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Leadership Behavior and Accounting Information System (An Empirical Study at the Hospitals in Riau Province-Indonesia)

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Abstract: Accounting information system functions to process data and to generate meaningful and useful accounting information for various users. The success of accounting information system is influenced by various internal and external factors of the organization. Leadership is one of the internal factors that plays a role in the design and implementation of accounting information system. This research is intended to examine the influence of leadership behavior on the quality of accounting information system at the hospital, through 33 selected hospitals in riau province by using simple random sampling technique and simple regression analysis tool. The result of this study concludes that leadership behavior significantly influences accounting information system. The result of this study can be used to solve the problem on the implementation of accounting information system by strengthening leadership behavior.

Key words: Leadership behavior, accounting information system, intended, leadership, implementation, examine

INTRODUCTION

As the information technology world progresses, computer-based accounting information system is becoming more popular and a necessity for almost all entities. Accounting information system plays a role in processing financial data and generates accounting information which is required by various users to reduce risk in making decisions (Susanto, 2013). Users also need financial information to improve the quality of organizational decisions and capabilities in the planning and preparation of its activity schedule (Romney and Steinbart, 2015) and to solve problems more closely (Effy, 2009).

Accounting information system is a collection of resources, such as people and tools which are designed to transform financial and other data into financial information (Bordnar and Hopwood, 2010). According to Hurt (2008) accounting information system is a series of interrelated activities, documents and technologies that are designed to collect and process data and to report accounting information which is generated to various groups of organization's internal and external decision-maker. Bocij *et al*. (2015) suggests that information system as a means by which organizations and people, use information technology, collect, process, store, use and disseminate information. So, it can be said that accounting information system is a collection of people and tools that are designed in a series of activities to process data and to produce financial information.

To achieve the intended purpose, the components of information system are interconnected with each other to process data and to disseminate quality information (Stair and George, 2012). The transaction processing system as part of accounting information system provides a role to integrate financial data into financial information (McLeod and Schell, 2007). The transaction processing system is designed in such a way that the flow of information from one system to another can take place automatically, without requiring manual work, thus, becoming an integrated information system (Stair and George, 2012).

Susanto (2013) reveals that the main problem of accounting information system is how to integrate between system components (brainware with software and hardware). In this regard, Laudon and Laudon (2014) explains that the application system which is owned by a company can not provide value, if it is implemented in a defective process or if the company does not know how to use the system. In order to software applications of accounting information system can be used. Then in addition to the software must be in harmony with the hardware and the communication network technology which is used, it must also fit the needs and the desires of users (Susanto, 2013).

In fact, the implementation of accounting information system in various units of entities do not work well as it is revealed from the phenomenon which is put forward by (Abadi, 2015), there is still many accounting information system in hospital that has not been yet, integrated with

the system of BPJS health because it still uses manual administrative process, so it takes quite plenty of time to connect with BPJS. Similarly, it is stated by Sungkono (2014) that the accounting information system at BPJS has not been integrated in which each organizer (BPJS health and BPJS employment) has its own information system, so that it is hard to access the data and it is late to present the information.

Sofwan, S. Ahmad as the President Director of Fujitsu Indonesia states the importance of implementing fast and efficient XBRL-based accounting information system and which is capable to validate data automatically, results in better data quality and reduces manual calculations. Furthermore, Sofwan, S. Ahmad discloses that the implementation of integrated accounting information system contributes significantly, especially in supporting of financial reporting with standard format, easy to access, more accurate and more transparent.

Leadership is one of the factors which is involved in managing information systems (Laudon and Laudon, 2014). Leadership is an individual's ability to influence and control other members in an effort to help a group or an organization achieve its goals (George and Jones, 2012). The same thing is put forward by Luthans (2011) that leaders motivate subordinates to achieve organizational goals. Luiser (2008) states that effective leaders will use a distinctive style of leadership consistently that is rooted in behavior. In this regard, leadership becomes a responsible aspect of facing business challenges in its environment through the establishment of organizational strategy and allocates human and financial resources to coordinate work and to achieve success in cluding responsibility for the implementation of information system (Laudon and Laudon, 2014).

Several previous researcher has been studied the influence of leadership behavior on accounting information system as Dong (2006), Ghandour *et al.* (2007), Cho *et al.* (2011) and Eseryel and Eseryel (2013). The result of these studies have been proved empirically that leadership is an important factor influences the accounting information system.

Literature review

Leadership behavior: According to Robbins and Judge (2014), leadership is the ability to influence a group toward the achievement of a vision or set of goals. George and Jones (2012) states that leadership is the capability of an individual to exercise influence and control over other members to help the group or organization to achieve its goals. Similarly, Gibson *et al.*, (2012) states that leadership is a leader's attempt to use influence motivate individuals to achieve some goals. Yukl (2010) states that leadership is the ability of an individual to influence, motivate, enable others to contribute toward the effective and success of the organization. Furthermore, Kondalkar (2007) states that leadership is the process of influencing others, so, they will be willing and enthusiastic to achieve goals. Based on the statement of the experts above can be concluded that leadership is the ability and effort to influence and control others to achieve goals of the organization.

