The Determinants of Accounting Information Systems' Quality and Its Implication on the Quality of Accounting Information

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Abstract: This research aims to analyze the impact of the organizational culture, leadership style, internal control system on the quality of the accounting information systems and its implication on the quality of the accounting information at BPKAD in the province of South Sumatra. The unit of analysis in this study is the individuals or people who work in BPKAD of South Sumatra province. This research is an explanatory research in which data are collected through a mail survey. To see the relationship between the latent variable with a manifest variable as well as to see the relationship between exogenous with endogenous variables, this research used a structural equation modelling by using PLS software. The result showed that the the organizational culture, leadership style, internal control system and the quality of the accounting information systems significantly affect the quality of the accounting information. Limitation of this study is the small value of the loading factor of each of the variables examined. This is an opportunity for subsequent researchers to investigate other variables that affect the quality of accounting information.

1 INTRODUCTION

All forms of business and non-profit organizations present accounting information to help stakeholders both within the company such as managers and from the outside of the company such as investors, government institutions, banks and others for the purpose of making economic decisions (Hansen & Mowen, 2013). Accounting information helps the external parties of company to make investment decisions, evaluate performance, monitor activities, and as regulatory measures (Hansen and Mowen, 2013). By using accounting information, internal parties of the company will obtain information related to the past and the future, such as forecasting which includes annual plans, strategic, and several alternative decisions (Susanto, 2008), determination of cost ofgoods product/cost of goods service and etc. (Hansen & Mowen, 2013). Utilization of accounting information as the basis for making various types of decisions as mentioned above because stakeholders understand well that the essence of accounting information has met the criteria as decision-useful-information, which means information that is useful for decision making (Kieso et al, 2012).

The development of regional autonomy in Indonesia in accordance to the applicable regulations brought changes to the system of politic, social, community and economy which led to various demands on good governance.

For reporting and accountability of financial statements, standards and default accounting systems are required to be applied consistently so that the financial statements can be presented completely and on time. Based on Government Regulation Number 71 of 2010, government accounting standards are defined as accounting principles in the preparation and presentation of government financial statements in the form of Government Accounting Standards (PSAP), and are prepared with reference to the Government Accounting Conceptual Framework. A government that applies good and right Government Accounting Standards will produce qualified financial statements.

The regional government of South Sumatra has attempted to compile reports based on government accounting standards and regional financial accounting systems, so that the quality generated from the regional financial statements can be increased and qualified. This can be seen in the

Results of Examination Summary (IHPS) Iin 2016 (IHPS BPK RI for the period 2011-2015) Regional Government Financial Statements (LKPD) of the South Sumatra Province from 2011 to 2013 describing the results of opinions as Qualified Opinions (WDP). Whereas in 2014 described the results of opinion as Modify Unqualified Opinions (WTPDPP) and in 2015 the government of South Sumatra province received the opinion of the Supreme Audit Institution (BPK) as Unqualified Opinions (WTP).

The results of the evaluation by the BPK show that the Regional Government Financial Statements that obtain WTP opinions generally have implemented SAP and SAKD well and properly as well as having adequate internal controls. Meanwhile, WDP opinions in general are due to the existence of SAP implementation that has not been fully implemented and LKPDs that obtain Unqualified Opinions and Disclaimer of Opinions (TMP) still need a lot of good improvements and perfection in terms of the right and correct application of government accounting standards, the effectiveness of regional government information reporting system optimally and improvement of internal control in terms of the reliability of the information presented in the financial statements.

In general, organizational culture within government institution is still characterized by various problems, such as: the weakness of consistency and continuity of the state apparatus towards the organization's vision and mission, low integrity, loyalty and professionalism, the state apparatus is not creative, and individualism is more prominent than togetherness (Ministry The Enforcement of the State Apparatus of the Republic of Indonesia, 2012). Susanto, 2008 revealed that related to accounting information systems, organizational culture is related to the mental problems of human resources (system users) in the organization. According to (Susanto, 2008), the presence of computer technology as part of the accounting information system component brings change from the previous culture to the new culture. So that any changes in the information system as something new and positive have forced each member of the organization to do something different than usual. Many people feel disappointed because they are doing something positive, and seek any effort to encourage the old accounting information system to survive.

