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DAMPAK TINDAK LANJUT DAN UKURAN AUDIT TERHADAP KUALITAS AUDIT

THE EFFECT OF AUDIT FOLLOW-UP AND SIZES ON THE AUDIT QUALITY

ABSTRAK/ABSTRACT

Penelitian ini mengukur pengaruh ukuran audit dan tindak lanjut hasil audit terhadap kualitas audit di Indonesia. Pemerintah Indonesia memiliki dua institusi audit: eksternal dan internal audit. Tindak lanjut audit adalah perkembangan pelaksanaan rekomendasi audit dari audit eksternal untuk memperbaiki laporan keuangan auditee. Penelitian ini menganalisa data 33 provinsi dari tahun 2009 sampai dengan tahun 2013 dari Ikhtisar Laporan Hasil Pemeriksaan Badan Pemeriksa Keuangan (ILHP BPK) dan Daerah Dalam Angka Badan Pusat Statistik (DDA BPS) menggunakan OLS dan TSLS. Penelitian ini menemukan bahwa jumlah tindak lanjut hasil pemeriksaan dan ukuran audit berpengaruh signifikan terhadap temuan audit walaupun ukuran audit yang didasarkan pada jumlah internal auditor, jumlah unit subyek audit dan jumlah pegawai provinsi hanya berpengaruh signifikan terhadap jumlah temuan audit. Hal ini menunjukkan bahwa jumlah tindak lanjut audit secara keseluruhan mempengaruhi temuan audit tanpa terganggu dengan nominal tindak lanjut audit. Belum ada penelitian sebelumnya yang mengukur pengaruh dari tindak lanjut audit terhadap kualitas audit. Penelitian ini menambahkan pertanyaan penting mengenai hubungan antara ukuran audit dan efektivitas tindak lanjut audit pada kualitas audit di institusi pemerintah khususnya pemerintah daerah.

This study examined the effect of audit size and the audit follow up on the audit quality in Indonesia. Indonesian government has two audit institutions: external and internal audit. The audit follow up is the progress of implementing audit recommendation from the external audit to correct the audit subject's financial report. This study analyzed data of 33 provinces from 2009 to 2013 from Badan Pemeriksa Keuangan's Audit Report Summary (ILHP BPK) and Local in Figures from Badan Pusat Statistik (DDA BPS) using Ordinary Least Square and Two Stage Least Square. This study found that the number of audit follow up and audit size are statistically significant to influence the audit findings although the internal audit sizes based on the auditor's number, the number of subject unit and the number of provincial employees are statistically significant only to the number of audit findings. It implies that the number of audit follow up affects the audit findings as a whole without being disturbed by the nominal amount of audit follow up. There are no previous studies which measure the effect of audit follow up on audit quality. This study added the important question on the relationship between audit sizes and the effectiveness of audit follow up on audit quality in government institutions especially in local governments.

KATA KUNCI:

Audit internal, audit eksternal, kualitas audit, tindak lanjut audit, ukuran audit.

KEYWORDS:

Internal audit, eksternal audit, audit quality, audit follow up, audit size

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INTRODUCTION

Studies about audit quality have been conducted from various perspectives. Most of these studies used audit activities in private institutions such as a private company. Private institutions generally hire an audit firm to audit their own institutions. The company is free to choose any audit firms and pays fee to it. A Common proxy for audit quality in private institutions is the discretionary accruals that detect inefficient expenses of an audited financial report (Cahan & Sun, 2015; Carey & Simnett, 2006; Wang & Huan, 2015). Most of the studies define audit quality by comparing the difference between actual audit activities and the auditing standards (Ball et al, 2015; Rahmina & Agus, 2014; DeAngelo, 1981).

The current study directly measures audit quality in the government using the audit findings themselves. The audit findings have similar characteristics to the discretionary accrual in previous studies but audit findings are not limited only to the amount. The other popular proxy for audit quality is the joint probability to find and report audit findings (DeAngelo, 1981). This joint probability was used in a study of audit quality in Indonesia conducted by Rahmina & Agus (2014) using private institutional data. Furthermore, the study on the audit quality in Indonesia is still limited specifically in private institution audit. This study fills the limitation by focusing on local government audit in Indonesia.

There are two national audit institutions in Indonesia, an external and an internal audit institution. The external audit institution BPK is the supreme audit institution. The internal audit institutions are the inspectorate in local governments and the general inspectorate (Inspektorat Jenderal/Itjend) in ministries. These internal auditors are supervised by the State Development Audit Agency (Badan Pengawas Keuangan dan Pembangunan/

BPKP) which guides the regulation of internal audits. The BPKP acts as an audit advisor for government units. Internal auditors should have an auditor's license from the BPKP which imposes by several requirements: audit trainings and auditors must pass an examination to earn an audit license.

According to the internal audit procedures at inspectorate of local governments, inspectorate reports every audit result to the audit subjects of its local government and inspectorate always provides recommendation to the audit subjects so that every audit findings may be solved. The same procedures also applied at the BPK as the external audit. BPK generally make recommendations based on the audit findings to resolve the audit subject's financial problems. The audit subject then will take action on the recommendation given by the internal audit and external audit.

