

The effect of audit findings and audit recommendation follow-up on the financial report and public service quality in Indonesia

Audit findings and audit recommendations follow-up

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Abstract

Purpose – This study aims to analyze the effect of audit findings and audit recommendations follow-up on the quality of financial reports and the quality of public services in the context of applying accrual accounting systems to local government in Indonesia. This study also examines whether the quality of the financial report affects the quality of public services.

Design/methodology/approach – This study employed cross-sectional regression using data from 1,437 observations from 491 districts/cities for 2014–2016. The data illustrates the conditions prior to the adoption of the accrual accounting system (2014), the initial year of application/transition period (2015) and the second year of the expected accrual accounting system (2016).

Findings – The results of the study indicate that, in general, the quality of financial reports affects the quality of public services. Regarding the implementation of audits in the public sector, it is also found that audit findings have a negative impact on the quality of financial report and the quality of public services, while audit recommendations follow-up plays a positive role in improving the quality of financial report and the quality of public services.

Research limitations/implications – The implication of the results of this study is closely related to the efforts to realize the ultimate goal of the recent government reforms. In order to increase the quality of public services in the era of higher report requirements through an accrual accounting system, the government should focus on the quality of financial reports, audit findings and the audit recommendations follow-up.

Originality/value – This study provides new insight on the link between the public sector auditing and the quality of accounting in accrual implementation context and the quality of public services.

Keywords Public services quality, Financial report quality, Accrual accounting system, Audit findings, Audit recommendations follow-up

Paper type Research paper

1. Introduction

In line with the changing paradigm of public sector organization functions and domains that occurred around the 1990s, there were fundamental changes in funding, governance and accountability related to the control and operation of public services, including the implementation of accounting and auditing (Broadbent and Guthrie, 2008). However, despite many previous studies analyzing the dynamics of changes in accounting systems in the local government organizations, it is still rare to find studies that comprehensively analyze the relationship between the application of accounting systems and the quality of public services (Bruns, 2014).



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The quality of accrual-based government financial reports is an important indicator in assessing the successful implementation of New Public Management (NPM) in the government (Connolly and Hyndman, 2006). Furthermore, in general, the application of accrual accounting systems can provide financial information and performance that are more comprehensive and reliable (Luder, 1992; Yamamoto, 1999; Cohen *et al.*, 2007; Prasajo and Holidin, 2018). When the local government implements an accrual accounting system and has a good quality financial report, it will have an impact on the quality of public services.

Therefore, to fill the study gap about the relationship between accounting implementation and public sector auditing with public services, this study aims to analyze the impact of audit findings and the role of audit recommendations follow-up on the quality of financial reports and public service in the context of local government. The context of this study is the application of the accrual accounting system in the local government in Indonesia. This study departed from the study conducted by Bruns (2014), who analyzed the relationship between the changes in the accrual accounting system and the performance of public services at the local government level. However, by using the data from the local government (districts/cities) in Indonesia that have implemented the accrual accounting system since 2014, this study focuses on analyzing the effect of financial report quality produced after the implementation of accrual accounting system on the quality of public services of the local government.

Referring to the regulations in Indonesia, the audit findings are represented as the results of the evaluation of the external auditor (The Audit Board of Indonesia/BPK) on the condition of financial management, internal control structure and compliance of the local government on regional financial management and reporting regulations. Unlike audits in the private sector, audits in government in Indonesia not only include audits of financial statements, whether they are in accordance with applicable accounting standards, but also include evaluations of internal controls and compliance with regulations. On the other hand, audit recommendations follow-up that is carried out is the responsibility of the local government officials, representing the effectiveness of internal supervision carried out by internal auditors (regional inspectorate), especially in the framework of overseeing the management and reporting of regional finances and the implementation of public services.

The public service itself includes all the activities of the public sector organizations in the context of providing goods or services for all levels of society and funded by tax revenues (Broadbent and Guthrie, 2008). Several previous studies related to the determinants of quality of public services (such as Graycar, 2015; Bose, 2004; Rakhman, 2019) found that conflicts of interest, misuse of information, nepotism, bribery, extortion and misuse, as well as indecisiveness of the imposition of sanctions and legal uncertainty about bribery, would adversely affect the governance, especially public services. Based on the results of the previous studies, it is assumed that when the number of audit findings on a local government is high, then the local government's compliance with the legislation and financial report management is low, and the quality of the financial report is low. The high audit findings are suspected to either directly or indirectly decrease the quality of public service administration of the local government. Meanwhile, when the suitability of the number of audit recommendations follow-up made by a local government is high, it is assumed that the implementation of the internal control system in the local government is in good quality, and the implementation of its duties and functions has been carried out effectively, efficiently and in accordance with the legislation. This condition, which is suspected of causing audit recommendations follow-up, can play a role in improving the quality of financial reports and at the same time encouraging better public services by the local government.

In general, the questions of this study are as follows:

- (1) To what extent does the quality of the financial report affect the quality of public services?

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- (2) To what extent do the audit findings and the audit recommendations follow-up affect the quality of public services?
 - (3) Do the audit findings and the audit recommendations follow-up affect the quality of public services indirectly through the quality of financial reports?

This study was conducted in Indonesia by examining 1,437 observations from 491 districts/cities for 2014–2016. This study provides several contributions and insightful empirical evidence. First, this study filled the research gap in the accounting and public sector, as stated earlier by Broadbent and Guthrie (2008), Bruns (2014), Pierre *et al.* (2018) by examining the link between the implementation of accounting and public sector auditing and also the quality of public services. The findings of this study do not only contribute to providing additional explanations related to the determinants of the quality of public services as previously stated by Bose (2004), Bruns (2014) and Graycar (2015) but also contribute to developing previous studies analyzing the determinants of successful application of accrual accounting system (e.g. Christensen, 2002; Hyndman and Connolly, 2011). The quality of the financial report resulting from the application of the accrual accounting system to the local government is found to have a positive effect on the quality of public services (Nurmandi and Kim, 2015). This study implies that the local government should focus on improving the quality of the financial report because the efforts made by the local government in order to improve the quality of financial reports will also be the right strategy to improve the quality of public services.

Second, according to predictions, the results of this study found a negative influence and significant audit findings on financial report quality as found by Johnson *et al.* (2012), Baber *et al.* (2013), Cohen and Laventis (2013) and Setyaningrum (2017). This study also shows those audit findings both directly and indirectly negatively affect the quality of public services. This study implies that the local government should improve the financial management and the implementation of internal control systems to increase the quality of financial reports and the quality of public services. On the other hand, the influence of audit findings on the quality of public services also has implications for greater responsibility of the external auditors in identifying and providing solutions to the problems of financial management and financial report to the local government, especially in the context of the application of accrual accounting system. Therefore, in order to improve the quality of financial report as well as the quality of public services, external auditors are expected to be able to identify problems appropriately and at the same time provide suggestions for improvement in the form of effective, constructive and applicable audit recommendations in the audit findings obtained during the audit process.

Third, this study also finds that there is a positive and significant influence on the audit recommendations follow-up on the quality of local government financial reports. The local government that consistently strives to carry out the follow-up based on the audit recommendations improves the quality of financial reports and provides excellent public services to the community. Therefore, based on the explanation above, it can be concluded that the application of the accrual accounting system and the effectiveness of the implementation of external audits and supervision by internal audits are very important in improving the accountability of the public sector and achieving the objectives of governance reforms (Prabowo *et al.*, 2017). That does not only have an impact on improving the quality of the financial reports but more than that, it will also have an impact on the duties and functions of the administration of other local governments, especially in the framework of providing excellent public services to the community.

The remainder of this article consists of four sections. The literature review and hypotheses development explore the previous literature and arguments to develop the hypotheses in this study. The methodology of the study explains the sample, data, model

of the study and analysis. The analysis section discusses the results of the descriptive statistics and hypotheses testing. The last section discusses the conclusions and implications of the results of the study and also the limitations and suggestions for further studies.

2. Literature review and hypotheses

2.1 Public services, accrual accounting system and government audits in Indonesia

Indonesia is one of the countries with the largest population in the world, with a population of around 258.316 million and an area of 1.913.57868 km². Since 1998, Indonesia has carried out significant economic, social and political reforms. Along with the main objectives of the application of the New Public Management (NPM) and the New Public Service (NPS), the reforms in Indonesia are also aimed at strengthening democracy and decentralization, as well as increasing professionalism, accountability and transparency in the public sector, especially government organizations (Harun *et al.*, 2015; De Vries and Sobis, 2016; Adiputra *et al.*, 2018).

The institution that has the authority to audit the finances of the regions in Indonesia as stipulated in Law No. 17 of 2003 concerning Regional Finance and Law No. 15 of 2004 concerning State Financial Accountability Examination is the Supreme Audit Agency (BPK) as the Supreme Audit Institution (SAI). According to the law, in addition to financial checks, BPK also has the authority to conduct performance and audit checks with specific objectives, all of which are carried out based on the state financial audit standards. The results of each BPK audit are presented in the form of an audit report which will be submitted to the legislature and published to the public. The financial audit will generate BPK's opinion on the Government Financial Report. Determination of opinions is based on the following four criteria, namely: (1) compliance with government accounting standards (since 2015, the standards have been based on the accrual accounting system), (2) adequacy of disclosure, (3) compliance with laws and regulations and (4) effectiveness of internal control systems.