Based on the phenomenon and gap research that has been explained, the purpose of this study is to analyze the influence of organizational culture, leadership style and internal control system partially and simultaneously towards the quality of accounting information systems in the South Sumatra provincial government and the influence of the quality of accounting information systems towards the quality of accounting information in the provincial government of South Sumatra.

2 LITERATURE REVIEW

In general organizational culture has a positive influence on organizational effectiveness when organizational culture can give support for organizational goals, share widely and deeply embedded in each member of the organization (Bartol & Martin, 1998)

According to (Indetje & Qin, 2010), organizational culture has a strong influence on the application of financial information systems. Identifying and understanding meanings, norms, and power in an organization is an important consideration when implementing a system. Hirsch (1994) also stated that organizational culture has a very strong influence on the behaviour of individuals and organizations as a whole. The information system is the main component of the organization, so that the information system can be influenced substantially by the organizational culture. Many information systems fail, in simple term, the cause is the information system does not match the organizational culture in which the information system is designed.

Just like the statements above (Claver et al, 2001) stated that in organizations that have a strong culture, that is when beliefs have been widely shared throughout the organization and values have been accepted by each particular group, then the system information will become a very important factor in its competitiveness. Therefore, according to (Loudon & Loudon, 2012) organizational culture is included as one of the central organizational factors when planning a new system.

Loudon & Loudon (2012) explained that leadership style is one of the factors that must be considered in planning a new (information) system. By using one of the leadership styles as intended in the path-goal-theory of leadership, leaders try to influence perceptions and motivate their subordinates (Luthan, 2008)

Transformational leaders inspire values and ideal follower sand ultimately motivate followers to do more than what is expected of them. By using the analogy of the definition of transformational

leadership, (Cho et al, 2011) tried to translate the meaning of a positive relationship between transformational leadership and the success of system information.

Cho (2011), then asserted, that by carrying out the four behaviors above can ensure that transformational leadership will be able to play an important role in the success of the information system user.

The information quality of accounting information systems is influenced by internal control factors (Elder et al, 2010). The management reason for designing an effective internal control system is to achieve three general objectives, namely: (a) reliability of financial reporting, (b) effectiveness and efficiency of corporation's operation, and (c) compliance with laws and regulations (Messier et al, 2006).

Internal controls are designed to ensure the accuracy of data entry, processing techniques, storage methods and accuracy of results (information). In other words, the internal control system is designed to monitor and maintain the quality and security of accounting information system activities in carrying out input, process and output activities (O Brien and Marakas, 2010). By building internal control in a computer-based accounting information system, it will help management's efforts to protect company assets from loss and embezzlement and to maintain the accuracy of the company's financial data (Jones and Rama, 2003: 7).

Internal control is needed to ensure that the accounting information system works as expected so that the risk of deviations from the pre-determined goals may be avoided (Susanto, 2008). Companies are required to develop internal controls with the aim of providing reasonable certainty that the financial report has been presented qualifiedly (Arens et al, 2008), while according to (Mill Champ and Taylor, 2012) accounting information systems and score keeping systems will not successfully carry out the processing of accounting transactions completely and accurately unless control is carried out which is known as internal control.

Over all, an accounting information system carries out four main functions, which are: data preparation, data entry, transaction processing, and report production and distribution (appendix 9A: 2014) The accounting information system processes financial transactions, then records the transactions in journal books and ledgers (both based on manual and computerized) and procedures without requiring guarantee of accuracy. However, accounting policies and procedures often contain basic elements of internal control

O'Brien (2010) stated that information systems can help managers by providing necessary information to carry out every managerial function. Scott (1986) also stated that the accounting information system aims to present financial statements designed for external users and internal users. Similarly (Hall, 2011) stated that fundamentally, the purposes of accounting information systems are: (1) to provide information about the organizational resources used, (2) to provide information related to management decision making, and (3) to provide information for personnel operations to assist them in carrying out their tasks efficiently and effectively.

