

The Successful Implementation of Accounting Information Systems and the Quality of Government Financial Statements at Regencies and Cities in North Sumatra, Indonesia

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Abstract: This study aims to examine and analyze; The influence the full implementation of accounting information system to the quality of financial statements. This study uses explanatory research method and type of research is verification. The type of data are primary and secondary data and use the interval and ordinal scale as a measurement scale. Data collection uses survey techniques with the distribution of a questionnaire to the government of the cities and regencies in North Sumatra and uses the documentation data which were obtained from the BPK-RI representative of North Sumatra while the observation unit is the Regions Finance and Asset Management Officer and the Regional Inspectorate. Validity and reliability tests are conducted on the questionnaire that has been collected, next the ordinal scale data is converted into an interval scale. The data were analyzed descriptively with help of the average statistics (mean) and inferential statistics by using SEM-PLS. The study results showed that the successful implementation of accounting information systems has positive effect on the quality of financial statements. Financial statement has not been qualified due to the application of accounting information system which has not been successful because of the services quality which is provided by system is not optimal, regional financial information system (SIKD) in regencies and cities have still not given satisfaction to the user, either reliable or has not been integrated adequately.

Key words: The successful implementation of accounting information systems, accounting information systems, regional finance, the quality of financial statements, mean, SEM-PLS, government

INTRODUCTION

Financial statements in public sector, particularly the government financial statement is an important component for creating public accountability. Financial statements are a form of transparency which is a supporting condition to the accountability in the form of government transparency on the activity of public resource management. Quality financial reporting in the public sector, especially in government, according to is a financial statement that is able to present financial information that is relevant and reliable. In order to determine whether the financial statements present financial information that is relevant and reliable there should be an assessment of the financial statements. In accordance with the Act No. 17 in 2003 on State Finance: to stipulate that the government financial statements must be audited by the Financial Audit Agency (BPK) in time.

The quality of the financial statements can be viewed from the perspective of auditors who provide an opinion on the financial statements of an organization. According to Cohen and Kaimanakis that the audit report serves as a proxy of the quality of accounting reports because the audit gives legitimacy to an entity that demonstrate compliance with accounting standards. Furthermore, Boynton and Johnson states that financial statement

users who rely on financial statements to take economic decisions assume that the auditor report as an indication of those statements reliability. Relevance and reliability are the two main qualities that make accounting information useful to decision makers, users of financial statements see the independent auditors report for assurance about the information reliability and conformity to generally accepted accounting principles.

The conditions that describe the poor quality of financial statements are declared by Moses that about 90% of the local officer work unit (SKPD) in Indonesia has not been able to make the financial statements of local governments (LKPD) such as the report on the realization budget, balance sheet, statement of cash flows and notes of financial statement well. The same as the opinion by Gunawan Fauzi that, although, the quality of the financial statements at the public sector, especially in the area that has increased but in terms of management and local financial reporting there are still many weaknesses. The low quality of local government financial statements also occurred in North Sumatra Province. Based on the results of BPK from 2008 until 2013 that the average opinion of local government financial statements at regencies and cities in North Sumatra is qualified with exception (WDP) unqualified (TW) and did not give opinion (TMP). Furthermore, the phenomenon of the low quality of

financial statements, it also can be seen from the delivery time of LKPD to BPK-RI. It can be shown from the number of local government at regencies and cities in North Sumatra Province were late in submitting financial statement to BPK-RI. As it was expressed by Mikael Togatorop stated that the deadline for LKPD acceptance by BPK was on March 31, 2012 but until March 19, 2012 there are seven regencies and cities submit LKPD. Quality financial statements are resulted from the successful implementation of accounting information systems. This is because the financial statement is the output of the accounting information system. According to Hansen and Mowen (2007), that the accounting information system is related to the goals it generates financial statements. Azhar (2013) states that the fundamental role of accounting information systems in organizations is to produce quality information.

Quality financial statement is resulted from the successful implementation of accounting information systems. This is because the financial statement is the output of the accounting information system. According to Hansen and Mowen (2007), that accounting information system is related to the goals it generates financial statement. Azhar (2013) states that the fundamental role of accounting information systems in organizations is to produce quality information. This means that if an application of accounting information system can run successfully it will produce quality financial statements. The same as the opinion of Leauanae and Rasmussen that if the financial reporting system is functioning properly, then the financial statements which are issued by a company will be reliable. If the financial reporting system is not functioning properly, then the means and methods that are already available can be misused.