The internal audit had an important role in audit recommendation implementation. The internal audit perform audit follow up to monitor and supervised the implementation of audit recommendation and to ensure that audit subjects' actions have been implemented effectively or that audit subjects' management has accepted the risk of not taking action. The internal audit reports the audit follow up to the BPK and BPK will check whether the recommendations had been implemented correctly. Therefore internal audit capacity should also be important to be take care of.

According to DeAngelo (1981), perceived audit quality depended on auditor size which was represented by the number of audit subjects and the specialization of the audit subjects. The specialization of the audit subject becomes a consideration in an audit process. The public officers who were not auditors are included in the audit team composition because of the specializations necessity. As the result, the number of auditors was not constant because of structural changes in internal audit institutions.

Lowensohn, et.al. (2007) suggested that there was a relationship between government specialization audit firms and audit quality but there was no association between audit specialization and audit fee. Since there was no exact education requirement in the specializations, public officers who passed the auditor exams and were nominated by an inspectorate chief could become an auditor. As the result, many auditors have different education backgrounds and specializations in the internal audit. Specialization in auditor institutions becomes necessary because the audit subject have a specific job task which is required to be audited by specialized auditors. An inspectorate thus needs to form an audit team for every unit audit.

Taking everything into consideration, the audit size and follow up are the important variables for the audit quality although there is a relationship uncertainty between both the audit size and the audit follow up. The objective of this study is to determine the relationship between audit size and audit follow up in affecting external audit findings directly and indirectly through the implementation of audit recommendation using archival data. Although Cahan & Sun (2015) conducted an audit quality study using archival data, no previous study measured the effect of audit size indirectly to external audit quality using archival data.

There are two research questions which integrate each other: the effect of audit size and the effect of audit follow up. This study examines the assumption of direct effect of audit size and audit follow up along with indirect effect of the audit size through the audit follow up on the audit quality. Based on DeAngelo's (1981) who doubt that the audit quality was independent of auditor size (audit firm size), this study presumes the audit size have an effect on the audit quality directly and indirectly. According to the audit procedures in Indonesia, there is an effect of audit size to audit follow up, and then audit follow up affects the audit quality.

However, the audit size can also directly affects the audit quality. This study limits the scope of research to audit follow up, not the internal audit report. It because audit follow up relates to both internal and external audit, while the internal audit report related only to the internal audit.

THEORETICAL FRAMEWORK

Audit Quality

There are several definitions of audit quality in previous studies. Each study has a distinct definition of audit quality and exhibits specific proxies of audit quality. Maroun (2014) described the audit quality as auditing standard in audit quality control which was explicitly defined as leadership responsibilities for quality, human resources performance and quality control monitoring/client relationship acceptance and continuance. Ball et al. (2015) defined audit quality as the differences and adjustments in the process of implementing International Financial Reporting Standards (IFRS). DeAngelo (1981) characterized the audit output as the independent verification of financial reports associated with quality dimensions. She also defined auditor quality as the joint probability of whether an auditor found and reported errors of the audited financial statements in compliance with general auditing standards or not, so that credibility is maintained. However, Carcello (1992) criticized the different standards about audit quality between audit stakeholders and surveyed audit stakeholders to find perceived audit quality and found four factors to determine audit quality that are audit team experience, expertise within audit teams, responsiveness to audit needs and compliance with general standards

Many studies about audit quality have been conducted employing various views. DeAngelo (1981) elaborated that probability of finding

errors depended on technological capabilities, procedures, sampling, and many other factors while probability report errors were measured from the independence of auditor. Perceived audit quality by Carcello's (1992) study was operationalized in Lowensohn's (2007) study suggested that local governments might be better audited by auditors with specialization and found a positive relationship between audit specialization and audit quality. Cahan & Sun (2015) found that auditor's experience negatively affected the audit quality which was represented by absolute discretionary accruals.

Based on the previous studies, audit quality can be seen along two dimensions. First, audit quality means the differences between ideal conditions and real conditions in financial reports. Second, audit quality can be defined by the audit stakeholders: audit subject and auditor. It can be concluded that Audit quality is defined as the difference between ideal conditions, based on regulation, and the real financial conditions. This study employs this definition of the audit quality.

Variables That Affect Audit Quality

Several studies had proven that audit sizes have an effect on the audit quality (DeAngelo, 1981; Fleischer & Goettsche., 2012; Cahan & Sun, 2015; Comprix et al., 2015). Many previous studies also had been proven that the auditor tenure had an effect on the audit quality (Carey & Simnett, 2006; Rahmina & Agus, 2014; Ball et al., 2015). Other studies examined into the specific variables related to audit stakeholder which were auditor and audit subject.

Audit quality can be seen from two sides. First, audit quality is affected by audit subjects' points of view which are determined by audit compliance. The study by Muehlbacher et al. (2012) showed that the percentage of participants who paid their taxes in delayed audit conditions was larger than for immediate audit conditions but surprisingly immediate audit condition participants had a lower

compliance rate than the of delayed audit condition participants.