According to the assumptions of behavioral leadership theories, effective leaders use consistently distinctive style: that is, that good leadership is rooted in behavior (Luiser, 2008). In another section, George and Jones (2012), explains that behavioral approaches aim to identify leader behaviors that help employees, groups and organizations achieve their goals. The behavior approach to leadership tried to identify behaviors that differentiated effective leaders from non-leaders. Leadership behavior can be studied by analyzing what was done by leaders with regard to the completion of its task and to maintaining the effort of people (Gibson *et al.*, 2012).

Behavioral approach seeks to identifies the behaviors responsible for effective leadership but also does not consider how situational factors influence behavior as illustrated in the path-goal theory (George and Jones, 2012). Path goal theory is a leadership contingency approach where leaders are responsible for improving subordinate motivation by clarifying the behavior required for achieving organizational goals (Daft and Lane, 2015).

Based on "The Leader Behavior Approach", there are 2 dimensions of leadership: Consideration behavior and initiating structure behavior (George and Jones, 2012; Robbins and Judge, 2014; Daft and Lane, 2015). Based on the path-goal theory, there are four dimensions of leadership behavior: directive, supportive, achievement oriented and participative (Stroh *et al.*, 2002; Daft and Lane, 2015).

Directive and achievement-oriented behaviors are two distinct dimensions of task-oriented behavior while supportive and participative behaviors are two distinct dimensions of person-oriented behavior (Gibson *et al.*, 2012). According to Gibson *et al.* (2012), the four behaviors can be practiced by the same leader in various situations to achieve desired goals. Mullins (2006) identifies the four dimensions of leadership behavior as follows: Directive leadership in volves letting subordinates know exactly what is expected of them and giving specific directions. Supportive leadership in volves a friendly and approachable manner and displaying

concern for the needs and welfare of subordinates; participative leadership in volves consulting with subordinates and the evaluation of their opinions and suggestions before the manager makes the decision; and achievement-oriented leadership in volves setting challenging goals for subordinates, seeking improvement in their performance and showing confidence in subordinate's ability to perform well.

Gibson *et al.* (2012) describes leadership behaviors into 4 dimensions as follows: the directive leader has a tendency to let subordinates to know what is expected of them; The supportive leader treats subordinates equally; The participative leader, consult with subordinates and consider their suggestions and ideas before reaching a decision and the achievement-oriented set challenging goals, expects subordinates to perform at the highest level and continue to search for improved performance. Furthermore, Gibson *et al.* (2012) explains that directive and achieved oriented behavior is task-oriented behavior, whereas supportive and partitative behavior is the dimension of person-oriented behavior.

The concept of leadership behavior in this study uses dimensions and indicators: The directive leader with the indicator, i.e., the leader gives trust and direction to subordinates; the supportive leader, treating subordinates equally; the participative leader, consisting of consulting with subordinates and considering the opinions and suggestions of subordinates before making a decision; and achievement-oriented leaders consist of setting challenging goals for subordinates, providing solutions to improve subordinate performance and believe a subordinate's ability to get things done properly (Mullins, 2006; Gibson *et al.,* 2012; George and Jones, 2012; Daft and Lane, 2015).

Accounting information system: Susanto (2013) states that accounting information system is a collection (integration) of the sub-system/components both physical and non physical interconnected and cooperate with each other in harmony to process data is related to financial problems into financial information. Similarly, proposed by Mancini *et al.* (2013), that accounting information system is a complex system consisting of a collection of interrelated elements (such as data, human resources in formation technology tools, accounting models and procedures) which undertakes the activities of including to collect, classify, elaborate, store accounting data. Wilkinson *et al.* (2000) argues that an accounting information system is an integrated structure within an entity such as a business enterprise that employs physical resources and other components to transform economic data into accounting information in order to satisfy various information needs users.

Based on the above statements can be concluded that accounting information system is a combination of human and technological tools are interconnected and work together in harmony to process financial and non financial data and generate financial information for the purpose of decision making.

Accounting information system can be seen through its subsystem Transaction Processing System (TPS) designed in such a way to process data from everyday business events at the operational level of the organization (Stair and George, 2012; Valacich and Christoph, 2012). Transaction Processing System (TPS) has a series of activities, namely: to convert economic events to financial transactions, to record financial transactions and to distribute financial information to support daily operations (Hall, 2011).