Accounting information systems is a data collection and processing procedures that create the information required for users. According to Azhar (2013) accounting information system is as a collection of sub-systems which are interconnected to each other and work together in harmony to process financial data into the financial information which is required by management in the decision making process in the financial sector. Specifically, Hall states that the fundamental purpose of accounting information system is to provide accounting information to external parties, management and operational personnel parties. This means, the essence of the accounting information system is to collect raw data then the data is processed and later is presented in the form of useful accounting information for the user (Kieso *et al.*, 2011).

The successful implementation of accounting information system can be defined as the effectiveness of the accounting information system (DeLone and McLean, 1992, 2003), user satisfaction (Stair and Reynolds,

2010) the quality of accounting information systems or the success of accounting information system itself.

The term of the effectiveness of the accounting information system is indicated by the size of the successful implementation of information systems in achieving the goals that have been set (DeLone and McLean, 2003). The term of the quality of accounting information systems can be demonstrated by the integration of hardware, software, brain ware, telecommunication of users and the data base quality and the quality of work and satisfaction of users (Huber, 1990) states that accounting information system that is integrated can be instrumental in supporting the operational activities and the competitive advantage achievement of the company as a strategic. Furthermore, the terms of user satisfaction is indicated by the level of beneficiary which is obtained by a user on an accounting information system (Meiryani, 2017) or described by the user response to the system (DeLone and McLean, 1992, 2003). The term of successful or success of accounting information system is shown by the out-put size that is generated by the actual system, to increase productivity, improve performance and increase control over decisions relating to the information which is generated by the accounting information system. Thus, the information which is generated is expected to make the decision making process more effective (DeLone and McLean, 2003).

A phenomenon that occurs at this time in Indonesia that the application of accounting information system which is held by entities both business and public entities are still having problems. In the business entity, Boediono stated that the report of the bank has not been accurate and transparent due to the system weakness. Furthermore, Budi Mulya revealed the same thing that the banking entity as a business entity is required to be more transparent and honest in reporting its balance sheet. Besides, according to Halim Alamsyah that Bank Indonesia recognizes there are some weaknesses in the banking system, first, the internal processes that are related to the bank itself. In the case of bank burglary, Bank Indonesia sees there is no optimal supervision from supervisor; There was also customer habit to believe easily in some redundant bank employees. It was also used by the bank employees that resulted in harming the customers themselves.

The weak accounting information systems also occur in public entity, Anwar Nasution states that the accounting information system of government has not been aligned with Institution Accounting Standards (SAI) and the Government Accounting Standards (SAP). Besides, according to Anwar Nasution Accountability and transparency of public sector financial statements are still not much progress because of the slow improvement

of the information system on national accounting in which the information system is still not integrated. On the organization of State-Owned Enterprises (BUMN), based on the audit results in 2005-2011 it was found as many as 24 BUMN are potential as the corrupt State institutions. Uchok Sky Khadapi states that one of the corruptions potential causes are inaccurate financial records reporting and reporting process which is not according to regulations.

Based on the descriptions above, researcher is interested in conducting further research on the successful implementation of accounting information systems and its effect on the quality of financial statements. The research on the above matter has been done but for the subject of research in government has not been done yet. From the existing research results the researchers claim that there is the influence in the successful implementation of accounting information system on the quality of financial statements.

Framework of theory and hypothesis: The effectiveness of the information system related to the collection, entry, processing, data storage, management, accounting information control reporting, so that, organizations can get quality financial statements (Meiryani, 2018). The same as according to Hayes *et al.* stated that the information quality which is produced by the system affects the management ability to make the right decisions in controlling the entity activities and preparing reliable financial reports. Similar to the opinion of Hangjiang Xu that the good information quality which is generated in an organization is a competitive advantage for the organization. In accounting information system, the information quality which is provided is essential to the system success implemented in the organization as a guideline in the implementation of accounting process.

Further, Scott states that the accounting information system aims to present financial statements that are designed for internal and external users. The same as Hall states that fundamentally the purpose of accounting information systems are providing information on the organization resources which are used, providing information related to management decision-making and providing information to operation personnels to assist the personnels in carrying out their duties effectively and efficiently.