Secondly, audit quality is affected by several characteristics of an auditor. The auditor's behavior towards audit performance depends on the auditor's capability and ethics which are included in regulation. Petraşcu & Attila (2013) defined auditors as a professional position which needed a competence and qualifications based on exams and that they should complied with their professional standard (ethics) when performing an audit. Dowling (2009) found that perceived normative pressures influenced an auditor in using the audit support system appropriately. Furthermore, Abernathy et al. (2014) concluded that accounting expertise gained from public accounting experience was related to punctual financial report. Since the governmental audits had a division of work, financial accounting expertise is not the only required capacity auditor needs. Lowensohn et al. (2007) suggested that the using of specialized auditors may be a good policy for the local governments. Therefore, the audit quality depends on the auditor's characteristics which contain the set of rules and ethics, accounting expertise and specialization.

Based on that theories, it can be inferred that the audit quality by audit subject means how the audit process could increase the audit subject's compliance. While the audit quality by auditor is defined by the characteristics of the auditor. According to the internal audit procedures, audit follow up aims not only to correct the audit subject financial report but also raise the audit subject compliance. This study limitation is that it only use the characteristics of the internal audit which covered in the audit size.

Audit Follow Up

No previous studies have explicitly defined the audit follow up. Based on the audit background in Indonesia, audit follow up is a progress of audit subject following up or implementing the external audit recommendations. This audit

follow up process are supervised or monitored by the internal audit. Therefore audit follow up is one of the internal audit performance indicator and relates to the internal auditor's capacity and capability.

Petraşcu & Attila (2013) suggested that auditors were required to have competence and qualifications based on exams and that they should follow their professional standard (ethics) when conducting an audit. Moreover, Abernathy et al. (2014) suggested that auditor committee's accounting financial skill affected their effectiveness by the increase of the timeliness of financial information. Cahan & Sun (2015) found that auditor's experience negatively influences the audit quality which is represented by absolute discretionary accruals. Not only the auditor's characteristics and competencies but also the auditor's experience affects the compliance of audit subjects.

The capability of an auditor is affected by the auditor's expertise qualification, commitment to ethics and audit experience. Rahmina & Agus (2014) found that in general these three variables positively affected audit quality although audit tenure did not show any statistically significant effect. In contrast, Cahan & Sun (2015) concluded that the audit experience negatively affected the discretionary accruals as the proxy of audit quality, while Ball et al. (2015) found a negative relationship between the length of tenure and quality. There is no certain conclusion about capability of auditor. Different approaches of auditor's capability might be used to measures audit quality for government audit institution.

Audit follow up is a slightly different variable from the auditor capacity and capability measurement. The audit follow up can directly measures the internal audit works as well as the external audit. As mentioned before, the audit follow up is one of the internal audit performance measurement indicator. The audit follow up could also be used to measure the effectiveness of external audit's

recommendations. Audit recommendation that was unimplemented by the audit subjects may indicate of ineffectiveness of the external auditor recommendation.

Audit Size

An equal position and different audit subjects become the characteristics of a local government's audit institution. Auditor's capability differs in each audit institution depending on the audit subject and standard, and the size of each audit might be different. The quality of an audit depends on its size according to several studies. Fleischer & Goettsche (2012) concluded that the audit price in a large size audit object was affected by only audit size, but the price of an audit in small size audit object was affected not only by audit size but also by audit risk such as leverage. This study uses audit size from audit subject side, because the proxy of audit size is the total number of employees. Wang & Huan (2015) found that there was no significant effect of audit subject size on transformation and audit quality. Transformation is generally included to increase the size of audit firms. According to the study of Wang & Huan (2015), transformation increases audit risk, but there is a positive relationship between transformation and audit opinions although it only lasts for one year. The study by Comprix & Huang (2015) found the lack of small audit firm's performance to keep audit object from violation. On the side of the audit institution, the optimum number of audit institution is needed to detect financial report violations.

Furthermore, there are studies of audit size affecting audit quality in government institutions. Giroux & Jones (2011) found that the number of local government clients caused audit quality differences, but population did not significantly affect audit quality. Giroux & Jones (2011)'s studies considered the size of local government units influenced audit quality. Another study by Deis & Giroux (1992) concluded that the size and financial health of

the client negatively affected the audit quality.

Compared to the private institution audit which has an independent relationship between audit firms and audit subjects or to other countries which use an audit committee, the internal audit institution in Indonesia is a unit which is formally formed in a hierarchy by the governor or mayor. Each local audit institution has a similar standard but a different size based on the size of the audit subjects.

Several definitions of audit size are proposed in the previous studies. DeAngelo (1981) and Comprix & Huang (2015) defined the audit size as the size of audit firms which was based on the financial statement. Fleischer & Goetsche (2012) argued about the robustness of the financial statement based audit size and concluded that the total number of employees as a non financial statement based audit size was better proxy for audit size. This study defines the audit size as the size of audit subject using non-financial statement based audit size which included the number of provincial employees, the number of audit subjects unit and the number of internal auditor employees.

