, leadership still does not fully maximum guarantee to encourage employees to be more confident in achieving the company's goals and have integrity attitude in completing basic tasks, it can be seen from the results of the questionnaire. The results of the questionnaire which are distributed to respondents in Bandung pharmaceutical wholesalers company replied that a good system is determined by motivation which is given by the leadership in terms of encouragement to cooperate either cooperate with superiors, peers or subordinates as well as the encouragement to have high motivation in achieving the company. Furthermore, in a leadership, intelligence is needed in dealing with all the problems that will be able to respond intelligently through giving the opportunity for employees to express their opinions and creativity is also needed in developing company. With the circumstances, it will develop a working relationship between divisions and a good system that can improve the company's competitive power. This is indicated by the percentage of questionnaire's responses in which the respondents say 'enough' and have not reached 'good' criteria.

This study result is in line with the conducted research by Ghandour *et al.* in his research that the leadership role of the owners and managers in small and medium enterprises have the key role to the success of e-Commerce system and the research by Soja (2009) concluded that leadership is one of the basic requirements that must be met in order to achieve successful implementation of information systems.

CONCLUSION

There is a leadership influence on the quality of accounting information systems. The problems of accounting information systems which is unqualified in pharmaceutical wholesalers company happened because the leadership that is not maximized, they are: the head is not 100% can respond intelligently and appropriately over the problems that faced by companies that sometimes the problem will end with the matters of time, the encouragement to be creative in developing the company is still considered not maximized, the firmness and discipline still have not reached the desired expectations due to various internal and external factors.

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