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Article

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The relationship of internal auditors' characteristics with external auditors' reliance and its impact on audit efficiency: Empirical evidence from Indonesian government institutions

Rudy Usman^{1,2*}, Abdul Rohman³ and Dwi Ratmono³

Abstract: Previous studies have separately investigated the relationship between the internal auditors' characteristics, the level of external auditors' reliance, and the audit efficiency so it has not fully described how the external auditors make decisions to rely on internal audit work, which has an impact on audit efficiency. Therefore, the current study aims to fill the research gap by analyzing the relationship among the internal auditors' characteristics, external auditors' reliance and audit efficiency in one comprehensive research model with the institutional environment as a moderating variable in the relationship between the level of external auditors' reliance and the audit efficiency. This study is conducted in government organizations with the consideration that the reliance of external auditors on internal audit work is one of the strategies for dealing with the limited resources faced by government external auditors in Indonesia. Surveys are conducted to collect research data. The research subjects are 164 external auditors (BPK) from 34 representative offices in Indonesia. The data are analyzed using Partial least Square-Structural Equation Modeling. The results of this study show that the level of external auditors' reliance on internal audit work has a significant effect on audit efficiency. Furthermore, the results also show that there is a moderating effect of the institutional environment on the relationship between the level of external auditors' reliance and audit efficiency. This study contributes to the application and development of relational coordination theory and institutional theory in accounting and auditing fields, especially in government sector audits.

Subjects: Auditing; Government & Non-Profit Accounting

Keywords: Accounting; auditing; public sector accounting; external auditors; internal auditors; level of reliance; audit efficiency; institutional environment

JEL Classifications: M410; M420; M480

1. Introduction

The wide range of Indonesian territory requires large numbers of government financial management entities. This causes the audit workload to be very large, which has to be completed by the

Supreme Audit Agency (BPK) as the government external auditor. BPK Annual Report in 2020 reported that 2,117 audit entities need to be inspected. The entities include 86 Ministries/Central Government Agencies, 115 State-Owned Enterprises, 542 Local Governments, and 1,374 Local-Owned Enterprises. Due to the large number of entities that must be audited annually, BPK is not possible to work alone in auditing all entities because it is the only state financial audit agency (BPKP, 2020). That impossibility is caused by the limitation of resources, including financial resources, personnel resources, and other resources (Damandari, 2018).

The limited auditor resources and the wide audit scope faced every year encourage the BPK auditors must implement effective and efficient audit management. A strategy that BPK auditors may apply to cope with limited resources when conducting audits of government financial reports is to work with the Government Internal Supervisory Apparatus (APIP). The reliance of BPK auditors on APIP audit work in auditing the government entity financial reports is an excellent solution to increase the efficiency and effectiveness of auditing and supervising government finances (Damandari, 2018).

This study is conducted in the context of auditing local government financial reports in Indonesia referring to Law number 15 in the year 2004 which states that in carrying out inspections of state financial management and accountability, the BPK can utilize the APIP audit work. This provision is in line with SAS 65 issued by AICPA and ISA 610 issued by IFAC which state that the external auditors must consider the objectivity, competence, and work performed of the internal auditors before determining at what level the external auditors utilize the work of the internal auditors. Based on the provisions contained in these standards, this study aims to examine how BPK auditors assess the characteristics of APIP auditors, especially related to competence, objectivity and work performed in carrying out its function as an internal audit institution for local government entities in Indonesia. Furthermore, to explain the inconsistency of the results of previous studies, this study broadens the scope by analyzing the role of the institutional environment as a moderating variable in the relationship between the level of BPK auditors' reliance and the efficiency of auditing government financial reports in Indonesia. This study is a follow-up to the study by Argento et al. (2018) who suggested further studies to examine more comprehensively the level of external auditors' reliance on internal audit work.

This study uses the characteristics of internal auditors (APIP) as a variable that affects the external auditors' reliance and its impact on the efficiency of auditing local government financial reports in a more comprehensive research model. The institutional environment is used as a variable that moderates the relationship between the level of external auditors' reliance and the efficiency of auditing local government financial reports. Different from previous studies, this study includes an institutional environmental factor as a moderating variable that supports the effect of external auditors' reliance on audit efficiency, referring to the concept of institutional theory. Pike et al. (2016) found that there is a moderating effect of internal auditors' environmental factor on the relationship between the involvement of the internal audit function in auditing financial reports and audit efficiency.

Previous studies on the relationship of competence, objectivity and work performed of internal auditors with the level of external auditors' reliance have shown inconsistent results. Studies by Suwaidan and Qasim (2010); Lenz and Hahn (2015); Azzam et al. (2020) reported that three characteristic attributes of internal auditors affect the level of external auditors' reliance. On the other hand, other studies found that not all of these three characteristic attributes affect the level of external auditors' reliance (Mihret & Admassu, 2011). Furthermore, other studies reported that there are differences in the order of attribute rank based on the significance of the effect on the level of external auditors' reliance (Desai et al., 2017).

This study aims to examine the effect of internal auditors' characteristics (including objectivity, competence and work performed) on the level of external auditors' reliance and its impact on

audit efficiency. This study is expected to elaborate the body of knowledge in accounting and auditing fields by developing a conceptual framework regarding the external auditors' reliance on internal audit work with reference to relational coordination theory, source credibility theory and institutional theory. In addition, the findings of this study are expected to be important references for further studies examining the relationship between the characteristics of internal auditors and the level of external auditors' reliance on internal audit work and its impact on audit efficiency.