Other Variables

Several previous studies examine audit quality using many variables. Audit size and audit tenure are popular variables which are used in the similar studies. Ball et al. (2015) found that there was a negative relationship between an auditor's tenure (auditor to audit subject) and audit quality, but there was a positive relationship between an audit organization's tenure (organization to organization) and audit quality.

Different from Ball et al. (2015), the proxy for audit tenure in Rahmina & Agus (2014) was the time experience of auditor conducted audits in a company. They concluded that only the auditor's independence and audit fee had significant effect on audit quality, yet an auditor's independence, tenure and fee simultaneously affected audit quality although

audit tenure was not significant to the audit quality.

Most of the audit factors come from the auditor. The auditor's tenure, independence, fee and capability are generally used in audit quality studies. Moreover, this study cannot ignore the variables that come from audit subjects. Audit size is a variable which can cover not only the auditor's factors but also the audit subject's factors.

RESEARCH METHOD

The previous studies about audit quality are still limited to a one way regression between audit quality and its factors. No study has measured the effect of an internal audit on an external audit. Moreover, the size of an internal auditor affects audit detection. Hylas & Ashton (1982) studied audit detection of errors from primary data and only explained an overview of the data. Muehlbacher et al. (2012) also used primary data from an experimental study which mostly related to participant behavior. Earnhart & Harrington (2014) used actual data to measure the effect of audit on compliance. Other studies measured factors which influenced audit qualities (Dowling, 2009; Lowensohn et al., 2007; Rahmina & Agus, 2014; Ball et al., 2015). Most audit studies are related to accounting studies. Also, government audit studies in Indonesia are still limited. There are no previous studies about the effect of government audit size on external audits. Therefore, this study aims to measure the effect of audit size on external audit in the government institutions.

This study uses secondary data which is derived from the BPK's Audit Report Summary (Ikhtisar Laporan Hasil Pemeriksaan' (ILHP) BPK) and from the Statistic Indonesia's Locals in Figures (Daerah Dalam Angka (DDA) dari Badan Pusat Statistik (BPS)). The number of audit findings, the amount of audit findings and audit follow up are derived from ILHP

while the number of local auditors, the number of provincial units and the total number of government officers are gained from provincial statistics. The data uses panel data of 33 provincial level governments from 2009 to 2014. The cross section data is the provincial governments with the time series from 2009 to 2014. Validity and reliability of the data are not necessarily being tested since this study uses secondary data from the government official.

This study uses a different approach from previous studies. Although the characteristics of a government audit are different from private audits, the regulations and standards for auditing are similar. Other approach to audit quality utilized categorical variables of audit opinion as in Carey & Simnett (2006). In this study, audit quality is measured using the number of audit findings and the amount of audit findings.

In general, this study uses one dependent variable and two main independent variables. The dependent variable as the audit quality proxy is the external audit findings. Audit finding is used because it has similar characteristics to the discretionary accruals which is one of popular proxy of the audit quality. The two main independent variables are audit follow up and audit size.

The follow up on audit recommendation is divided into finished and unfinished follow up. Finished follow up is the audit recommendation which has been followed up, while the unfinished follow up is the audit recommendation which has not been followed up or still on process.

The audit size is divided into three variables: The number of auditors, the number of audit subject unit, and the number of provincial employees. Comprix & Huang (2015) used total assets to measure audit size. According to Fleischer & Goettsche (2012), audit size can be represented more commonly by total assets and total sales but the audit system is

different. In this study, audit subjects have total assets but not all of audit subject have sales. Moreover, Fleischer & Goettsche (2012) found inconsistency sign of assets parameters although it exhibited statistically significant results. Furthermore, the previous studies on audit size as an independent variables used dummy variables for audit firm sizes (Fleischer & Goettsche, 2012; Cahan & Sun, 2015) and for total assets of audit subject (Carey & Simnett, 2006). The previous study only measured the size from one side, either the auditor or the audit subjects. This study uses audit size of both the internal audit institutions and audit subjects where the audit size is represented by the number of audit subjects that are auditors, audit subject units and provincial employees.

This study uses a research design which evaluates both audit size and follow up simultaneously as a part of internal and external audit factors. Many previous studies researched the effect of auditor's characteristics on audit quality using a standard Pooled Ordinary Least Squares (OLS) regression model while this study uses both OLS and Two Stage Least Squares (TSLS) to examine the effect of audit follow up and size on the audit quality. Both OLS and TSLS are used because of the two assumptions based on the audit procedures. First, this study assume that the audit size and follow up affects the audit findings directly. Second, there is an assumption that the audit size affects the progress of implementing audit recommendation which is the audit follow up, while the audit follow up affects the next year audit findings. Both assumptions will be examined by OLS and TSLS.

In general, the OLS model is specified by:

$$AF = \alpha + \beta_1 FAF + \beta_2 UAF + \beta_3 A + \beta_4 AU + \beta_5 PE + \beta_6 L + \beta_7 RS + \beta_8 Iefc + \epsilon$$

AF is audit findings. A is a constant number. Finished and unfinished audit follow up is represented by FAF and UAF respectively. A is the discreet number of auditor. AU is the

discreet number of audit subject unit. The discreet number of provincial employee is represented by PE. Furthermore, the control variables are Loss (L), Revenue Shortage (RS), and Inefficiency in Budget Spending (Iefc).