In addition to containing opinions (specifically for financial examinations), the audit report also presents findings, conclusions and recommendations, including the results of monitoring the audit recommendations follow-up. Findings related to financial examinations are presented in two groups, namely (1) findings on the internal control system and (2) findings on compliance with legislation. Furthermore, the results of monitoring the audit recommendations follow-up are presented in four groups, namely: (1) follow-up based on audit recommendations, (2) follow-up but not in accordance with the recommendations, (3) recommendations that are not followed up and (4) recommendations that cannot be followed up.

According to Broadbent and Guthrie (2008), although the function of public services has never changed, there have been significant changes due to reforms in the public sector, such as the use of approaches adopted from the private sector by the government and the involvement of the private sector in direct delivery of public services to the community, major changes also occur in terms of funding, governance and accountability related to the operation and control of public services (Broadbent and Guthrie, 2008). Based on this statement, basically in realizing the implementation of quality public services will be greatly influenced by how the effectiveness of funding (financial management) and the level of accountability in the delivery of public services.

Related to this, Giroux and Shields (1993) who conducted research on the local government in United States found that audit opinions (describing the quality of financial reporting) could positively influence the efficiency of public spending in the next period. It was stated by Giroux and Shields (1993) that accounting and auditing are the most effective control tools, especially in limiting the power of bureaucrat monopolies over information and excessive spending of public funds. In addition, Bruns (2014) who conducted research on six cities in Germany showed a relationship between changes in the accrual accounting system and the

performance of public services. The benefits gained from changes in the accrual accounting system are not only limited to the improvement in the public service system at the organizational level, but with changes in the arrangements and practices of the accrual accounting system, it can also have an impact on the more effective (technical) activities of public services at the organizer level (Street Level Bureaucracy). Therefore, when local government finances are managed professionally, effectively and efficiently and financial reporting is able to provide reliable and relevant (quality) information, it can support the holding of more effective, efficient and accountable (quality) public services (Araujo and Tejedo-Romero, 2016).

2.2 The role of audit findings

In general, using the restatement of accounting information as a measure of financial report quality, Baber *et al.* (2013) in his study on the city government in the United States conclude that the role of governance, particularly concerning the conduct of audits and voter supervision, is the determinant of the quality of local government financial report. Baber *et al.* (2013) state that the role of auditors as determinants of financial report quality would be represented through audit findings. When auditors find problems and material errors during the audit, it can affect the quality of the financial report. This opinion is in line with the results of a study by Setyaningrum (2017) that shows that there is a correlation between auditor characterization or audit quality and the quality of local government financial reports.

Another study was conducted by Johnson *et al.* (2012) in the context of the State of Florida, United States. Their study shows that the audit findings negatively affect the quality of the local government's financial report. They argue that audit findings cannot only be viewed from the perspective of audit quality but can also be interpreted as problems inherent in the auditee. The audit findings can become indicators of financial management, internal control structure and operational efficiency of the local government. Cohen and Laventis (2013) also expressed similar opinions. The results of their study in Greece found that one of the causes of the timeliness of the presentation of the financial statements is the audit findings. According to Cohen and Laventis (2013), the audit findings represent the negligence of the local government on accounting standards and other financial report regulations, so that when the audit findings are high, several accounting standards are not followed and that condition causes audit findings to affect the timeliness of the presentation of the financial statements. Therefore, the audit findings in this study are interpreted as indicators that can be used to assess the condition of financial management, internal control structures and operational efficiency (Johnson *et al.*, 2012) in compliance with accounting standards and regulation of financial report (Cohen and Laventis, 2013), and to describe violations that occur in the management of public income and expenditure (Liu and Lin, 2012).

In addition, based on the previous studies, the scope of the financial reports on local government that implements an accrual accounting system will be more extensive than the local government that only applies the cash accounting system. On the other hand, a study by Radcliffe (2008) in Cleveland, Ohio, the United States found that there is a possibility that the auditor does not disclose all of his findings in the field, causing the audit findings report to not be able to describe the overall performance of the public sector organizations. In this study, it is assumed that when the number of audit findings in a local government is low, it indicates that the local government has sound financial management, an effective internal control structure and a high level of compliance with legislation. The local government that implements accrual accounting systems and has low audit findings will have a higher quality of the financial report, and the implementation of the local government program will also run effectively, efficiently and accountably, which in the end increases the quality of public services.

Therefore, due to the negative influence of audit findings on audit opinions on Regional Government in Indonesia (Setyaningrum, 2017), there is a link between conflicts of interest, misuse of information, nepotism, bribery and extortion with the creation of good governance, primarily related to the quality of public services. According to Graycar (2015), it can be said that audit findings not only decrease the quality of the financial report but can also directly and indirectly decrease the quality of public services.

The number of audit findings at the Regional Government indicates the extent of the application of the internal control structure, the level of compliance with the accounting standards and financial report regulations as well as violations in managing revenue and expenditure (corruption) (as previously stated by Johnson *et al.*, 2012; Cohen and Laventis, 2013; Liu and Lin, 2012; Nguyen *et al.*, 2017; Prabowo and Cooper, 2016). Thus, when the number of audit findings in a Regional Government is low, it indicates that the financial management in the Regional Government has been carried out properly because it is supported by an effective internal control structure and the level of compliance with the regulations of high legislation. In this condition, the implementation of activities in the Regional Government has been carried out effectively, efficiently and accountably, so that misuse of information and corrupt practices such as nepotism, bribery and extortion in the administration of public services will be difficult. Conversely, when the audit findings increase, it indicates that the internal control system has not been implemented effectively and compliance with laws and regulations in the Regional Government is also still low, so that it can lead to greater potential for misuse of information and corrupt practices in the delivery of public services, which will lead to the low quality of public services. Accordingly, the hypotheses are as follows:

H1a. Audit findings negatively affect public services quality.

H1b. Audit findings negatively indirectly affect public services quality through financial report quality.

2.3 The role of audit recommendations follow-up

Audit recommendations are the reflection of an independent assessment of errors found and how to improve them (Eckersley *et al.*, 2014). In BPK Regulation No. 2 of 2017, it is stated that audit recommendations are suggestions from the auditor based on the results of the examination, which are addressed to the authorized person and body to take action. It can be concluded that audit recommendations are suggestions for improvement provided by the auditor on weaknesses or errors found during the audit process that are expected to be carried out or acted upon by the auditee. In this case, the provision of audit recommendations is within the domain of the auditor's authority, while the implementation of audit recommendations follow-up is the responsibility and is within the control of the local government as the auditee, including if the audit recommendations involve third parties in its settlement.

In general, the follow-up to audit recommendations is an effort made by the local government in order to improve public financial accountability (Setyaningrum, 2017). In the context of local government in Indonesia, the parties who are also responsible for realizing local financial accountability are regional inspectors that function as internal supervisors of local government or internal auditors. Asare (2009) explains that the role of internal audit in public sector organizations consists of three important elements, namely evaluating and improving: (1) risk management, (2) control and (3) the process of achieving good governance, in which through these roles, internal audit can provide confidence to the management of the local government regarding the condition of the internal control system, including other stakeholders for the behavior of certain individuals who are considered dangerous for the operational and strategic objectives of the local government (Gabrini, 2013).

When the supervision of audit recommendations follow-up can be carried out effectively and in accordance with the recommendations, the financial management of the local government in the next period will be more accountable. The argument is consistent with the results of the study by [Liu and Lin \(2012\)](#) on the provincial government in China which found that the implementation of sanctions, penalties and other audit recommendations had a deterrent effect on the auditee so that audit recommendations follow-up would lead to reduced corruption in the next period. [Bose \(2004\)](#) also states that the indecisiveness of sanctions for bribery and lack of clarity in the law governing bribery would have an impact on delays in public services.

The results of the study by [Setyaningrum et al. \(2017\)](#) show the positive effects of audit recommendations follow-up on audit opinion. The results imply that when a local government conducts the audit recommendations follow-up in accordance with what is recommended by the external auditor, the local government should also improve the system of internal control, financial management and the implementation of tasks. Therefore, besides playing a role in improving the quality of the financial report, the high number of follow-up in accordance with audit recommendations, both directly and indirectly, will have an impact on the better public services carried out by the local government to the public. The hypotheses are as follow:

- H2a.* Audit recommendations follow-up positively affects public services quality.
- H2b.* Audit recommendations follow-up positively indirectly affect the public services quality through financial report quality.

3. Methodology

3.1 Data

This research was conducted in Indonesia, especially in the district/city government level. Since 2015, all district/city governments in Indonesia have implemented an accrual accounting system. This study employed follow-up data on audit recommendations. Therefore, in order to get a comprehensive picture related to the application of accrual accounting system, the analysis carried out in this study used the data from the period of 2014–2016. This range is used to provide an overview of conditions prior to the adoption of the accrual accounting system (2014), the initial year of application/transition period (2015) and the second year of the expectation of the accrual accounting system (2016).

There were 508 district/city governments in Indonesia during 2014–2016. The total number of final samples was 1,437 observations (*unbalanced*) from 491 regencies/cities in Indonesia. All data used in this study were taken from Indonesian Government agencies. The financial report data, audit findings and audit recommendations follow-up were taken from BPK. The public service data and the status of local government were taken from the Ministry of Home Affairs, and other data were taken from the Financial and Development Supervisory Agency.