The study results of Mahdi Salehi *et al.* which was conducted in Iran concluded that the accounting information system can improve the correctness of financial statements and financial reporting. Sajadi *et al.* studied the effectiveness of accounting information systems. The study results showed that the effectiveness of the accounting information systems in company can lead to improvements in the quality of financial statement and fasten the transaction processing in companies. The

same as Sacer *et al.* by using empirical methods of deductive and logical methods concludes that there is a relation between accounting information systems and business reports on the basis of information quality characteristics. Onaolapo and Odetayo in their study concluded that the accounting information systems leads to good financial statement and also leads to better decision making. The study results of Hossein *et al.* showed that computer-based accounting information system has a significant effect on the three main characteristics: the transparency of financial statements that are relative, reliability and comparability of financial statements.

Based on the above framework, the hypothesis which is proposed in this study is: the successful implementation of accounting information systems has positive effect on the quality of financial statements.

MATERIALS AND METHODS

The method that is used is the research method with explanation approach (explanatory research). The type of study is verification. The population in this study is all of local government in North Sumatra Province. The target population are the governments of regencies and cities throughout North Sumatra. Furthermore, the unit of analysis is the regional government which is composed of 33 regencies and cities government in North Sumatra. In this study, the type of data is qualitative and quantitative data. Source of data are primary data and secondary data. Qualitative data or primary data is obtained from respondents with collection techniques are questionnaires, interviews, observation and documentation. The primary data which were collected through questionnaires need to be tested first with the consideration that the seriousness of the respondents in answering the questions is very important in this study. For that it is required two kinds of tests, validity test (test of validity) and reliability test (test of reliability). The most of the data collected in this study is the data by ordinal scale. Then to be able to be analyzed statistically, the data must be scaled into intervals using interval sequence (Method of successive interval). Once the data is transformed from ordinal scale into an interval scale, the data can already be analyzed further. In this study, it is done the type of analysis to obtain results which are suitable to the study purpose: the analysis by equation modeling Structural Equation Modeling (SEM) component or variance-based which is known as Partial Least Square (PLS) in order to answer the formulation problems and the hypothesis.

After all models are tested and it is obtained a model that fits the data, then the next stage which is conducted is hypothesis testing by Bootstrap resampling method.

RESULTS AND DISCUSSION

Study result

The results of measurements model: The successful implementation of accounting information systems was measured using 3 dimensions consisting of 13 indicators. Based on the processing results of using second order confirmatory factor analysis it is obtained measurement model for the successful implementation of accounting information system variable as it is presented in Fig. 1.

The analysis of first order measurement model on the succesful implementation of accounting information systems variable: Based on the data processing results using Software SmartPLS 2.0 it is obtained the testing results of each indicator on the succesful implementation of accounting information system variable using the first order of confirmatory factor analysis as it is presented in the following Table 1.

Table 1: The validity testing result summary of first order measurement model on the succesful implementation of accounting information system variable

Indicators	Loading factors	R ²	Error variance	t-values	CR	AVE
Y ₁	0.513	0.263	0.737	2.2180	0.841	0.583
Y ₂	0.882	0.778	0.222	40.0430		
Y ₃	0.952	0.906	0.094	71.1230		
Y ₄	0.621	0.386	0.614	2.6220		
Y ₅	0.855	0.731	0.269	15.5220	0.947	0.817
Y ₆	0.886	0.785	0.215	22.9150		
Y ₇	0.936	0.876	0.124	71.0850		
Y ₈	0.936	0.875	0.125	35.3330		
Y ₉	0.909	0.827	0.173	44.4670	0.934	0.739
Y ₁₀	0.901	0.812	0.188	30.3590		
Y ₁₁	0.851	0.724	0.276	22.4500		
Y ₁₂	0.788	0.620	0.380	5.9620		
Y ₁₃	0.844	0.712	0.288	9.6980		

Based on the results of the first order confirmatory factor analysis it can be seen the loading factor value of each indicator is >0.50 . This means that all indicators are valid as measure tools for each its dimension. Then the Composite Reliability value (CR) of each dimension is >0.70 indicates that the indicators have consistency in measuring each dimension. Furthermore, the Average Variance Extracted value (AVE) of each dimension is >0.50 indicates that on average more than 50% of the information which is attached to each indicator can be reflected through its dimensions.