Bocij *et al.* (2015) suggests that accounting information system quality is easy to use, reliable, secure and well integrated with other systems. Similarly, proposed by DeLone and McLean (2003) that the quality of the system can be reviewed from ease of use and system integration. Furthermore, Laudon and Laudon (2014) argued that the quality of information systems in addition to consider the accuracy and timeliness of information produced and ease of use. According to Effy (2009), ease of use of the system can be determined by the easier the program is used. Gelderman and Kusters (2012) argues that the ease of use is demonstrated by how the system is easy to understand, logical and easily accessible.

System integration is the interaction between components (subsystems), resulting in overall integration of information systems and related businesses (David and Fitzgerald, 2006). Susanto (2013) states that in the concept of accounting information systems that must be integrated are all related components and sub-components that form an accounting information system to produce quality information. Furthermore, Ferreira (2013) argues that integrating the system not only facilitates the data flow but also allows this process to run automatically where the completion of one step triggers the implementation of the same next step or in different systems.

The concept of accounting information systems in this study uses the dimensions of easy to use (Bocij *et al.*, 2015; DeLone and McLean, 2003; Laudon and Laudon, 2013; Effy, 2009; Gelderman and Kusters, 2012) and integration of components system (Susanto, 2013; David and Fitzgerald, 2006; Ferreira, 2013).

Framework and hypotheses: Duggan and Reichgelt (2006) argued that leadership behavior is required to transform

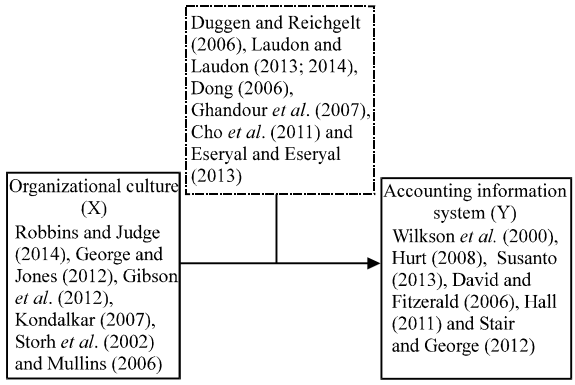

Fig. 1: Framework sheme

organizations into high performance systems units, capable of delivering high-quality information system with consistency.

Management must be able to use leadership to address business challenges in its environment, organize organizational strategies to respond to those challenges; and allocate human and financial resources to coordinate work and achieve success in cluding responsibility for coordination and successful implementation of accounting information systems (Laudon and Laudon, 2014). Leadership plays a role not only during the design but also on the implementation of accounting information system (Laudon and Laudon, 2013). Therefore, aspects of leadership behavior affect the information systems used by organizations (Laudon and Laudon, 2014).

The research results of Dong (2006) shows that the existence of leadership relationship with the implementation of accounting information system where the implementation of information systems always evoke changes in the organization, the leadership is able to bridge the impact of the changes to streamline the implementation of accounting information systems. Ghandour *et al*. (2007) concludes that the visionary and strategic leadership of owners and managers contributes to the successful implementation of ecommerce systems in small and medium enterprises in New Zealand. Similarly, the research results of Cho *et al*. (2011) study concluded that transformational leadership behaviors affect on the success of information systems in organizations via two psychological mechanisms of system user's perceived organizational support and systems self-efficacy. In addition research results of Eseryel and Eseryel (2013) shows that leadership strategically influences the development of information systems.

Based on the theories and research results which have been described before, it can be concluded that leadership behavior influences on accounting information system.

For more details on this conceptual framework it will be presented in the form of schematic framework in Fig. 1.

MATERIALS AND METHODS

This research uses descriptive and verification methods are intended to describe the facts and examine the research hypothesis based on facts on the fiield. The subjects of this study were hospitals in Riau Province with a population of 58 units while the sampling population was 42 hospital units type A-C while 16 units of hospital were not studied because they are small hospital types (type D). The 33 of these 34 hospitas that returned the answers to the questionnaire can be processed.

The research data is collected is in ordinal data. This data is transformed into interval data by using MSI (Method of Successive Internal). Hypothesis testing uses the help of statistical program SPSS (Statistical Product and Service Solutions). Validity and reliability testing was conducted to test the quality of the data. Validity testing is intended to assess the ability of the measured variable while the reliability testing is intended to determine the level of accuracy, accuracy or consistency of data collection tools.

RESULTS AND DISCUSSION

Validity and reliability testing is performed to assess the validity and reliability of the answers to the questionnaire items were received from the respondents. Validity test uses the validity index of product moment correlation with correlation coefficient value more than 0.30 while reliability test uses standard value based on Cronbach's alpha value is more than 0.70. The result of validity tests can be seen on Table 1.