3.2 Empirical model and operationalization of variables

To answer the questions and simultaneously test the hypotheses, the empirical model in this study is formulated as follow:

$$\text{PUBQ}_{it} = \beta_0 + \beta_1 \text{FINQ}_{it} + \beta_2 \text{FINDNG}_{it} + \beta_3 \text{FOLUP}_{it-1} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{AGES}_{it} + \beta_6 \text{SIMDA}_{it} + \beta_7 \text{ISLAND} + \beta_8 \text{MUN}_{it} + \beta_9 \text{YEAR}_{it} + \varepsilon_{it} \quad (1)$$

$$\begin{aligned}
 \text{FINQ}_{it} = & \alpha_0 + \alpha_1 \text{FINDING}_{it} + \alpha_2 \text{FOLUP}_{it-1} + \alpha_3 \text{SIZE}_{it} + \alpha_4 \text{AGES}_{it} + \alpha_5 \text{SIMDA}_{it} \\
 & + \alpha_6 \text{ISLAND}_{it} + \alpha_7 \text{MUN}_{it} + \beta_8 \text{YEAR}_{it} + \varepsilon_{it}.
 \end{aligned}
 \tag{2}$$

To test the direct effect of audit findings and audit recommendations follow-up on public service quality (Hypotheses H1a and H2a), this study use Model 1. To test whether the audit findings and audit recommendations follow-up affect the financial reporting quality, this study use Model 2. This study test Models 1 and 2 separately, and referred them as the individual model tests. To test the indirect effect of audit findings and audit recommendations follow-up on public service quality through financial reporting quality, this study performs a two-stage least square (2SLS) testing which runs both models simultaneously. This study referred to this test as the full model test. The research model is presented, in form of figure, in Figure 1.

The main variables in this study are PUBQ_{it} , FINQ_{it} , FINDING_{it} and FOLUP_{it-1} . PUBQ_{it} is a public service quality variable. Following Wardhani *et al.* (2017), this study measured PUBQ_{it} by the score based on the results of the 2016 Local Government Implementation Performance Evaluation (EKPPD) (Decree of the Minister of Home Affairs Number 100 – 53, 2018). The score is based on the evaluation results of the implementation of the duties and functions of the local government organized by the region, with scores ranging from 0.00 to 4.00. The higher the score, the better the quality of the public services to the local government. Wardhani *et al.* (2017) stated that this measurement is the most comprehensive performance measurement that score the quality of service which covers several areas of affairs such as education, health and the environment, infrastructure, youth and sports, investment, population, employment, food resilience, empowerment of women and children protection, family planning and welfare, transportation, communication and information, politics, community and villages empowerment, social, culture, etc. FINQ_{it} is a financial report quality variable measured audit opinion dummy variable, namely “1” for unqualified audit opinions and “0” for others. When the local government gets an unqualified opinion, the quality of its financial report is good whereas if it is on the contrary, the quality of its financial report is bad or not good. FINDING_{it} is an audit finding variable measured by the number of audit findings. Audit findings consisted of 67 types of findings and divided into two main groups, namely audit findings on internal control systems and compliance with legislation. The audit findings group on the internal control system is only presented in the form of amounts of

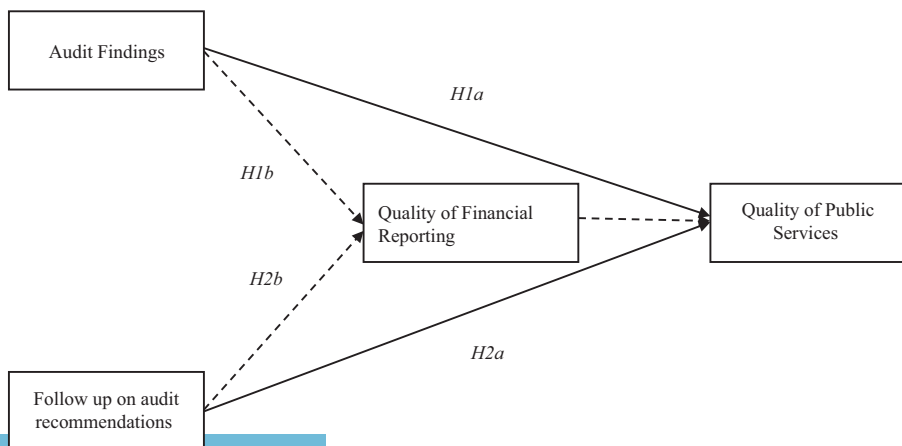


Figure 1.
Theoretical model

findings and does not measure in monetary value to provide a more comprehensive picture of the number of audit findings. In accordance with the study conducted by Johnson *et al.* (2012), the measurement of audit finding variables in this study uses the number of audit findings.

FOLUP_{*it-1*} is a follow-up variable to audit recommendations measured by the percentage of audit recommendation follow-up that is in accordance with the audit recommendations compared to the total audit recommendations provided by BPK auditors. FOLUP henceforth ranges from 2015 to 2016 as years of recommendation follow-up from the audit findings of 2014 and 2015, consecutively. This variable was based on the consideration that the Regional Government received an audit report from BPK/SAI examination of the financial statements, which contained (1) audit opinion on the financial statements, (2) audit findings on the financial statements and (3) audit recommendations based on the audit findings in previous years. Therefore, when the Regional Government carried out the management and report of financial transactions in following years, the Regional Government was also required to make improvements or provide sanctions (follow-up) on audit recommendations given by the auditor based on the results of the audit of previous financial statements. Therefore, it is hypothesized that the audit recommendations follow-up and the previous years (FOLUP_{*it-1*}) of 2014 and 2015 will have a positive effect on the quality of the financial statements and at the same time, the quality of public services in following years (2015 and 2016).

The control variables in this study are SIMDA_{*it*}, SIZE_{*it*}, AGES_{*it*}, ISLAND_{*it*} and MUN_{*it*}. SIMDA_{*it*} is the utilization variable of the Regional Financial Management Information System used by the local government based on the results of cooperation with BPKP as a guiding institution for the implementation of the Government Internal Control System. Utilization of SIMDA will be analyzed as a control in this study because based on the results of Setyaningrum's study (2017), it is found that the existence of BPKP in assisting in preparing local government financial statements has a positive influence on the quality of the financial report. Christensen's study (2002) found the effect of applying accounting information system technology to support the successful implementation of accrual accounting in the New South Wales government. Since there are six types of applications to support the implementation of financial management in the local government, the SIMDA_{*it*} measurement in this study is based on the percentage of SIMDA application used by the local government.

SIZE_{*it*} is a local government size variable as measured by the natural logarithm (Ln) of the total assets of the local government. Setyaningrum (2017) found a positive influence of the government size on the audit opinion in Indonesia. It is assumed that the size of the government can have a positive impact not only on improving the quality of the financial report but also the quality of public services.

AGES_{*it*} is a local government age variable as measured by the number of years of the local government formation. The age of the government represents the government's experience in managing financial management and public services so that the local government that had more experience is expected to carry out better financial management, financial reports and public services.

ISLAND_{*it*} is a variable of the local government's geographical location as measured by a dummy, namely "1" if the local government is on the island of Java, and "0" if it is in other islands. This variable represents the cultural differences between local governments in Indonesia. The results of the study by Hyndman and Connolly (2011) found that ideological, political and cultural factors are also determinants in the successful application of accrual basis accounting in the government. Therefore, in this study, it is predicted that there are differences in the quality of financial reports and the quality of public services due to geographical location.

MUN_{*it*} is a variable of local government status measured by a dummy, which is "1" if the local government is city/municipality, and "0" if it is the other. This variable represents

the different characteristics of the social conditions of the community and the type of status of local government in Indonesia. The city has the characteristics of a dense population and the availability of more complete facilities compared to the district. Ziegenfuss (2001) found that there is a difference in the type of government (city vs county) against fraud that occurs in the local government. This study allegedly influences the difference between the status of the local government and the quality of the financial report and the quality of public services.

YEAR_{it} refers to time of the application of accrual accounting system, measured by "0" for the period before the accrual accounting system, "1" for the first year of the accrual accounting system (transition period) and "2" for the second year in the accrual accounting system.

A brief overview of the operationalization of variables and data sources of this study can be seen in Table 1.

Meanwhile, audit findings based on the state financial audit regulations in Indonesia, in addition to describing the implementation of the internal control system, also illustrate the level of local government compliance with laws and regulations, including corrupt behavior that has the potential to cause regional losses. In addition, due to the different types of audit findings, this study also adds additional analytical analysis to explain the effects of each type of audit findings on the quality of financial report and public services, including the effect of audit findings that are indicated to cause regional losses (corruption).