In addition to the above statement (Susanto, 2009) stated that for a company, accounting information systems are built with the main purpose to process accounting data from various sources into accounting information needed by various users to reduce risk in making decisions. Romney & Paul JS (2006) also stated that the basic function of the accounting information system is to provide useful information for decision making. Furthermore, according to (Romney & Paul JS, 2006), to be useful accounting information generated by accounting information systems, such as financial statements and various types of statements, must present an accurate, complete, and timely description of company activities.

Whereas according to (Pornpandejwittaja & Pairat, 2012) that the effectiveness of information systems relates to collecting, entering, processing, storing data, managing, controlling reporting of accounting information so that organizations can obtain qualified financial statements.

Proof of the theoretical concepts above related to the influence of the quality of the Accounting Information Systemson the quality of accounting information empirically shows the following results: The study of (Salehi et al, 2011), about the success of information systems in economic revival in Iran, shows that accounting information systems can repair the validity of the financial statements and financial reporting.

3 RESEARCH METHODOLOGY

This study uses a quantitative research approach. The research method used by the author is an explanatory research method. The selected unit of analysis is BPKAD of South Sumatra province with

the observation unit (respondent) are employees who work at the BPKAD of South Sumatra province which are related to the preparation of the financial statements of the province of South Sumatra

Data needed from the two types of data are collected by questionnaire technique and observation technique. Before the questionnaire was distributed to the respondents, several tests were carried out first, namely validity and reliability test.

The population of this research is all employees who work in BPKAD in South Sumatra Province which are related to the preparation of financial statements as many as 90 people. From those 90 employees, the questionaire that returned and can only be processed are only 46 questionnaires, so that the author uses saturated samples. Data processing research is using SEM-PLS.

4 RESULT AND DISCUSSION

4.1 Result

4.1.1 Result of the Measurement Model (Outer Model)

The criteria used in assessing the outer 'model are convergent validity, discriminant validity and composite reliability. Because the model of the Structural Equation Modelling (SEM) used is an approach model with the Second Order, so the Measurement Model has two stages namely Indicators of Dimensions and Dimensions of Variables.

The calculation result of loading factor for 4 manifest variables of the latent variable of Organizational Culture ranged from 0.7 to 0.9 is already above the average for loading factor of 0.5. The results of calculating the value of the outer model or correlation between constructs with variables (loading factor) have fulfilled the Convergent Validity. The loading factor value is above the recommended value of 0.50. The t test value shows that the indicator is significant (because the t value is more than 1.96), so that the construct (manifest variables) for organizational culture is not eliminated from the model.

Leadership style consists of dimensions of directive, supportive, participative and achievement oriented. The calculation results of loading factor for the 4 manifest variables of the latent variable leadership style ranged from 0,8 to 0.9 is already above the average for loading factor of 0.5. Calculation of the value of the outer model or

correlation between constructs with variables (loading factor) has fulfilled the Convergent Validity. The loading factor value is above the recommended value of 0.50. The t test value shows that the indicator is significant (because the t value is more than 1.96), so that the construct (manifest variable) for the Leadership Style is not eliminated from the model.

The Internal control system consists of general control and special control dimensions. The calculation result of loading factor for 2 manifest variables of the internal control system latent variable ranges from 0.8 – 0.9 is already above the average for loading factor of 0,5. Calculation of the value of the outer model or correlation between constructs with variables (loading factor) has fulfilled the convergent validity. The loading factor value is above the recommended value of 0.50. The t test value shows that the indicator is significant (because the t value is more than 1.96), so that no construct (manifest variables) for the internal control system is eliminated from the model.