Based on data specification, the data is divided into two measurements which are the number data and the amount data. The number data represents the number of financial problems reported by the auditor. Each number of financial problem figures consists of the nominal amount of financial problems. The amount data represents the size of those financial problems.

According to table 3.1, the division between the number and the amount besides the data of audit findings also occurs on variable loss, revenue shortage, inefficiency, finished audit findings, and unfinished audit findings. The other independent variables data such as auditor, audit subject unit, and provincial employees use number data.

Multicollinearity test employing Variance Inflation Factor (VIF) is conducted to check whether the independent variables have multicollinearity problem. Hair et al. (2010) stated that multicollinearity reduce the variables to measure the dependent variables and suggested VIF scores 10 as the tolerance value of multicollinearity.

OLS Models

There are four models of OLS that use the combination of number and amount data. The focus of the different regressions has different meanings, but the aim is the same: to measure the effect of audit follow up and audit size on audit quality.

Model 1

$$NAF = \alpha + \beta_1 NL + \beta_2 NRS + \beta_3 NIefc + \beta_4 NFAF + \beta_5 NUAF + \beta_6 A + \beta_7 AU + \beta_8 PE + \epsilon$$

Model 1 is a straight regression of the number data. The objective of this model is to measure

Table 3.1. Variables

Dependent Variable	Independent Variables (Number)	Independent Variables (Amount)	Expected Sign
The number of audit findings (NAF)/The amount of audit findings (AAF)	The Number of Finished Audit Follow up in previous year (NFAF)	The Amount of Finished Audit Follow up in previous year (AFAF)	+
	The number of Unfinished Audit Follow up in previous year (NUAF)	The Amount of Unfinished Audit Follow up in previous year (AUAF)	+
	The Number of Auditor (A)	The Number of Auditor (A)	+
	The Number of Audit Subject Unit (AU)	The Number of Audit Subject Unit (AU)	-
	The Number of Provincial Employee (PE)	The Number of Provincial Employee (PE)	+
	The number of Loss (NL)	The Amount of Loss (AL)	-
	The Number of Revenue Shortage (NRS)	The Amount of Revenue Shortage (ARS)	+/-
	The Number of Inefficiency (NIefc)	The Amount of Inefficiency (Alefc)	+/-

the effect of the number of audit follow up to the number of audit findings. This regression measures the effect of internal audit jobs performance in the implementation of audit follow up on audit quality. As mentioned before, audit follow up is performed by an internal audit, so Model 1 implies the effect of internal audit job size on follow up of audit recommendation. Based on this model, a hypothesis, H1, is stated as follows:

H1: The number of previous audit has been followed up significantly affects the current number of audit findings.

Model 2

$$AAF = \alpha + \beta_1 AL + \beta_2 ARS + \beta_3 AIefc + \beta_4 AFAF + \beta_5 AUAF + \beta_6 A + \beta_7 AU + \beta_8 PE + \varepsilon$$

Although the specification of this model is the same as model 1, the intuition of the model differs from Model 1, because of a different type of data. Model 2 is a straight regression of the amount data. In contrast to Model 1, the amount regression of Model 2 measures the responsibility level effect on audit findings. Audit follow up contains the amount of previous audit findings which needed to be resolved. The amount of audit finding is divided into several numbers of audit follow up based on the number of previous audit findings. The amount of audit follow up implies the internal audit responsibility size which has been implemented by an internal audit. The regression of this amount uses the logarithm for all variables except the audit size variables. Hypothesis 2 derives from this model:

H2: The amount of previous audit follow up significantly affects the current amount of audit findings.

Beside the straight regression of number and amount by Model 1 and 2, this study conducts a cross regression between independent variables

and dependent variables. Compared to the previous two models, the cross regressions specifically measure the effect of the number of audit follow up on the amount of audit findings, and vice versa. With these regressions completed, the basic model not only measures the effect of the number data and the amount data separately but also the effect of the number data on the amount data. It means that the dependent variables data is switched where the number of audit findings becomes a dependent variable for the independent variable of amount data and vice versa. The model is developed into two additional models.

Model 3

$$AAF = \alpha + \beta_1 NL + \beta_2 NRS + \beta_3 NIefc + \beta_4 NFAF + \beta_5 NUAF + \beta_6 A + \beta_7 AU + \beta_8 PE + \varepsilon$$

Model 4

$$NAF = \alpha + \beta_1 AL + \beta_2 ARS + \beta_3 AIefc + \beta_4 AFAF + \beta_5 AUAF + \beta_6 A + \beta_7 AU + \beta_8 PE + \varepsilon$$

These models also measure the relationship between audit follow up implementation and audit findings but the aim of these models are different. Model 3 aims to determine whether the previous internal audit job size to resolve audit findings affected the succeeding year's responsibility size. In contrast, model 4 aims to examine the effect of the previous year's responsibility size on the next year's internal audit job size. This study states the following two hypotheses:

H3: The amount of previous audit follow up significantly affects the current number of audit findings.

H4: The number of previous audit follow up

significantly affects the current amount of audit findings.