In connection with the need for analysis to distinguish nested data between provinces as the first level of local government under the national government and district /city

Name	Operationalization of variables	Data source
PUBQ _{it}	Quality of Public Services, measured by the level of achievement of SPM based on the results of EKPPD	Ministry of Home Affairs
FINQ _{it}	Quality of the Financial Reporting, measured by the audit opinion dummy, namely "1" unqualified opinion, "0" other	The Supreme Audit Agency (BPK)
FINDING _{it}	Audit findings, measured by the number of audit findings	The Supreme Audit Agency (BPK)
FOLUP _{it-1}	Follow-up of audit recommendation, measured by the percentage of the number of audit recommendations that are in accordance with audit recommendations divided by the total number of audit recommendations	The Supreme Audit Agency (BPK)
SIMDA _{it}	Utilization of the Regional Financial Management Information System, measured by the percentage of the number of applications used by the local government divided by the total number of applications provided by the BPKP	Financial and Supervisory Agency (BPKP)
SIZE _{it}	Local government size, measured by the natural logarithm (Ln) of total assets of the local government	The Supreme Audit Agency (BPK)
AGES _{it}	Local government life, measured by the number of years since the formation of local governments	Ministry of Home Affairs
ISLAND _{it}	Geographical location of the Local Government, measured by the dummy of the island, which is "1" of the island of Java, "0" for other	Ministry of Home Affairs
MUN _{it}	Local Government Status, measured by the dummy status of the Local Government, namely "1" city government, "0" for other	Ministry of Home Affairs
YEAR _{it}	Years of applying the accrual accounting system, measured by "0" before applying the accrual accounting system, "1" the first year of applying the accrual accounting system (transition period), and "2" the second year of applying the accrual accounting system	Ministry of Home Affairs

Table 1.
Operationalization of variables and data sources

government as the second level of the regional government, this study also analyzes the effects of audit findings using the control variable of the provincial government.

4. Results of the study

4.1 Descriptive statistics

The complete description of the descriptive statistics of variables in this study can be seen in Table 2.

Table 2 illustrates the descriptive statistics for the overall variables analyzed in this study. The mean variable $PUBQ_{it}$ is at 2.45. When compared with the level of achievement of SPM that has a range between 0.00 and 4.00, the sample used has good quality public services on average. Likewise, the $FINQ_{it}$, $FOLUP_{it-1}$ and $FINDING_{it}$ with the mean of 0.58, 79.58 and 22.41, respectively, mean that the average sample has good financial report quality, a high level of audit recommendations follow-up and low level of audit findings.

It is different from the case with the $SIMDA_{it}$ variable with a mean of 0.26. It means that the average sample only uses 2 SIMDA applications from six applications provided for local government. In addition, the $SIZE_{it}$ variable has a mean value of 2866.98. It means that the average sample has assets of around 2.8 trillion Rupiah. The $AGES_{it}$ variable, which has a mean of 39.13, means that the average sample has been formed before the reforms of government in Indonesia, namely in 1998. The $ISLAND_{it}$ and the MUN_{it} with the mean of 0.23 and 0.20 show that the average sample used in this study is the local government outside Java Island with the regency status. Furthermore, the results of the correlation analysis between each variable are presented in the following table.

Table 3 shows that all the main variables of this study, such as the $FINDING_{it}$ and $FOLUP_{it-1}$, $FINQ_{it}$, and $PUBQ_{it}$ variables, correlate with each other. The variables of financial report quality have a positive correlation with public services quality; audit finding variables have a negative correlation with the quality of financial report and the quality of public services; and the follow-up on audit recommendations has a positive correlation with the quality of financial report and the quality of public services. Likewise, related to the control variables used, almost all positively and significantly correlated with the $PUBQ_{it}$ and $FINQ_{it}$ variables. The results indicate that the quality of financial reports and the quality of public services are not only correlated with audit findings and audit recommendations follow-up but also correlated with the size, age, geographical location and the status of the local government.

4.2 Regression results

The hypothesis testing in this study used two-stage least square tests, and the results are presented in Table 4. In general, based on the results of the direct effect test of $PUBQ_{it}$

Variables	Mean	Std. Dev	Min	Max
$PUBQ_t$	2.61	0.53	0.13	3.61
$FINQ_t$	0.70	0.45	0	1
$FINDING_t$	22.26	8.26	6	58
$FOLUP_{t-1}$	78.37	14.26	19.02	100
$SIMDA_t$	0.29	0.20	0	0.83
$SIZE_t^{*)}$	2689.62	3293.36	547.68	38222.84
$AGES_t$	39.88	23.67	2	66
$ISLAND_t$	0.22	0.42	0	1
MUN_t	0.19	0.39	0	1

Note(s): Number of observations = 1.437

Explanation of operational variables in Table 1

*) In billions of rupiah

Table 2. Descriptive statistics of variables

Table 3.
Variable correlation
analysis

Variable	PUBQ _{it}	FINQ _{it}	FINDING _{it}	FOLUP _{it-1}	SIMDA _{it}	SIZE _{it}	AGES _{it}	ISLAND _{it}	MUN _{it}	YEAR _{it}
PUBQ _{it}	1.000									
FINQ _{it}	0.306*** (0.000)	1.000								
FINDING _{it}	-0.215*** (0.000)	-0.274*** (0.000)	1.000							
FOLUP _{it-1}	0.335*** (0.000)	0.238*** (0.000)	-0.307*** (0.000)	1.000						
SIMDA _{it}	0.024 (0.348)	0.078*** (0.003)	0.012 (0.641)	-0.071*** (0.006)	1.000					
SIZE _{it}	0.301*** (0.000)	0.173*** (0.000)	0.011 (0.659)	0.162*** (0.000)	-0.093*** (0.000)	1.000				
AGES _{it}	0.384*** (0.000)	0.125*** (0.000)	-0.106*** (0.000)	0.257*** (0.000)	-0.118*** (0.000)	0.359*** (0.000)	1.000			
ISLAND _{it}	0.447*** (0.000)	0.115*** (0.000)	-0.149*** (0.000)	0.335*** (0.000)	-0.161*** (0.000)	0.397*** (0.000)	0.476*** (0.000)	1.000		
MUN _{it}	0.073 (0.110)	0.105*** (0.001)	0.008 (0.741)	0.122*** (0.000)	-0.066** (0.012)	0.124*** (0.000)	-0.016 (0.530)	0.084*** (0.001)	1.000	
YEAR _{it}	0.216*** (0.000)	0.198*** (0.000)	-0.011 (0.076)	-0.072*** (0.006)	0.033 (0.204)	-0.007 (0.789)	-0.021 (0.369)	-0.004 (0.855)	-0.009 (0.719)	1.000

Note(s): Number of observations = 1.437

Explanation of operational variables in Table 1

***, ** = p-value significant at 1%, 5%

Variables	Expected Sign	Individual model test (Direct effect test)		Full model test (Indirect effect test)		VIF	1/VIF
		FINQ _{it}	PUBQ _{it}	FINQ _{it}	PUBQ _{it}		
1	2	3	4	5	6	7	8
_CONS		-11.680 (0.000)	-1.413 (0.018)	-11.772 (0.000)	-0.971 (0.120)		
FINQ _{it}	(+)	-	0.162*** (0.000)	-	0.295** (0.021)	1.23	0.815623
FINDING _{it}	(-)	-0.039*** (0.000)	-0.004*** (0.002)	-0.039*** (0.000)	-0.003 (0.101)	1.19	0.843573
FOLUP _{it-1}	(+)	0.015*** (0.000)	0.007*** (0.000)	0.015*** (0.000)	0.006*** (0.000)	1.29	0.773625
SIMDA _{it}	(+)	0.807*** (0.000)	0.312*** (0.000)	0.819*** (0.000)	0.275*** (0.001)	1.05	0.955177
SIZE _{it}	(+)	0.381*** (0.000)	0.097*** (0.000)	0.385*** (0.000)	0.081*** (0.003)	1.30	0.770204
AGES _{it}	(+)	0.001 (0.193)	0.004*** (0.000)	0.001 (0.202)	0.004*** (0.000)	1.38	0.723373
ISLAND _{it}	(?)	-0.140* (0.092)	0.385*** (0.000)	-0.135* (0.099)	0.391*** (0.000)	1.51	0.662071
MUN _{it}	(?)	0.286*** (0.001)	0.015 (0.323)	0.286*** (0.001)	0.002 (0.475)	1.04	0.958614
YEAR _{it}	(?)	0.372*** (0.000)	0.150*** (0.000)	0.373*** (0.000)	0.134*** (0.000)	1.06	0.942435
Prob > chi ² /Prob > F		0.000	0.000		0.000		
Pseudo R ² /Adj. R-squared		0.147	0.368				
Mean VIF						1.23	

Note(s): Number of observations = 1,437

Explanation of operational variables in Table 1

***, **, * = p-value significant at 1%, 5%, 10%

Table 4. Hypothesis testing results

(Equation 1 – Column 4) and FINQ_{it} (Equation 2 – Column 3) models, it can be concluded that the independent variables can explain 36.8% of the variation in the quality of public services and 14.7% of the variation in financial report quality. The results of the test show that there are negative and direct effects of audit findings on the quality of public services (H1a). Table 4 column (4) shows that the FINDING_{it} variable has a direct negative effect on the PUBQ_{it} variable with a coefficient of -0.004 and is significant at 1% level. Meanwhile, the results of the test show that there are negative and indirect effects of audit findings on the quality of public services through financial report quality (H1b). Table 4 column (3) shows that the FINDING_{it} variable has a negative effect on the FINQ_{it} variable with a coefficient of -0.039 and is significant at 1% level and column (6) shows that the FINQ_{it} variable has a positive effect on the PUBQ_{it} variable with a coefficient of 0.295 and is significant at 5% level, and finally column (6) shows that the FINDING_{it} variable does not significantly influence the PUBQ_{it} variable. Based on these results, it can be concluded that the data used in this study support H1b, meaning that the quality of the financial report is a variable that can perfectly mediate the influence of audit findings on the quality of public services.