The quality of the Accounting Information System consists of the dimensions of Ease, Usability and the Actual Usage. The calculation results of loading factor for the 3 manifest variables of the latent variable the quality of the Accounting Information System (Y) ranges from 0,8 to 0,9 is above the average for a factor of 0,5. The results of calculating the value of the outer model or correlation between constructs with variables (loading factor) have fulfilled the Convergent Validity. The loading factor value is above the recommended value of 0.50. The t test value shows that the indicator is significant (because the t value is more than 1.96), so that the construct (manifest variable) for the quality of the Accounting Information System is not eliminated from the model.

The Quality of Accounting Information consists of the dimensions of Relevance, Accuracy, Completeness and Timeliness. The calculation results of loading factor for 4 manifest variables of latent variables the quality of accounting information ranges from 0.8 – 0.9 is above the average for loading factor of 0.5. The results of calculating the value of the outer model or correlation between constructs with variables (loading factor) have fulfilled the convergent validity. The loading factor value is above the recommended value of 0.50. The t test value shows that the indicator is significant (because the t value is more than 1.96), so that the construct (manifest

variable) for the quality of accounting information is not eliminated from the model.

4.1.2 Testing Results of the Structural Model (Inner Model)

PLS explained that the R^2 value is equal to 0.25 which has a weak effect, 0.5 has a moderate effect and 0.75 has substantial effect (Chin, 2010). R^2 values indicate the accuracy of predictions from the model (Hair, 2014). So the research model using the accuracy of the model in predicting the Quality of the Accounting Information System (Y1) of 0.823 has a substantial (strong) effect and the accuracy of the model in predicting the Quality of Accounting Information (Y2) of 0.881 has a substantial (strong) effect.

4.1.3 Full Analysis Model of SEM

Based on the research data calculated using the SEM approach of Partial Least Square (PLS), the structural model is shown in Figure 1.

Based on the research data and calculated using SEM the PLS approach was obtained by the structural equation sub-model for this study as follows:

$$\eta_1 = 0.366\xi_1 + 0.389\xi_2 + 0.233\xi_3 + 0.177$$

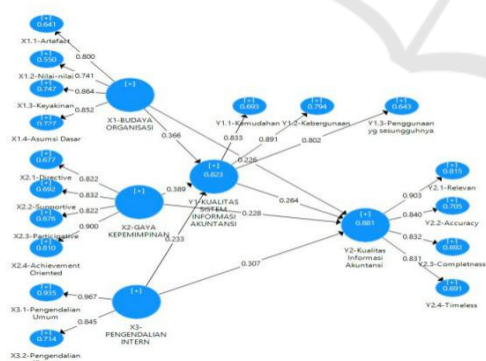$$\eta_2 = 0.226\xi_1 + 0.228\xi_2 + 0.307\xi_3 + 0.264\eta_1 + 0.119$$

Figure 1: Structural model

4.2 Discussion

4.2.1 The Effect of Organizational Culture (OC) towards the Quality of Accounting Information Systems (AIS)

The results of testing of the first hypothesis regarding the influence of OC towards the quality of

the AIS shown in Figure 1 shows that the path coefficient value is 0.366 with a t count of 2.141 with a significance value (p-value) of 0,038. The value of the t-statistics obtained (2.141) is greater than the t-critical (1.960) and when viewed from the test significance value of 0.038 < 0.05, it is concluded that it is significant. This result means that OC has an effect towards the quality of the AIS which is meaningful in accordance with the hypotheses that are suspected. This provides information that the increasing intensification of organizational culture socialization to expand the spread of OC values so that they are understood and believed then applied by BPKAD employees in South Sumatra province that will have a significant influence on improving the quality of AIS.

The results are in line with the research conducted by (Carolina and Rapina, 2015) regarding the influence of OC, organizational structure on the Quality of AIS and their implications for the Quality of Accounting Information on manufacturing companies in Bandung which show the influence of OC towards the Quality of AIS; (Napitupulu, 2015) with the results of OC influencing the Quality of AIS; and (Nusa, 2015), that there is a significant influence of OC towards the quality of AIS.