TOLS Models

The second measure uses Two Stage Least Squares (TOLS) models. The internal audit will supervised the implementation of the external audit recommendation to solve the financial violation. According to this system, audit follow up in a previous year might affect audit findings for the following year where the implementation of audit recommendation is affected by audit subject size. In contrast, Alzeban & Sawan (2015) studies found that size which was represented by the number of audit committee members suggested no relation with the implementation of audit recommendation.

The audit size is represented by the number of internal auditors, the number of audit subject units and the number of provincial employees. Audit follow up is affected by these three variables using TOLS regression. The regression of TOLS is based on an OLS regression of the number of audit findings and not on the amount of audit findings. By the TOLS, the OLS assumption of no correlation between independent variables is omitted. As a result, this study chooses only the best result of OLS regression to be implemented in TOLS.

The TOLS model is divided in two. The first TOLS model uses finished audit follow up to be affected by the audit size variables. The second TOLS model uses unfinished audit follow up to be affected by the audit size variables.

TOLS Model 1:

$$AF = \alpha + \beta_1 L + \beta_2 RS + \beta_3 Iefc + \beta_4 FAF + \beta_5 UAF + \epsilon$$

Where FAF is instrumented and the instruments are A, AU and PE

$$FAF = \alpha + \theta_1 A + \theta_2 AU + \theta_3 PE + \mu$$

TOLS Model 2:

$$AF = \alpha + \beta_1 L + \beta_2 RS + \beta_3 Iefc + \beta_4 FAF + \beta_5 UAF + \epsilon$$

Where UAF is instrumented and the instruments are A, AU and PE

$$UAF = \alpha + \theta_1 A + \theta_2 AU + \theta_3 PE + \mu$$

On the basis of these two models, the hypotheses are as follows:

H5: The number of previous audit follow ups which was affected by the audit size significantly affected the current number of audit findings.

H6: The amount of previous audit follow up which was affected by the audit size significantly affected the current amount of audit findings.

RESULTS

Descriptive Statistics

Statistics of all variables are described in Table 4.1 and 4.2 . There are some data noises because the data does not have complete variables. After removing the data noises, the number of data decreases to 115 observations from 198. The number of auditors (AN) was not the number of pure auditors in audit institutions, but the number of internal audit institution employees. All of the amount variables use logarithm. There are at least four audit findings and one finished audit follow up in a year. The minimum number of unfinished audit follow up is zero implying that there are provinces which finish all of audit recommendations within a year.

Table 4.2 describes the correlation between the variables. The number of audit findings has a higher correlation with the number of audit follow up, as compared to the amount of audit follow up. The overall number of audit size variables as well as audit follow up variables

has a higher correlation to the number of audit follow up as compared to the amount of audit follow up. Among the audit size variables, the number of provincial employees have the highest correlation to audit follow up variables while the second highest is the number of auditors.

OLS Regression

Table 4.3 shows the result of multicollinearity test employing VIF test. All of the variables except the provincial employee exhibit VIF less than 10 which is considered by Hair et al. (2009) as the tolerance value of VIF. Almost all VIF test of the amount variables are less than 10. This study still uses the provincial employee although it exhibits VIF test more than 10 in VIF result of number variables. The comparison between the amount regression and the number regression needs to be balanced. Moreover, O'Brien (2007) concluded that higher values of VIF do not discount the result of regression analysis but the individual coefficient which contain multicollinearity face the variance inflation.

Table 4.3: VIF Test

VIF	Amount	Number
Provincial Employee	9.15	12.4
Auditor	9.72	9.61
Audit Subject Unit	1.64	3v.5
Finished Audit Follow up	1.30	3.50
Unfinished Audit Follow up	1.20	1.65
Loss	1.25	2.29
Revenue Shortage	1.27	2.31
Inefficiency	1.13	1.35
Mean VIF	3.33	4.33

According to Table 4.4, audit follow up, in term of number, had a consistent sign and significant effect on audit findings rather than the amount term. Only loss and inefficiency significantly affected the amount of audit findings. Since audit follow up implementation is based on the number of external audit recommendations, the amount of audit follow up might not have an effect on the amount of audit findings. The internal audit will control the implementation of external audit recommendation by the sum of audit findings amount which is covered on one audit finding.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
NAF	115	23.1913	18.34317	4	98
AAF	115	9.25849	1.863439	2.227861	14.19395
NL	115	7.773913	9.102786	0	51
NRS	115	3.556522	3.372207	0	21
Nlefc	115	0.826087	1.244362	0	6
AL	115	6.998107	2.560317	0	12.30164
ARS	115	6.073161	2.679995	0	11.14538
Alefc	115	2.727136	3.25479	0	10.66709
NFAF	115	95.02609	106.0974	1	720
NUAF	115	75.12174	70.65001	0	404
AFAF	115	7.603689	2.39492	0	12.99183
AUAF	115	8.245867	2.414917	0	12.67619
AN	115	108.8522	66.04521	22	428
AU	115	44.93913	6.77882	30	69
PN	115	11203.31	16256.51	1344	82134