Furthermore, through loading factors which are presented in Table 2 it can be seen that the dimensions of the system quality (KPSIA₁), Y₃ indicator has the greatest loading factor which indicates that Y₃ indicator (Integrated) is the most powerful in reflecting the service quality dimension. Instead Y₁ indicator has the smallest loading factor which indicates Y₁ indicator (Reliability) is the weakest in reflecting the system quality dimension.

On the service quality dimensions (KPSIA₂), Y₇ and Y₈ indicators have the greatest loading factor which indicates that Y₇ and Y₈ indicator (trust and empathy) is the most powerful in reflecting the service quality dimensions. Instead Y₅ indicator has the smallest loading factor which indicates that Y₅ indicator (responsiveness) is the weakest in reflecting the service quality dimensions.

Table 2: The validity testing results summary of second order measurement model on the succesful implementation of accounting information system variable

Dimensions	Loading factors	R ²	Error variance	t-values	CR	AVE
KPSIA ₁	0.896	0.803	0.197	63.337	-	-
KPSIA ₂	0.948	0.898	0.102	57.256	0.952	0.870
KPSIA ₃	0.953	0.909	0.091	61.605	-	-

Data processing

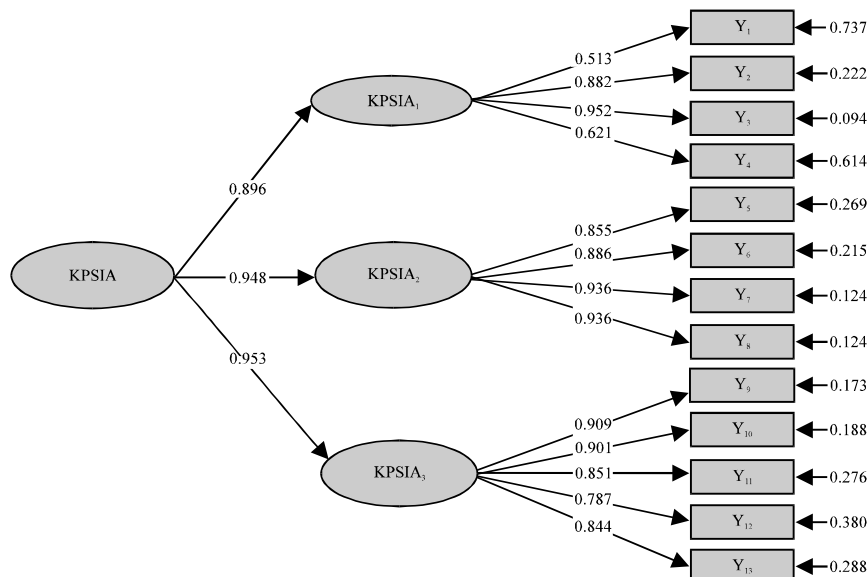


Fig. 1: Path diagram of measurement model on the succesful implementation of accounting information system variable

In the dimension of user satisfaction (KPSIA₃), Y₉ indicator has the greatest loading factor which indicates that Y₉ indicator (confidence) is the most powerful in reflecting the dimensions of user satisfaction. Instead Y₁₂ indicator has the smallest loading factor which indicates that Y₁₂ indicator (pleasure) is the weakest in reflecting the dimensions of user satisfaction.

The analysis of second order measurement model on the successful implementation of accounting information system variable: Based on the data processing results using Software SmartPLS 2.0 it is obtained the testing results of each dimension of the successful implementation of accounting information systems variable using the second order confirmatory factor analysis as it is presented in following Table 3.

Based on the second order results of confirmatory factor analysis it can be seen the loading factor value of each dimension is >0.70. That is the four dimensions are valid in shaping the success implementation of accounting information systems variable. Composite Reliability value (CR) of 0.952 is also >0.70 which indicates that the three dimensions have consistency in measuring the successful implementation of accounting information systems. Furthermore, the value of Average Variance Extracted (AVE) of 0.870 indicates that on average 87.0% of the information contained in each dimension can be reflected through the successful implementation of accounting information systems variable.

Based on Table 2, it can also be seen that the coefficient of determination estimation (R²), the largest in the successful implementation of accounting information system is expressed by the dimensions of user satisfaction (KPSIA₃). These results indicate that the dimension of user satisfaction is the most important factor in reflecting the successful implementation of accounting information systems. Otherwise, the system quality dimension is the weakest in reflecting user satisfaction.