The most dominant dimension of OC variables on the confidence dimension with indicators of seriousness in carrying out the task in the best way and sincerity in completing the work tasks and objectives, while the dominant AIS quality variable is formed by the usability dimension with indicators of task completion speed, performance, achievement of goals work and ease of doing work. This makes the findings in this study that if the belief to carry out the tasks and objectives of the job is high, then the AIS will have a high value of use/increase.

4.2.2 The Effect of Leadership Style (LS) towards the Quality of AIS

The results of the second hypothesis testing show that the path coefficient value is 0.389 with a t count of 2.751 with a significance value (p-value) of 0.09. The value of the t-statistics obtained (2.751) is greater than that of t-critical (1.960) and when viewed from the test significance value of 0.009 < 0.05, a significant test is concluded. This result means that the LS is effect towards the quality of the AIS which means that it is in accordance with the hypothesis that is suspected. Thus it can be interpreted, that the increasing effectiveness of LS in the BPKAD of South Sumatra Province will have a significant effect on improving the quality of AIS.

The results of this study support the theoretical statement about the effect of LS towards the quality of AIS (Eom, 2005), (Ghandour et al, 2007), (Tajuddin et al, 2012), (Cho, 2011). Based on the description above that it can be concluded that leadership affects the success/effectiveness/quality of AIS.

The dominant dimensions of LS variables are oriented achievement dimensions with leader indicators providing opportunities for subordinates, subordinate awareness to use their best abilities while the dominant accounting information system quality variable is formed by usability dimensions with indicators of task completion speed, performance, achievement of work goals and ease of doing work.

4.2.3 The Effect of Internal Control System (ICS) towards the Quality of AIS

The results of the third hypothesis testing indicate that the path coefficient value is 0.233 with a t-count of 2.644 with a significance value (p-value) of 0.011. The value of the t-statistics obtained (2.644) is greater than that of t-critical (1.960) and when viewed from the test significance value of $0.011 < 0.05$, a significant test is concluded.

This result means that the ICS affects towards the quality of the AIS, which means that it is in accordance with the hypotheses that are suspected. Thus, the more effective the ICS is, the quality of the AIS Province BPKAD will have a high quality.

The dominant dimensions of ICS variables are general control dimensions with indicators of implementation of control organizational structure, implementation of general operating procedures, implementation of equipment control features and implementation of data access control, while the variable quality of AIS is predominantly shaped by usability dimensions with speed indicators performance, achievement of work goals and ease of doing work.

4.2.4 The Effect of OC, LS and ICS Simultaneous towards the Quality of AIS

The results of the effect of OC, LS and ICS towards the quality of the AIS is 82.3% and the effect of factors outside the OC, LS and ICS is 17.7%. The most dominant variable affects the variable quality of the AIS is the LS variable with the most reflecting dimensions, namely achievement oriented dimension, while the most reflecting variable is the

quality of AIS dominantly formed by usability dimensions.

4.2.5 The Effect of OC towards the Quality of Accounting Information (AI)

The fifth hypotheses testing results show that the path coefficient value is 0.226 with a t-count of 2.609 with a significance value (p-value) of 0.013. The value of the t-statistics obtained (2.609) is greater than that t-critical (1.960) and when viewed from the significance value of $0.013 < 0.05$, a significant test is concluded. This result means that OC affects the quality of AI that is meaningful in accordance with the hypotheses that are suspected.

This provides information that the increasing intensification of socialization of OC to expand the spread of OC values so that they are understood and believed then applied by BPKAD employees in South Sumatra province that will have a significant effect on improving the quality of AI. The most dominant dimensions of OC variables in the dimension of belief, while the quality variables of AI in the relevant dimensions.