Table 4.2: Variables Correlations

	NAF	AAF	NL	NRS	Niefc	AL	ARS	Aiefc	NFAF	NUAF	AFAF	AUAF	AN	AU	PN
NAF	1														
AAF	0.509	1													
NL	0.8227	0.3566	1												
NRS	0.8013	0.4394	0.6803	1											
Niefc	0.425	0.3202	0.3365	0.3682	1										
AL	0.5023	0.444	0.4584	0.3618	0.1695	1									
ARS	0.4171	0.4109	0.3192	0.6017	0.0515	0.2968	1								
Aiefc	0.2842	0.2993	0.1479	0.1827	0.7861	0.1957	-0.0265	1							
NFAF	0.6162	0.3079	0.6157	0.6214	0.3397	0.1821	0.2888	0.1809	1						
NUAF	0.5457	0.3155	0.4422	0.4319	-0.0029	0.3073	0.3388	0.0409	0.4143	1					
AFAF	0.322	0.225	0.2938	0.3757	0.2255	0.2101	0.3202	0.1409	0.3832	0.206	1				
AUAF	0.2443	0.1628	0.1324	0.1848	0.1934	0.1594	0.0428	0.229	0.1668	0.47	0.2932	1			
AN	0.582	0.2409	0.5653	0.5885	0.2251	0.0863	0.2421	0.1034	0.7624	0.4847	0.2964	0.1695	1		
AU	0.2434	0.0734	0.3333	0.2839	0.0518	0.1607	0.2091	-0.0057	0.3769	0.2606	0.2285	-0.0321	0.5841	1	
PN	0.6501	0.278	0.6145	0.5985	0.1737	0.1647	0.3001	0.0693	0.8065	0.5699	0.3135	0.1729	0.9372	0.5414	1

Table 4.4: OLS Result

Audit Findings	Number	Amount	Number	Amount
	Coefficient	Coefficient	Amount	Number
Finished Audit Follow up	-0.021* (-1.71)	0.001 (0.08)	0.089 (0.18)	0.0001 (0.04)
Unfinished Audit Follow up	0.037*** (2.91)	0.005 (0.58)	0.186 (0.4)	0.0054* (1.9)
Auditor	-0.065* (-1.94)	0.004 (0.58)	0.026 (0.54)	-0.0066 (-0.9)
Audit Subject Unit	-0.265** (-2.03)	-0.044 (-1.63)	-0.532*** (-2.72)	-0.0108 (-0.38)
Provincial Employee	0.0005*** (3.10)	0.000 (0.32)	0.0006*** (3.16)	0.00002 (0.55)
Loss	0.863*** (7.33)	0.226*** (3.61)	2.491*** (5.49)	0.0066 (0.25)
Revenue Shortage	2.035*** (6.38)	0.209*** (3.47)	1.160*** (2.66)	0.1625** (2.33)
Inefficiency	2.500*** (3.78)	0.128*** (2.74)	0.930*** (2.74)	0.3383** (2.33)
Constant	20.015*** (3.56)	7.463*** (5.7)	8.198 (0.86)	8.93*** (7.25)
R-squared	0.8419	0.373	0.660	0.265
N = 115				

Significance Level : * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test)
t-stat are shown in parentheses

The common goodness of fit of the OLS model is R-squared which has range between 0-1. The R-squared values close to 1 indicates that the model has a good degree of fit. The straight regression of number data shows the highest R-squared values of 0.8419. The second highest is model 3 which has R-squared values of 0.660. Both are followed by model 2 and model 4, respectively.

The analysis result of audit size focuses on the number regression because a significant result occurs in the number regression. The number of internal auditors does not have a highly significant affect the number of audit findings. A high number of auditors consistently decreases the number of audit findings but with the significant level of 5%-10%. The next indicator of audit size, audit subject units, shows a significant level of 5% effect on audit findings.

Similar to the internal auditor number, a negative relationship is exhibited, which means that higher number of audit subject units indicates a lower number of audit findings. The division of work not only effectively reaches the provincial government goals, but also increases the quality of financial reports. The other audit size indicator, the number of provincial employees shows a significantly positive relationship on audit findings. A higher number of provincial employees indicate a higher number of audit findings but its coefficient suffers from multicollinearity. The number of employees represents the size of work which is being audited. A large size of audit subject employees increases the audit findings.

Based on the hypotheses, H1 is the only hypothesis which is completely not rejected. Both finished and unfinished audit follow up

significantly affect the audit findings although finished audit follow up only has 5%-10% of significant level. H2 and H3 are completely rejected while only unfinished audit follow up has a significant effect to the audit findings in H4. The previous number of unfinished audit follow up affects the amount of audit findings at a 10% significance level. This implies that internal audit unfinished jobs to resolve audit findings affects the next year's responsibility size of the internal audit itself.

There is a snowball effect because the number of unfinished audit follow up will increase not only the next year's internal audit job size, but also the amount of the next year's responsibility size, and this process will repeat. On the other hand, the number of finished audit follow up only decreases the number of audit findings, and there is no effect on the amount of audit findings. It can be concluded that audit follow up urgently need to be resolved before the next year's audit to avoid repetitive audit findings. The unfinished audit follow up will add up with the next year's audit findings, but finished

audit findings will decrease the next year's job size although it has no effect on the amount of audit findings.