This finding is also strengthened by the results of the Sobel test analysis developed by Sobel (1982) (available online at <http://quantpsy.org/sobel/sobel.htm>) based on coefficient values, standard errors and t values of the FINDING_{it} variable (column 3) and FINQ_{it} (column 4) which show the statistical value and the standard error are -4.702 and 0.001 respectively with a p-value of 0.000.

The results of this study provide empirical evidence in accordance with the results of the studies by [Johnson et al. \(2012\)](#) and [Setyaningrum \(2017\)](#) that found a negative influence on audit findings on the financial report quality. This study implies that, to improve the quality of the financial report, the local government must strive to reduce the number of audit findings. In the context of this study, it can be said that when the local government has a large number of audit findings, it indicates that many forms of violations (including those related to corruption) occur in the local government. This condition can directly lead to poor quality of public services carried out by the local government to the community. In addition, the findings of the mediating role of financial report quality on the indirect effects of audit findings on the quality of public services provide additional evidence of the important role of financial report quality to be a benchmark for successful implementation of NPM as stated by [Connolly & Hyndman \(2006\)](#). Local government financial management reforms, including the adoption of an accrual accounting system, aimed at improving the quality of financial reports and can be an effective strategy for local government to improve public services simultaneously.

Moreover, the results show that there is a positive and direct influence of audit recommendations follow-up on the quality of public services (**H2a**), and positive and indirect influence of audit recommendations follow-up on the quality of public services through financial report quality (**H2b**). [Table 4](#) column (4) shows that the $FOLUP_{it-1}$ variable has a positive effect on the $PUBQ_{it}$ variable with a coefficient of 0.007 and is significant at 1% level. As for the **H2b** testing, [Table 4](#) column (3) shows that the $FOLUP_{it-1}$ variable has a positive effect on the $FINQ_{it}$ variable with a coefficient of 0.015 and is significant at 1% level and column (6) shows that the $FINQ_{it}$ variable has a positive effect on the $PUBQ_{it}$. Finally, column (6) shows that the $FOLUP_{it-1}$ variable affects the $PUBQ_{it}$ variable with 0.006 coefficient and significant at 1% level. However, based on the standard error value and t value of the variables $FOLUP_{it-1}$ (column 3) and $FINQ_{it}$ (column 4) that were tested with the Sobel test showed that the statistical value and the standard error were -4.702 and 0.001 with a p -value of 0.000 . Therefore, although the quality of financial reporting only partially mediates the effect of the follow-up of audit recommendations on the quality of public services, it can be said that the data used in this study can support **H2b**.

Furthermore, related to the role of audit recommendations follow-up, the same as the results of [Setyaningrum's study \(2017\)](#), this study also found that there is a positive and significant influence on audit recommendations follow-up on the financial report quality. The local government that has a level of suitability for follow-up with high audit recommendations on average has a better quality financial report (unqualified opinion) in the following year. This finding confirms the importance of carrying out audit recommendations follow-up in order to realize the accountability, including by reducing the potential for violations that are indicated by corruption as the results of the study by [Liu and Lin \(2012\)](#). However, in contrast to the previous studies, this study also found that audit recommendations follow-up directly and positively influences the quality of public services. This result, nonetheless, is not in accordance with the findings of [Harun et al. \(2019\)](#) in the context of improving the quality of data/financial report data, found that audit system reforms in local government in Indonesia are less likely to enhance the quality of the internal audit function and reduce the level of corruption.

The results of this study also have implications for the role of external auditors in conducting audits. Although the financial audit aims to assess the fairness of the presentation of financial report, but as stated by [Cameron \(1995\)](#), in the current era of government reforms, external auditors can no longer only focus on issues directly related to financial report, allowing the external auditor to assess the effectiveness of the implementation of duties and functions of other regional administrations, such as systems and procedures for public services and the implementation of other government projects in determining the fairness of

the presentation of financial report. Patanakul *et al.* (2016), in his study, concluded that based on the interpretation of the auditors, they are believed to be competent and able to be free of various interests. Thus, in addition to being able to track down the causes and problems, the audit findings report is also reliable, especially in evaluating project performance as well as in increasing the effectiveness and efficiency of the project in the future. Therefore, the recommendations provided by external auditors on audit findings must be appropriate and applicable, so that the efforts to improve the internal control system and enforcement of laws and regulations, including audit recommendations follow-up made by the local government can be a part of improving the quality of public services.

For the control variables, the test results show that the control variables that positively significantly influence the $FINQ_{it}$ variable are $SIMDA_{it}$ and $SIZE_{it}$ with the level of significance of 5% and 1%, consecutively. The results indicate that in the utilization of $SIMDA_{it}$ applications contribute to the improvement of the quality of financial report in the local government in Indonesia and bigger size of local government tend to provide a higher quality of the financial report. Meanwhile, the test results in Table 4 column (4) indicate that the control variables that have a significant positive effect on the $PUBQ_{it}$ are the $SIMDA_{it}$, $SIZE_{it}$, $AGES_{it}$ and $ISLAND_{it}$. The results of this study indicate that in addition to audit findings and audit recommendations follow-up, the quality of public services in the local government in Indonesia is also influenced by the utilization of the $SIMDA_{it}$ application, the value of assets, age and local government geographical location. Table 4 also shows that the $year_{it}$ variable has a significant positive effect at p -value of 0.001 (columns 3 and 4). This indicates that along with the implementation of the accrual accounting system in the Regional Government there has been an increase in the quality of financial reporting and the quality of public services to the Regional Governments in Indonesia.

In addition, the test results of the full model in Table 4 column (5) show that the $FINQ_{it}$ variable is also the perfect mediating variable for the indirect effect of the $SIZE_{it}$ variable on the $PUBQ_{it}$ variable, which shows that when the availability of local government resources which is characterized by the value of substantial assets can be optimized in order to improve the quality of financial report, it will have an impact on the increasing quality of public services carried out by the local government toward the community.

4.3 Additional test: effect of each type of audit findings

Based on the criteria for determining financial report quality (audit opinion) as stipulated in the laws and regulations in Indonesia described earlier in the literature review, in the audit report, BPK presents audit findings into two groups, namely: audit findings related to the internal control system and audit findings related to compliance with laws and regulations, including findings that cause regional losses. Therefore, as a sensitivity test of the model of the study and to provide a clearer picture regarding the influence of each type of audit findings on the quality of financial report and the quality of public services, Equations (1) and (2) are used to re-test the hypotheses of this study on each type of audit findings. The results are presented in Table 5.

Table 5 shows the results of the hypotheses test by using the measurement of the number of audit findings related to the internal control system ($FINDING_ICS_{it}$) in Panel A and measuring the number of audit findings related to the regulation and compliance ($FINDING_LAW_{it}$) in Panel B, including audit findings of non-compliance which cause regional losses (classified as corruption) ($FINDING_LOSS_{it}$) in Panel C. If compared with the results of hypotheses test using the measurement of the total number of audit findings in Table 4 previously; it can be concluded that there is no fundamental difference in the use of different audit findings. In addition, the results of this test can also mean that both the number of audit findings related to the internal control system and the compliance with the legislation has a negative effect on the quality of financial report and the quality of public

Table 5.
Additional testing
results influence of
each type of audit
findings

Variables	Expected sign	Individual model test (Direct effect test) FINQ _{it}	PUBQ _{it}	Full model test (Indirect effect test) FINQ _{it}	PUBQ _{it}
1	2	3	4	5	6
<i>Panel A. Number of audit findings on internal control systems (FINDING_ICS_{it})</i>					
_CONS		-12.351 (0.000)	-1.428 (0.018)	-12.382 (0.000)	-1.185 (0.094)
FINQ _{it}	(+)	-	0.175*** (0.000)	-	0.242* (0.073)
FINDING_ICS _{it}	(-)	-0.053*** (0.000)	-0.003* (0.093)	-0.053*** (0.000)	-0.002 (0.281)
FOLUP _{it-1}	(+)	0.019*** (0.000)	0.008*** (0.000)	0.019*** (0.000)	0.007*** (0.000)
SIMDA _{it}	(+)	0.791*** (0.000)	0.306*** (0.000)	0.767*** (0.000)	0.289*** (0.000)
SIZE _{it}	(+)	0.384*** (0.000)	0.093*** (0.000)	0.385*** (0.000)	0.085*** (0.004)
AGES _{it}	(+)	0.002 (0.119)	0.004*** (0.000)	0.002 (0.122)	0.004*** (0.000)
ISLAND _{it}	(?)	-0.136* (0.097)	0.389*** (0.000)	-0.133 (0.102)	0.392*** (0.000)
MUN _{it}	(?)	0.301*** (0.001)	0.013 (0.344)	0.301*** (0.001)	0.006* (0.432)
YEAR _{it}	(?)	0.383*** (0.000)	0.150*** (0.000)	0.384*** (0.000)	0.142*** (0.000)
Prob > chi ² /Prob > F		0.000	0.000	0.000	
Pseudo R ² /Adj R-squared		0.136	0.365		
<i>Panel B. Number of audit findings on compliance with legislation (FINDING_LAW_{it})</i>					
_CONS		-10.664 (0.000)	-1.257 (0.031)	-10.733 (0.000)	-0.929 (0.126)
FINQ _{it}	(+)	-	0.165*** (0.000)	-	0.272** (0.033)
FINDING_LAW _{it}	(-)	-0.047*** (0.000)	-0.008*** (0.001)	-0.047*** (0.000)	-0.007** (0.020)
FOLUP _{it-1}	(+)	0.017*** (0.000)	0.007*** (0.000)	0.017*** (0.000)	0.006*** (0.000)
SIMDA _{it}	(+)	0.849*** (0.000)	0.320*** (0.000)	0.858*** (0.000)	0.288*** (0.001)
SIZE _{it}	(+)	0.330*** (0.000)	0.092*** (0.000)	0.333*** (0.000)	0.080*** (0.003)
AGES _{it}	(+)	0.001 (0.232)	0.004*** (0.000)	0.001 (0.238)	0.004*** (0.000)
ISLAND _{it}	(?)	-0.092 (0.187)	0.390*** (0.000)	-0.089 (0.196)	0.393*** (0.000)
MUN _{it}	(?)	0.242*** (0.004)	0.009 (0.386)	0.241*** (0.004)	0.000 (0.494)
YEAR _{it}	(?)	0.358*** (0.000)	0.148*** (0.000)	0.358*** (0.000)	0.135*** (0.000)
Prob > chi ² /Prob > F		0.000	0.000	0.000	
Pseudo R ² /Adj R-squared		0.130	0.370		
<i>Panel C. Value (Rupiah) audit findings affecting the regional loss (Natural logarithm) (FINDING_LOSS_{it})</i>					
_CONS		-10.557 (0.000)	-1.270 (0.018)	-10.612 (0.000)	-1.023 (0.104)