4.2.6 The Effect of LS towards the Quality of AI

The results of the first hypothesis testing show that the path coefficient value is 0.228 with a t-count of 2.802 with a significance value (p-value) of 0.008. The value of the t-statistics obtained (2.802) is greater than that t-critical (1.960) and when viewed from the significance value of the test $0.008 < 0.05$, a significant test is concluded. This result means that the LS affect the quality of AI that is meaningful in accordance with the hypothesis that is suspected. Thus it can be interpreted, that the increasing effectiveness of LS in the BPKAD of South Sumatra Province will have a significant effect on improving the quality of AI. The dominant dimension of LS variables is achievement-oriented, while the quality of AI quality is relevant.

4.2.7 The Effect of ICS towards the Quality of AI

The seventh hypothesis testing result show that the path coefficient value is 0.307 with a t-count of 3.362 with a significance value (p-value) of 0.002. The value of the t-statistics obtained (3.362) is greater than that t-critical (1.960) and when viewed from the test significance value of $0.002 < 0.05$, a significant test is concluded. This result means that the ICS affects the quality of AI that is meaningful

in accordance with the hypotheses that are suspected. The dominant dimension of ICS variables is the general control dimension, while the dominant AI quality variable is formed by the relevant dimensions.

4.2.8 Effect of AIS Quality on AI Quality

The testing results of the eighth hypothesis indicate that the path coefficient value is 0.264 with a t-count of 2.177 with a significance value (p-value) of 0,035. The value of the t-statistics obtained (2.177) is greater than that t-critical (1.960) and when viewed from the significance value of $0.035 < 0.05$, a significant test is concluded.

These results mean that the quality of the AI system affects the quality of AI that is meaningful in accordance with the hypotheses that are suspected. To improve the quality of AI in the BPKAD of South Sumatra province, it requires an improvement in the quality of the AIS, because with the increasing quality of the AIS, the quality of AIS significantly.

4.2.9 The Effect of OC, LS, ICS and Quality of AIS Simultaneously towards the Quality of AI

The results of effect of OC, LS, ICS and quality of AIS towards the quality of AI obtained by 88.1% and the effect of factors outside OC, LS, ICS and AIS quality of 11.9%.

5 CONCLUSIONS

OC has proven to have a positive and significant effect on the quality of the AIS. The most dominant dimension of OC variable in the dimension of belief, while the variable quality of AI systems is predominantly shaped by the dimensions of usefulness.

The LS has proven to have a positive and significant effect on the quality of the AIS. The dominant dimension of LS variables is the achievement-oriented dimension, while the variable quality of the AIS is predominantly shaped by the usability dimension.

The ICS has proven to have a positive and significant effect on the quality of the AIS. The dominant dimension of ICS variable is the general control dimension, while the AIS quality variable is predominantly shaped by the usability dimension.

OC, LS and ICS are simultaneously proven to have a positive and significant effect on the quality

of the AIS with a contribution of 82.3%. The most dominant variable influencing the variable quality of the AIS is the LS variable with the most reflecting dimensions, namely achievement oriented dimension, while the most reflecting variable is the quality of AIS quality dominantly formed by usability dimensions.

OC has a positive and significant effect on the quality of AI. The most dominant dimensions of OC variables in the dimension of belief, while the quality variables of AI in the relevant dimensions. The LS has proven to have a positive and significant influence on the quality of AI. The dominant dimension of LS variables is achievement-oriented, while the quality of AI quality is relevant. The ICS has proven to have a positive and significant effect on the quality of the AIS. The dominant dimension of ICS variables is the general control dimension, while the dominant AI quality variable is formed by the relevant dimensions.

The quality of AIS has proven to have a positive and significant effect on the quality of AI. The variable quality of the AIS is formed by the usability dimension, while the AI quality variable is on the dimensions of revelation.

OC, LS, ICS and the quality of AIS are jointly proven to have a positive and significant effect on the quality of AI with a contribution of 88,1%. The most dominant variables affecting the quality of AI variables are internal control system variables, with the most reflecting dimensions, namely dimensions: general control, while the dimensions that most reflect the quality variables of AI, are the relevant dimensions.

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