Two Stage Least Squares (TSLS) Regression

According to Table 4.5, unfinished audit follow up significantly affects audit findings in both models, assuming that audit follow up is affected by audit size. Unfinished audit findings also have a sign that is consistent with the expectations. Model 2 shows a higher coefficient for unfinished audit findings which implies that the audit size highly affects the audit findings indirectly from the previous unfinished audit follow up. There is no significant effect of audit follow up on Model 3 and Model 4.

Finished audit follow up does not have significant effect on audit findings. This implies that previous audit findings which have been solved do not become a matter for the new period of budgeting. The next audit findings are not affected by the previous finished audit

Table 4.5: TSLS Regression Result

	Model 1	Model 2	Model 3	Model 4
Audit Findings	Number	Number	Amount	Amount
Independent variables	Number	Number	Amount	Amount
Instrumented	FAF	UAF	FAF	UAF
Finished Audit Follow up	0.018 (1.25)	-0.015 (-1.21)	-0.164 (-1.14)	0.190 (0.62)
Unfinished Audit Follow up	0.046*** (3.65)	0.132*** (3.51)	0.670 (1.61)	-0.011 (-0.11)
Loss	0.825*** (6.56)	0.749*** (4.91)	0.159* (1.79)	0.200*** (3.12)
Revenue Shortage	1.815*** (5.28)	1.638*** (3.97)	0.264*** (3.17)	0.179* (1.83)
Inefficiency	1.909*** (2.81)	3.231*** (3.58)	0.056 (0.69)	0.127*** (2.54)
Constant	3.568*** (2.90)	0.366 (0.18)	2.115 (0.86)	5.070*** (4.18)
R-squared	0.813	0.753	0	0.301
N = 115				

Significance Level : * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test)

z-stat are shown in parentheses

follow up since the finished audit follow up only solves previous audit findings. This is different from unfinished audit findings which still left open the previous financial problems to the next period and thus become audit findings for the new period.

CONCLUSION

To summarize, there is an effect of audit follow up and audit size on audit quality. Both external and internal audits are related to audit follow up. The dependent variable is the work of the external audit and audit size is characterized not only by the audit subject but also the internal audit. The unfinished audit follow up positively affects audit findings.

The snowball effect is unavoidable for this positive effect. Both internal and external audits need to adjust audit follow up to minimize the audit findings. External audits should consider the capacity of internal auditors while formulating the audit recommendation. On the other hand, internal audits also need to implement the audit recommendations accurately before next year's audit. Upgrading internal audit capability is unavoidably necessary but specific skills should be considered. Internal auditors not only need to be well taught in audit skills but also in the effective implementation of external audit recommendations. The main task of the internal audit is to examine and guide the provincial unit's financial report. And Audit follow up working becomes a part of guiding the provincial unit.

The reliance of external audit to internal audit in this study is quite high because the internal audit is a part of the external audit subject. Moreover, the internal audit shares the same funding resources with its audit subject. Brody (2012) found that external audits relied more on internal audit while audit subjects devoted

additional resources to the internal audit. Saidin (2014) concluded that the reliance on internal audit did not have a significant impact on reducing audit fees and external audit works. The result of this study exhibits a similar conclusion, that finished audit follow up does not have a significant impact on audit findings, but unfinished audit follow up significantly increases the next year's external audit works.

Taking everything into consideration, external and internal audits need to work effectively on audit follow up. They should synchronize to adjust the audit follow up implementation. The composition of audit recommendations should be easy to handle by internal audits. The external audit needs to focus more on formulating the audit recommendation. According to the result, it is better to decrease the number of audit recommendation. The decreasing of audit recommendations does not mean marking down the audit findings. Although the number of audit findings is higher, the number of audit recommendation needs to be solid. The solid number of audit recommendations will be easier to implement by the internal audit. Moreover, the amount of audit recommendations is still consistence with the amount of audit findings.

This study uses provincial level regressions. In future research, it will be better to extend the study to the city/regency level, since it has its own internal audit and is also audited by the external audit directly. Furthermore, the aim of this study is only to measure the audit quality by the size of the audit and audit follow up, but there is no capability of internal audit measurement in this study. Although it can be measured in many directions, the audit composition is one of the important approaches to audit quality which cannot be neglected.

POLICY

RECOMMENDATIONS

This study proposes several policy recommendations which are divided into three sides: internal audit, audit subject and external audit. First, the internal audit should increase the number of auditor as well as the capability of auditor. The internal auditor needs not only the ability to audit but also the ability to interpret and implement the external audit recommendation.

Secondly, the local government should consider the number of local government unit as the audit subjects. There is a presumption that the lack of audit subject unit causes the overload task in each unit although it needs to be examined specifically. The capability of the unit to interpret and implement the audit recommendations also need to be increased.

Last, the external audit need to act as both external auditor and recommendations implementation supervisor. The external audit could have better understanding about the capability of the audit subject and could formulate the recommendations which are easy to handle by the audit subjects.

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