The results of validity test in Table 1 shows that the measurement value of leadership behavior and accounting information system variables are above the critical value of 0.30. This means that the questions posed as an indicator measuring of leadership behavior and accounting information system are able to measure the variables. The result of reliability test can be seen in Table 2.

The results of reliability test in Table 2 shows that both variable leadership behavior and accounting information system meet the criteria of reliable because it has a reliability value above 0.70. This means that answers to variable leadership behaviors and accounting information systems are consistent.

Table 1: The results of validity test

Variable/ Dimension	Indicators	Validity index	Results
Leadership behavior variables			
Directive leadership	Biliefs to subordinates work	0.727	Valid
	Providing specific directions	0.756	Valid
Supportive leadership	Treating subordinates as equals	0.899	Valid
Participative leadership	Consider subordinate suggestions	0.742	Valid
Achievement-oriented leadership	Setting challenging goals	0.701	Valid
	Seeking improvement	0.735	Valid
	confidence in subordinate's ability	0.847	Valid
Accounting information system variables			
Easy to use	Easy and fast collection and data input	0.501	Valid
	Easy and fast data processing	0.727	Valid
	Secure data storage	0.684	Valid
	The availability of timely financial statements	0.615	Valid
Components integration	The use of hardware as the needs	0.782	Valid
	Software utilization supported by hardware	0.768	Valid
	Competent users	0.727	Valid
	Users run the SOP	0.570	Valid
	Database meets the needs	0.860	Valid
	Communication network connected	0.725	Valid

Table 2: The results of reliability test

Variables	Reliability	Results
Leadership behavior	0.877	Reliable
Accounting information system	0.903	Reliable

Hypothesis testing: Before performing hypothesis testing, a simple regression equation was established earlier, this equation is intended to determine the direction of the relationship independent variables and dependent variable. Based on the results of data processing, it can be built a simple regression equation as follows:

$$AIS = 0.278 + 0.714LB_i + \varepsilon$$

This simple regression equation shows that leadership behavior has an influences on accounting information system is shown by regression coefficient of 0.714. This means that the stronger the leadership behavior in the company, the better the accounting information system.

Hypothesis testing is intended to determine the influences of leadership behavior on accounting information systems. The statistical hypothesis is:

H_0 = There is no influence of leadership behavior on accounting information system

H_1 = There is influence of leadership behavior on accounting information system

The results of statistical tests show that the value of t_{table} leadership behavior is 3.688 at a level of significance of 0.001. The value of t_{table} at a significance level of 5% and N (33-2) = 31 for the two-sided test is equal to 2.040. Thus, it can be determined that: $t_{count} > t_{table}$, where 3.688>2.040 where H_0 is rejected and H_1 is accepted. It means that there is the influence of leadership behavior on the accounting information system. Furthermore, the significance value of 0.001 is smaller than the specified alpha value of 0.05 indicating that the influence of leadership behavior on the accounting information system is significant.

Therefore, based on the results of testing the hypothesis above, it can be concluded that leadership behavior significantly influences the accounting information system.

This research can find several causes of problems not easy to use and not integrated accounting information system through leadership behavior. Based on the results of this study obtained some notes on the aspects of leadership behavior associated with the application of accounting information systems which is shown by: leadership beliefs to subordinate work, provide direction to subordinates, treat subordinates in equal, consider suggestions and opinions subordinates, providing jobs that challenge the creativity of subordinates and confidence in the ability of subordinates.

The results of this study confirmed the opinion of Laudon and Laudon (2014) that leaders are responsible for the successful implementation of accounting information systems. The results of this study are also in line with the opinion of Laudon and Laudon (2013) other that leadership plays a role in the design and implementation of accounting information systems. Furthermore, The results of this study support the opinion of Duggen and Reichgelt (2006) that high-level leadership behavior is important to produce a consistent quality accounting information system.

The results of this study reinforce the results of previous studies is conducted by Dong (2006), Ghandour *et al.* (2007), Cho *et al.* (2011) and Eseryel and Eseryel (2013) who concluded that leadership influences the successful of accounting information systems.

CONCLUSION

Based on the results of study and discussion above can be concluded that the leadership behavior influences the accounting information system. The accounting information system at hospitals in riau province that has not been integrated and not easy to use due to leadership behavior has not been maximally utilized. It is indicated by

the behavior of leaders who do not maximally trust in subordinate task, provide direction to subordinates, treat subordinates equally, consider the suggestions and opinions of subordinates, provide work that is monotonous that does not require creativity and less believe in the ability of subordinates.

SUGGESTIONS

The result of study is able to answer the problem that is not quality accounting information system as stated through previous phenomena through strengthening leadership behavior by: trusting the task of subordinates, giving direction to subordinates in achieving the work, treating subordinates equally, consider the suggestions and opinions of subordinates, develop task that develops creativity and believe in the ability subordinate.

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