Measurement model of the quality of financial statements variable: The quality of financial statements are measured using two indicators, based on processing using first-order confirmatory factor analysis it is obtained the measurement model for the quality of the financial statements variable as it is presented in Fig. 2.

Based on the results of data processing using Software SmartPLS 2.0 it is obtained the testing results of each indicator on the quality of the financial statements variable using the first order of confirmatory factor analysis as it is presented in the following Table 3.

Based on the first order results of confirmatory factor analysis it can be seen the loading factor value of each indicator is >0.50. That is both valid indicators as a measure tool for the variable quality of financial statement. The Composite Reliability value (CR) of 0.891

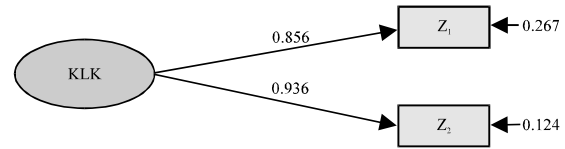


Fig. 2: Path diagram of measurement model on the quality of financial statements variable

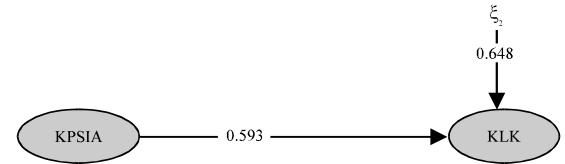


Fig. 3: Diagrams of hypothesis testing path

Table 3: The validity testing result summary of first order measurement model on the quality of financial statements variable

Indicators	Loading factors	R ²	Error variance	t-values	CR	AVE
Z ₁	0.856	0.732	0.268	5.870	0.891	0.804
Z ₂	0.936	0.876	0.124	39.028	-	-

Table 4: Testing results of the successful implementation influence of accounting information systems on the quality of financial statements

Path coefficients	t _{count}	t _{critical}	H ₀	H _a
0.593	7.453	1.96	Rejected	Accepted

Data processing

is >0.70 indicates that both indicators have consistency in measuring the quality of financial statements. Furthermore, the value of Average Variance Extracted (AVE) of 0.804 indicates that on average 80.4% of the information which is contained in each indicator can be reflected through the quality of financial reporting variable.

Based on Table 4, it can also be seen that the coefficient of determination estimation (R²), the largest in the quality of financial statements are expressed by timely submission of financial statements to the auditor indicators (Z₂). These results indicate that the timely submission of financial statements to the auditor is a stronger factor in reflecting the quality of the financial statements compared to the opinion which was given by the auditor.

Structural model results: Path diagram of the successful implementation of accounting information system to the quality of the financial statements are visually described as follows: on Fig. 3, it can be seen the path coefficient of successful implementation of accounting information systems (KPSIA) on the quality of financial statements (KLK) of 0.593 with a positive direction. It means that the successful implementation of accounting information system will improve the quality of financial statement.

Furthermore, the path coefficient is tested to prove whether there is influence of successful implementation of accounting information system to the quality of financial statements. Hypothesis:

- $H_0: \beta_{2,1} = 0$ the successful implementation of accounting information system does not affect the quality of financial statement at the regencies/cities in North Sumatra Province
- $H_a: \beta_{2,1} \neq 0$ the successful implementation of accounting information system affects the quality of financial statement at the regencies/cities in North Sumatra Province

Based on the testing results it can be seen t_{count} value of successful implementation path of accounting information system to the quality of financial statements $7.453 > t_{critical} (1.96)$. Because $t_{count} > t_{critical}$, then the error rate of 5%, so, it was decided to reject H_0 and H_a is received. So, based on the testing results it can be concluded that the successful implementation of accounting information systems affect the quality of financial statement at the regencies/cities in North Sumatra Province. The study results provide empirical evidence that the more successful implementation of accounting information system is it will improve the quality of financial statement at the regencies/cities in North Sumatra Province. The successful implementation of accounting information systems affect for 35.2% on the quality of the financial statements, while the remaining of 64.8% is the influence of other factors.