(continued)

Variables	Expected sign	Individual model test (Direct effect test)			Full model test (Indirect effect test)	
		FINQ _{it} 3	PUBQ _{it} 4	PUBQ _{it} 4	FINQ _{it} 5	PUBQ _{it} 6
FINQ _{it}	(+)	-	0.176*** (0.000)	-	0.256** (0.042)	
FINDING_LOSS _{it}	(-)	-0.037*** (0.000)	-0.005** (0.032)	-0.037*** (0.000)	-0.004* (0.095)	
FOLUP _{it-1}	(+)	0.020*** (0.000)	0.008*** (0.000)	0.020*** (0.000)	0.007*** (0.000)	
SIMDA _{it}	(+)	0.826*** (0.000)	0.314*** (0.000)	0.832*** (0.000)	0.291*** (0.000)	
SIZE _{it}	(+)	0.323*** (0.000)	0.090*** (0.000)	0.326*** (0.000)	0.082*** (0.002)	
AGES _{it}	(+)	0.001 (0.224)	0.004*** (0.000)	0.001 (0.228)	0.004*** (0.000)	
ISLAND _{it}	(?)	-0.010 (0.462)	0.403*** (0.000)	-0.006 (0.474)	0.403*** (0.000)	
MUN _{it}	(?)	0.229*** (0.005)	0.008 (0.402)	0.230*** (0.005)	0.001* (0.481)	
YEAR _{it}	(?)	0.377*** (0.000)	0.151*** (0.000)	0.377*** (0.000)	0.141*** (0.000)	
Prob > chi ² /Prob > F		0.000	0.000	0.000		
Pseudo R ² /Adj R-squared		0.118	0.366			

Note(s): Number of observations = 1,437
Explanation of operational variables in [Table 1](#)
***, **, * = *p*-value significant at 1%, 5%, 10%

Table 5.

services. Thus, to improve the quality of the financial report and the quality of public services, improving the implementation of the internal control system is not enough. It must also be accompanied by an increase in compliance with the relevant laws and regulations.

Sobel test shows significant results (Panels A, B and C). Therefore, it can be said that the quality of Regional Government financial reporting mediates all the effects of follow-up on audit findings and audit findings related to weaknesses in the internal control system and non-compliance with laws and regulations, including audit findings on non-compliance which cause regional losses/potential for corruption, on the quality of public services.

The main point of this article is to assess the effect of audit findings and the audit recommendations follow-up on the quality of financial reports and the quality of public services. To analyze this effect, there are differences in the time lag between the FOLUP_{it} variable and the FINDING_{it} and FINQ_{it} statistical test variables that further analyze the comparison of the time lag between these variables. Table 6 shows the test results to see the extent of the influence of time differences in financial reporting quality variables (FINQ_{it}), audit findings (FINDING_{it}) and follow-up recommendations (FOLUP_{it}) on the quality of public services, which is carried out to answer why use FINQ_{it} and FINDING_{it} (years same as PUBQ_{it}), do not use a time lag of 1 or 2 years before as FOLUP_{it-1} (which uses a gap of 1 year).

Based on the test results it can be said that Model A (according to the main test) is the best model in explaining the effect of audit findings, follow-up of audit recommendations and the quality of financial reporting on the quality of public services. This means that the quality of public services in a given year will be affected by the extent of the audit findings, follow-up on audit recommendations and the quality of financial reporting in the same year. The weaknesses in Model B (if using FINQ_{it-1}, FINDING_{it-1}, FOLUP_{it-1}) are on the influence of the previous year's audit findings (FINDING_{it-1}) that do not describe how the condition of the Internal control system or legal compliance at the time public services is performed. In addition, the absence of influence of FINDING_{it-1} in Model B is also caused because usually all audit findings from the previous year have been followed up in year *t*, (FOLUP_{it-1}), so that the quality of public services in the current year is no longer affected by audit findings in the year before, but influenced by the extent to which the audit findings in the previous year have been followed up or not (FOLUP_{it-1}). This is reinforced by the evidence shown in the test results of Model C. When there is no follow-up on the audit findings of the previous year (FOLUP_{it-1}), FINDING_{it-1} will still have a negative effect, albeit small. The same result is shown in model D (if using FINQ_{it-2}, FINDING_{it-2}, FOLUP_{it-3}). FINDING_{it-2} has had a positive influence on public services. This means that the audit findings in the previous 2 years (*t-2*), when they have been followed up/improved (in years *t-1* and year *t*) will have a positive impact on public services in the next 2 years (year *t*). However, when FINDING_{it-2} is not followed up (as in model F) then FINDING_{it-2} has no significant effect on the quality of public services in year *t*. Therefore, Table 6 showed that in order to know the extent of the influence of audit findings, follow-up of audit recommendations and quality of financial reporting on the quality of public services, it must use audit findings data, follow-up of audit recommendations and quality of financial reporting in the same year as the public service implementation.

The data of the study used 1,437 observations from 491 districts/cities for 2014–2016. To clarify the combination of the MUN_{it} variable, a District Government variable means “0,” and City Government means “1”. Another consideration is that the two dummy statuses are still limited to dividing the second level of local government in Indonesia, which means that this local government needs to be nested within the province. Testing the additional regression is performed with (34–1) dummy variables to control provinces in Indonesia. Additional multilevel regression is performed with provinces as the level of grouping observations (District/City Government) with the consideration that multilevel models are suitable for designs of the study where data observations are regulated at more than one level, such as

Variables	Model A PUBQ _t 2	Model B PUBQ _t 3	Model C PUBQ _t 4	Model D PUBQ _t 5	Model E PUBQ _t 6
_CONS	-1.413 (0.018)	-0.757 (0.156)	-0.080 (0.458)	-0.346 (0.728)	-0.443 (0.665)
FINQ	0.162*** (0.000)	0.175*** (0.000)	0.215*** (0.000)	0.090** (0.048)	0.137*** (0.003)
FINDING	-0.004*** (0.002)	-0.000 (0.401)	-0.002** (0.043)	0.004* (0.059)	0.001 (0.467)
FOLUP	0.007*** (0.000)	0.007*** (0.000)	-	0.009*** (0.000)	-
SIMDA	0.312*** (0.000)	0.401*** (0.000)	0.385*** (0.000)	0.413*** (0.000)	0.408*** (0.000)
SIZE	0.097*** (0.000)	0.070*** (0.004)	0.068*** (0.006)	0.058 (0.100)	0.056 (0.125)
AGES	0.004*** (0.000)	0.004*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.006*** (0.000)
ISLAND	0.385*** (0.000)	0.367*** (0.000)	0.423*** (0.000)	0.372*** (0.000)	0.467*** (0.000)
MUN	0.015 (0.323)	0.050* (0.083)	0.072** (0.025)	0.089* (0.070)	0.116** (0.022)
YEAR	0.150*** (0.000)	0.124*** (0.047)	0.110*** (0.000)	-	-
Number of observations	1.437	979	979	490	490
Prob > F	0.000	0.000	0.000	0.000	0.000
Adj R-squared	0.368	0.375	0.345	0.378	0.330

Note(s): Model A: FINQ_t, FINDING_t, FOLUP_t
 Model B: FINQ_{t-1}, FINDING_{t-1}, FOLUP_{t-1}
 Model C: FINQ_{t-1}, FINDING_{t-1}, Without FOLUP
 Model D: FINQ_{t-2}, FINDING_{t-2}, FOLUP_{t-3}
 Model E: FINQ_{t-2}, FINDING_{t-2}, Without FOLUP
 Explanation of operational variables in Table 1
 ***, **, * = p-value significant at 1%, 5%, 10%