Hypothesis testing results indicate that there are significant successful implementation of local financial accounting information systems (SKID) on the quality of financial statement by 35.2%. That is 35.2% due to the quality of the financial statement or can be explained by the successful implementation of accounting information system. The more successful the implementation of accounting information system is the more quality of financial statement. The successful influence of SIKD implementation to the quality of financial statements although significant but it is only 35.2%. The testing results can be seen t_{count} value of successful implementation path of accounting information system to the quality of financial statements $7.453 > t_{critical} (1.96)$. Because $t_{count} > t_{critical}$, the error rate of 5% is decided to reject H_0 and H_a is received. So, it can be concluded that the successful implementation of accounting information system has positive effect on the quality of financial statement at the regencies and cities in North Sumatra Province.

The successful of SIKD implementation at the regencies and cities in North Sumatra Province is still not ideal and needed improvement, the weaknesses in the successful of SIKD implementation are caused by some indicators that are part of the successful of SIKD implementation dimensions. The weaknesses of SIKD implementation that are mentioned above become a concern for the government of regencies and cities in North Sumatra Province, so in order to obtain the quality of financial statements will be achieved, the submission of financial statement to BPK-RI is in time and able to obtain a normal unexceptful (WTP) opinion of BPK-RI on its financial statement. It means to be able to achieve timely financial statement and obtain WTP opinion, the application of accounting information system in local government should be run properly or success. The efforts for the successful implementation of accounting information system in local government can be done by paying attention to and improving the quality of SIKD, SIKD service quality and the existing SIKD can give satisfaction to SKID user.

The study results are consistent with the study results by Mahdi Salehi *et al.* which was conducted in Iran concluded that accounting information system can improve the correctness of financial statement and financial reporting. Moreover, Sajadi *et al.* showed that the effectiveness of the accounting information systems in company can lead to improvements in the quality of financial statement and speed up the transaction process in company. Similarly, Sacer *et al.* concluded that there is a relation between accounting information system and business reports on the basis of information quality characteristics. Onaolapo and Odetayo in their study concluded that the accounting information system leads to good financial statement and also leads to better decision making. Then study results by Hossein *et al.* showed that computer-based accounting information system has significant effect on the three main characteristics, the financial statements transparency that are relative, reliability and comparability of financial statements.

The study results are relevant to the theory which was put forward by Hall states that fundamentally the purpose of accounting information systems are providing information on the organization resources which are used, providing information which is related to management decision-making and providing information to the operating personnel to assist the personnel in carrying out their duties adequately and efficiently. Scott states that the accounting information system aims to present financial statements that are designed for internal and external users. The same as the opinion of Hangjiang Xu

that the good information quality which is generated in an organization is a competitive advantage for the organization.

The study results also explain the phenomenon that the financial statement on the regencies and cities of North Sumatra Province has still not been qualified that from the SIKD implementation aspects have not been fully successful/success. The more successful the implementation of accounting information system (SKID) is then it can improve the quality of financial statement in the government of regencies and cities in North Sumatra Province. The phenomenon is consistent with which is proposed by Nazir that BPK judges the quality of the regional financial statements from year to year decreases. Musa also stated that about 90% of SKPD in Indonesia has not been able to make local government financial statements (LKPD). Furthermore, Gamawan Fauzi stated that, although, the quality of the public sector financial statements, especially in the area which has increased but Ministry of Internal Affairs assess in terms of local management and financial statement that there are still many weaknesses.

CONCLUSION

The conclusions of this study are as follows: the successful implementation of the local financial accounting information system has positive effect on the quality of financial statement. Financial statement has not been qualified due to the application of accounting information system that has not been successful because of the services quality which is provided by the system is not optimal, SIKD in regencies and cities have still not either given satisfaction to the user yet or reliable and have not been adequately integrated.

SUGGESTIONS

The successful implementation of accounting information systems can improve the quality of financial reports, it is done: by improving the reliability and flexibility of SIKD; by completing SIKD with the programs that can facilitate and assist the implementation of SKID. Improving the service quality of SIKD by developing SIKD applications which are more dynamic and flexible

that are kept up ready to be updated whenever they suit the needs of local government and environmental conditions which are constantly changing. Increasing SIKD user satisfaction by providing quality information technology facilities such as the Internet network, wifi, battery backup, SIKD special space for the server as well as maintenance personnel of SIKD who has sufficient competence. This study has limitation. The study observation unit is only on PPKAD and Regional Inspectorate, so that, it less describes the thorough condition of the local governments that is studied, therefore, it is suggested to other researchers to examine the opinion of other SKPDs as the accounting entity within the government. Besides, using other variables that can affect the quality of financial reports such as the internal control system, the user competence and the role internal audit.

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