Table 6. Comparison of results for difference in FINQ, FIND and FOLUP intervals to PUBQ

Table 7.
Test results with
Control Variable of
Province

Variables	Individual model test (Direct effect test)		Full model test (Indirect effect test)	
	FINQ _{it} 2	PUBQ _{it} 3	FINQ _{it} 4	PUBQ _{it} 5
<i>Panel A. Dummy variables for the provinces (33 provinces)</i>				
1	CON	-10.033 (0.000)	-1.000 (0.056)	-0.847 (0.121)
2	FINQ _{it}	-	0.106*** (0.000)	0.221** (0.036)
3	FINDING _{it}	-0.049*** (0.000)	-0.002* (0.081)	-0.000 (0.425)
4	FOLUP _{it-1}	0.026*** (0.000)	0.002*** (0.004)	0.001* (0.068)
5	SIMDA _{it}	0.621*** (0.006)	0.202*** (0.001)	0.182*** (0.004)
6	SIZE _{it}	0.354*** (0.000)	0.086*** (0.000)	0.085*** (0.000)
7	AGES _{it}	0.002 (0.171)	0.001** (0.025)	0.001** (0.032)
8	ISLAND _{it}	-1.149*** (0.002)	0.424*** (0.000)	0.456*** (0.000)
9	MLN _{it}	0.197** (0.027)	-0.197 (0.122)	-0.038* (0.085)
10	YEAR _{it}	0.460*** (0.000)	0.162*** (0.000)	0.147*** (0.000)
11	PROV _{it}	-2.283*** (0.000)	0.080 (0.111)	0.154* (0.063)
12		-1.241*** (0.000)	0.466*** (0.000)	0.500*** (0.000)
13		-0.672** (0.017)	0.450*** (0.000)	0.468*** (0.000)
14		-1.801*** (0.000)	0.432*** (0.000)	0.489*** (0.000)
15		-0.559* (0.058)	0.385*** (0.000)	0.400*** (0.000)
16		-2.111*** (0.000)	0.160** (0.037)	0.229*** (0.023)
17		-1.456*** (0.000)	0.361*** (0.000)	0.400*** (0.000)
18		-2.420*** (0.000)	0.800*** (0.000)	0.880*** (0.000)
19		-1.625*** (0.000)	0.618*** (0.000)	0.664*** (0.000)
20		-0.280 (0.232)	0.345*** (0.000)	0.352*** (0.000)
21		-0.897*** (0.005)	0.287*** (0.002)	0.294*** (0.001)
22		0 (omitted)	0.382*** (0.003)	0.363*** (0.004)
23		-0.722** (0.020)	0.372*** (0.000)	0.391*** (0.000)
24		-1.051*** (0.006)	0.318*** (0.001)	0.349*** (0.000)
25		-0.645* (0.056)	0.492*** (0.000)	0.509*** (0.000)
26		-3.136*** (0.000)	0.033 (0.325)	0.121 (0.150)
27		-2.033*** (0.000)	0.240*** (0.002)	0.302*** (0.002)
28		-1.701*** (0.000)	-0.010 (0.445)	-0.037 (0.345)
29		-0.874** (0.011)	0.408*** (0.000)	0.434*** (0.000)
30		-1.447*** (0.000)	0.541*** (0.000)	0.578*** (0.000)
31		-2.827*** (0.000)	0.308*** (0.005)	0.397*** (0.004)
32		-0.115 (0.359)	-0.020 (0.368)	-0.020 (0.397)
33		-1.268*** (0.000)	0.112* (0.096)	0.151* (0.059)
34		-1.363*** (0.000)	0.694*** (0.000)	0.734*** (0.000)
35		-1.058*** (0.001)	0.253*** (0.001)	0.284*** (0.001)
36		0.019 (0.484)	0.718*** (0.000)	0.717*** (0.000)
37		-0.900*** (0.014)	0.373*** (0.001)	0.397*** (0.001)

(continued)

Variables	Individual model test (Direct effect test)		Full model test (Indirect effect test)	
	FINQ _{it} 2	PUBQ _{it} 3	FINQ _{it} 4	PUBQ _{it} 5
30	-2.317*** (0.000)	0.110 (0.101)	-2.259*** (0.000)	0.181* (0.055)
31	-1.687*** (0.000)	0.149* (0.051)	-1.683*** (0.000)	0.204*** (0.028)
32	-1.789*** (0.000)	-0.771*** (0.000)	-1.764*** (0.000)	-0.713*** (0.000)
33	-1.094*** (0.001)	-0.388*** (0.000)	-1.077*** (0.001)	-0.358*** (0.000)
Prob > chi ² /Prob > F	0.000	0.000	0.000	
Pseudo R ² /Adj R-squared	0.259	0.393		
<i>Panel B. Multilevel linear regression (Province: Identity)</i>				
Variables	FINQ _{it} 2		PUBQ _{it} 3	
1	CONS		FINQ _{it} 2	
	FINQ _{it}		PUBQ _{it} 3	
	FINDING_LOSS _{it}		-0.879 (0.097)	
	FOLUP _{it-1}		-0.107*** (0.000)	
	SIMD _{it}		-0.002* (0.076)	
	SIZE _{it}		0.002*** (0.001)	
	AGES _{it}		0.184*** (0.003)	
	ISLAND _{it}		0.092*** (0.000)	
	MLN _{it}		0.000 (0.151)	
	YEAR _{it}		0.016 (0.437)	
	Prob > chi ²		0.059** (0.016)	
	SD (cons)		0.127*** (0.000)	
	SD (residual)		0.000	
	Prob > chi ²		0.194	
	Intraclass Correlation (ICC)		0.403	
			0.383	
			0.000	
			0.000	
			0.364	

Note(s): Number of observations = 1.437
 Explanation of operational variables in Table 1
 ***, **, * = P-value significant at 1%, 5%, 10%

Table 7.

nested data. [Table 7](#) presents the test results for the research model with the provincial dummy is included in the model. The test results in [Table 7](#) show the main test results (not considering provincial variables) robust on the existence of provincial variables. The results of the test are the same, whether using provincial variables or not using provincial variables.

5. Conclusion

The main objective of this study was to analyze the extent of the relationship between the implementation of accounting and public sector audits of the quality of public services. Specifically, this study analyzes the effect of financial report quality on public services as well as the influence of audit findings and audit recommendations follow-up on the quality of financial reports and the quality of public services. By using 1,437 observations from 491 districts/cities for 2014–2016, the results of this study can prove empirically that there is a relationship between accounting and auditing of public services. The application of accrual accounting system to produce quality financial report, audit findings produced by external auditors in the context of financial audits and audit recommendations follow-up initiated by the local government's internal auditors in the framework of supervision; all of them have a significant and decisive effect in the efforts to improve the quality of public services to the local government. The quality of financial reports resulting from the application of the accrual accounting system to the local government was found to have a positive effect on the quality of public services. In addition, the quality of the financial report is also a perfect mediation of the indirect effects of audit findings, the use of information technology systems and the size of local government on the quality of public services. This result implies that efforts to improve the quality of financial reports are the right strategy for the local government in order to improve the quality of public services carried out by the local government to the public.

Regarding the impact of audit findings, the results of this study indicate that there is a negative influence of audit findings on the quality of financial report and the quality of public services that apply to all types of audit findings measurement, either using the index of the total number of audit findings or using only the number of audit findings on the internal control system or the number of audit findings on the compliance with legislation. The implication of the negative influence of audit findings on the financial report quality is that in addition to the need for prevention efforts to minimize audit findings by local government, it also implies the importance of the role of external auditors in detecting problems appropriately and at the same time providing effective, constructive and applicable audit recommendations for the audit findings obtained during the audit process.

In addition, the results of this study also show the important role of audit recommendations follow-up in order to realize the efficiency, effectiveness and accountability in the implementation of tasks and functions of the local government, especially in terms of financial management and public services. It does not only play a role in reducing the audit findings. The level of suitability of audit recommendations follow-up also has a positive influence on improving the quality of financial reports and the quality of public services in the following year. The implication is that the local government needs to streamline the role of the internal auditors so that they can oversee the implementation of audit recommendations follow-up provided by the external auditors.

Some limitations of this study that might be followed up by further studies. First, both independent and dependent variables were collected from the Indonesian government, possibly leading to potential common method/source bias ([Jakobsen and Jensen, 2015](#); [Podsakoff et al., 2003, 2012](#)). Minimizing this bias can be done by obtaining and testing data from external sources or non-governmental contexts. Second, this study assumes that a one-year time lag might be enough for FOLUP, instead that some changes may take more than one year to take effect. The study took 2016 data as the most recent data as a reflection of

FOLUP. The next study is expected to empirically analyze a longer and more recent time lag to test the FOLUP variable. Moreover, this study does not observe the quality of each level and type of public services and how they are related to the implementation of accounting and auditing in the public sector in detail. This can be an opportunity to be developed by further studies, because as stated by Broadbent and Guthrie (2008) that public service is currently not only carried out by one government agency but also spread in several parts and levels of government, even involving the private sector. In addition, there are several types of public services that are currently the attention of many parties, including those related to the fields of education, health, public works and spatial planning, public housing and residential areas, public order and security, community protection and social fields. This study only focuses on the quality of financial reports in the context of the application of accrual accounting system, audit findings and audit recommendations follow-up. There is still plenty of room to analyze the problems of accounting and auditing in other public sectors that may have a higher influence on the quality of public services, for example, related to accounting information systems, the application of management accounting and behavioral accounting.

References

- Adiputra, I.M.P., Utama, S. and Rossieta, H. (2018), "Transparency of local government in Indonesia", *Asian Journal of Accounting Research*, Vol. 3 No. 1, pp. 123-138.
- Araujo, J.F.F.E. and Tejado-Romero, F. (2016), "Local government transparency index: determinants of municipalities' rankings", *International Journal of Public Sector Management* Vol. 29 No. 4, pp. 327-347.
- Asare, T. (2009), "Internal auditing in the public sector: promoting good governance and performance improvement", *International Journal of Governmental Financial Management*, Vol. 9 No. 1, pp. 15-28.
- Baber, W.R., Gore, A.K., Rich, K.T. and Zhang, J.X. (2013), "Accounting restatements, governance and municipal debt financing", *Journal of Accounting and Economics*, Vol. 56 No. 2, pp. 212-227.
- Bose, G. (2004), "Bureaucratic delays and bribe-taking", *Journal of Economic Behavior and Organization*, Vol. 54 No. 3, pp. 313-320.
- Broadbent, J. and Guthrie, J. (2008), "Public sector to public services: 20 years of "contextual" accounting research", *Accounting, Auditing and Accountability Journal*, Vol. 21 No. 2, pp. 129-169.
- Bruns, H.J. (2014), "Accounting change and value creation in public services—do relational archetypes make a difference in improving public service performance?", *Critical Perspectives on Accounting*, Vol. 25 Nos 4-5, pp. 339-367.
- Cameron, J.W. (1995), "Public service reform: the auditor's perspective", *International Journal of Government Auditing*, Vol. 22 No. 1, p. 14.
- Christensen, M. (2002), "Accrual accounting in the public sector: the case of the New South Wales government", *Accounting History*, Vol. 7 No. 2, pp. 93-124.
- Cohen, S. and Leventis, S. (2013), "Effects of municipal, auditing and political factors on audit delay", *Accounting Forum*, Vol. 37 No. 1, pp. 40-53.
- Cohen, S., Kaimenaki, E. and Zorziog, Y. (2007), "Assessing it as A key succes factor for accrual accounting implementation in Greek municipalities", *Financial Accountability and Management*, Vol. 23 No. 1, pp. 91-111.
- Connolly, C. and Hyndman, N. (2006), "The actual implementation of accruals accounting: caveats from of A cases within the UK sector public", *Accounting, Auditing and Accountability*, Vol. 19 No. 2, pp. 272-290.
- Decree of the Minister of Home Affairs Number 100 - 53 (2018), *Ranking and Status of National Performance of Regional Government Administration in 2016*, Government of Republic Indonesia.

- De Vries, M. and Sobis, I. (2016), "Increasing transparency is not always the panacea: an overview of alternative paths to curb corruption in the public sector", *International Journal of Public Sector Management*, Vol. 29 No. 3, pp. 255-270.
- Eckersley, P., Ferry, L. and Zakaria, Z. (2014), "A 'panoptical' or 'synoptical' approach to monitoring performance? Local public services in England and the widening accountability gap", *Critical Perspectives on Accounting*, Vol. 25 No. 6, pp. 529-538.
- Gabrini, C.J. (2013), "The effect of internal audit on governance: maintaining legitimacy of local government", A dissertation at the Florida state University College of social sciences and public policy, available at: <http://diginole.lib.fsu.edu/etd>.
- Gioux, G. and Shields, D. (1993), "Accounting controls and bureaucratic strategies in municipal government", *Journal of Accounting and Public Policy*, Vol. 12 No. 3, pp. 239-262.
- Graycar, A. (2015), "Corruption: classification and analysis", *Policy and Society*, Vol. 34 No. 2, pp. 87-96.
- Harun, H., Van-Peursem, K. and Eggleton, I.R. (2015), "Indonesian public sector accounting reforms: dialogic aspirations a step too far?", *Accounting, Auditing and Accountability Journal*, Vol. 28 No. 5, pp. 706-738.
- Harun, H., Mir, M., Carter, D. and An, Y. (2019), "Examining the unintended outcomes of NPM reforms in Indonesia", *Public Money and Management*, Vol. 39 No. 2, pp. 86-94, doi: [10.1080/09540962.2019.1580892](https://doi.org/10.1080/09540962.2019.1580892).
- Hyndman, N. and Connolly, C. (2011), "Accruals accounting in the public sector: a road not always taken", *Management Accounting Research*, Vol. 22, pp. 36-45.
- Jakobsen, M. and Jensen, R. (2015), "Common method bias in public management studies", *International Public Management Journal*, Vol. 18 No. 1, pp. 3-30, doi: [10.1080/10967494.2014.997906](https://doi.org/10.1080/10967494.2014.997906).
- Johnson, L.E., Lowensohn, S., Reck, J.L. and Davies, S.P. (2012), "Management letter comments: their determinants and their association with financial reporting quality in local government", *Journal of Accounting and Public Policy*, Vol. 31 No. 6, pp. 575-592.
- Liu, J. and Lin, B. (2012), "Government auditing and corruption control: evidence from China's provincial panel data", *China Journal of Accounting Research*, Vol. 5, pp. 163-186.
- Luder, K.G. (1992), "A contingency model of governmental accounting innovations in the political-administrative environment", *Research in Governmental and Nonprofit Accounting*, Vol. 7, pp. 99-127.
- Nguyen, T.V., Bach, T.N., Le, T.Q. and Le, C.Q. (2017), "Local governance, corruption, and public service quality: evidence from a national survey in Vietnam", *International Journal of Public Sector Management*, Vol. 30 No. 2, pp. 137-153.
- Nurmandi, A. and Kim, S. (2015), "Making e-procurement work in a decentralized procurement system: a comparison of three Indonesian cities", *International Journal of Public Sector Management*, Vol. 28 No. 3, pp. 198-220.
- Patanakul, P., Kwak, Y.H., Zwikael, O. and Liu, M. (2016), "What impacts the performance of large-scale government projects?", *International Journal of Project Management*, Vol. 34 No. 3, pp. 452-466.
- Pierre, J., Peters, B.G. and de Fine Licht, J. (2018), "Is auditing the new evaluation? Can it be? Should it be?", *International Journal of Public Sector Management*, Vol. 31 No. 6, pp. 726-739.
- Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 885 No. 879, pp. 10-1037, doi: [10.1037/0021-9010.88.5.879](https://doi.org/10.1037/0021-9010.88.5.879).
- Podsakoff, P.M., MacKenzie, S.B. and Podsakoff, N.P. (2012), "Sources of method bias in social science research and recommendations on how to control it", *Annual Review of Psychology*, Vol. 63, pp. 539-569, doi: [10.1146/annurev-psych-120710-100452](https://doi.org/10.1146/annurev-psych-120710-100452).
- Prabowo, H.Y. and Cooper, K. (2016), "Re-understanding corruption in the Indonesian public sector through three behavioral lenses", *Journal of Financial Crime*, Vol. 23 No. 4, pp. 1028-1062.

- Prabowo, T.J.W., Leung, P. and Guthrie, J. (2017), "Reforms in public sector accounting and budgeting in Indonesia (2003-2015): confusions in implementation", *Journal of Public Budgeting, Accounting and Financial Management*, Vol. 29 No. 1, pp. 104-137.
- Prasojo, E. and Holidin, D. (2018), "Leadership and public sector reform in Indonesia", in Berman, E. and Prasojo, E. (Eds), *Leadership and Public Sector Reform in Asia*, (Public Policy and Governance, Vol. 30), Emerald Publishing Limited, pp. 53-83, doi: [10.1108/S2053-7697201800](https://doi.org/10.1108/S2053-7697201800).
- Radcliffe, V.S. (2008), "Public secrecy in auditing: what government auditors cannot know", *Critical Perspectives on Accounting*, Vol. 19 No. 1, pp. 99-126.
- Rakhman, F. (2019), "Budget implementation in a risky environment: evidence from the Indonesian public sector", *Asian Review of Accounting*, Vol. 27 No. 2, pp. 162-176, doi: [10.1108/ARA-01-2018-0020](https://doi.org/10.1108/ARA-01-2018-0020).
- Setyaningrum, D. (2017), "The direct and mediating effects of an auditor's quality and the legislative's oversight on the follow-up of audit recommendation and audit opinion", *International Journal of Economic Research*, Vol. 14 No. 3, pp. 269-292.
- Sobel, M.E. (1982), "Asymptotic confidence intervals for indirect effects in structural equation models", *Sociological Methodology*, Vol. 13, pp. 290-312.
- Wardhani, R., Rossieta, H. and Martani, D. (2017), "Good governance and the impact of government spending on performance of local government in Indonesia", *International Journal of Public Sector Performance Management*, Vol. 3 No. 1, pp. 77-102.
- Yamamoto, K. (1999), "Accounting system reform in Japanese local governments", *Financial Accountability & Management*, Vol. 15 Nos. 3&4, pp. 291-307.
- Ziegenfuss, D.E. (2001), "The role of control environment in reducing local government fraud", *Journal of Public Budgeting, Accounting and Financial Management*, Vol. 13 No. 3, p. 312.

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