The novelty of this study is the theoretical model. This study uses the theory of relational coordination proposed by Gittell (2006) as a grand theory to develop the research model of this study. This study also uses the perspective of institutional theory to explain the inconsistency of results of studies related to the influence of the characteristics of internal auditors on the level of external auditors' reliance on internal audit work. Based on our literature study, there is no related study that uses the relational coordination theory and institutional theory, although some studies in this context have been carried out for a long time and have examined various factors that influence the relationship between the external and internal audit functions (Aldred et al., 2013). This study includes an institutional environmental factor from the perspective of institutional theory because this theory can provide a further understanding of the interactions between elements of good governance within an organization (Cohen et al., 2008). In addition, Baker et al. (2014) recommended the use of institutional theory in studies related to issues of auditing practice and regulation.

2. Literature review dan research hypothesis

2.1. Relational coordination theory

This study uses the relational coordination theory introduced by (Gittell, 2006) as a grand theory to design the research model. The relational coordination theory is developed to study the relational dynamics in working coordination (Gittel, 2011). This theory proposes relational coordination as a process of mutually reinforcing interaction through communication and relational relationships carried out for task integration (Bolton et al., 2021; Gittell, 2000).

The use of the relational coordination theory in this study is considered relevant because it explains the importance of the coordination and interaction relationships between the two government audit functions in the implementation of auditing local government financial reports and its impact on the audit efficiency. The use of the relational coordination theory in this study is relevant, viewed from two aspects:

2.1.1. The first aspect

This theory develops under conditions that are in line with the conditions faced by BPK auditors in conducting audits of local government financial reports, namely limited resources that lead to dependence on other parties (APIP), limited time allocation in conducting audits and environmental uncertainty faced by BPK auditors. The BPK audit environment is characterized by conditions of uncertainty that require assessments based on valid evidence. In addition, the BPK auditors are under pressure to complete assignments on time and face risks, so they require coordination with other parties (Bantleon et al., 2021; Lenz & Sarens, 2012).

2.1.2. The second aspect

This aspect is related to the expected impact of relational coordination which is in line with the expected impact of the reliance of BPK auditors on the APIP audit work. Relational coordination between work units causes task interdependence to be managed better and reduces redundancy, irregularities, errors, and work delays (Gittell, 2016). This is in line with the expected impact in which the BPK auditors' reliance on APIP audit work can increase audit efficiency by avoiding duplication of work.

2.2. The source credibility theory

The source credibility theory is developed by Hovland et al. (1953). This theory explains that it is possible to persuade a person more easily if the sources of persuasion are credible. The source credibility theory identifies source expertise and source bias as elements that affect the credibility of information sources (Birnbaum & Stegner, 1979; Tjeng & Nopianti, 2021). The determination of whether a source is considered an “expert” who has high credibility is determined by evaluating the characteristic attributes of the source, namely the knowledge, training, experience, and work results of the person (Steinbart et al., 2012).

Some previous studies in auditing have used constructs of the source credibility theory, namely source competence and source objectivity as factors that affect client credibility (Agrawal, 2018; Cohen et al., 2022; Hux, 2021). Furthermore, this study uses the source credibility theory to explain the effect of the internal auditor characteristics on the level of external auditors’ reliance on government financial reports audit.

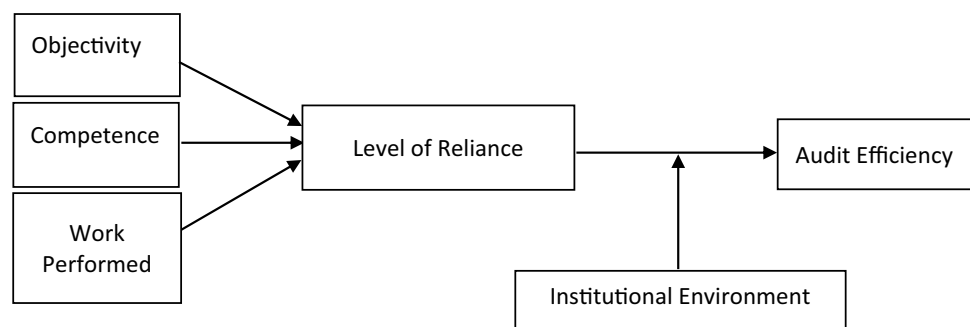
2.3. Institutional theory

The institutional theory provides a broad explanation of how culture, politics and social forces around the organization affect the structure and behaviour of the organization (Fogarty, 1992). This theory emerged as the dominant theory in providing a strong explanation of the actions of individuals and organizations (Dacin & Dacin, 2008). The institutional theory provides rich and complex organizational insights that can be used to explain auditor’ practice and behaviour (Haapamäki, 2022; Zucker, 1987). Previous studies showed that the institutional theory can explain the practice of audit functions in developing countries (Boolaky & Soobaroyen, 2017; Mihret et al., 2012; Vadasi et al., 2019) and in developed countries (Arena & Azzone, 2007). Chan et al. (2010) found that local auditors who work in a weak institutional environment are more likely to issue an unqualified opinion than local auditors who work in a strong institutional environment. Besides Chan et al. (2010) and Arena et al. (2006) also found the relevance of the characteristics of the institutional environment with the emergence of various characteristics of audit departments in Italy. Abbott et al. (2012) proved that the characteristics of the institutional environment moderate the relationship between the involvement of internal auditors in auditing financial reports and the audit efficiency.

2.4. Hypothesis development

This study examines the relationship between the characteristics of APIP auditors as the government internal auditors (objectivity, competence, and work performed) and the level of reliance of BPK auditors as the government external auditors and audit efficiency. Furthermore, this study also examines the moderating role of the institutional environment on the relationship between the level of external auditors’ reliance and the audit efficiency (Figure 1).

Figure 1. Research model.



2.4.1. Relationship between the objectivity of APIP auditors and the level of BPK auditors' reliance

Objectivity is one of the characteristic attributes of the internal auditors that must be evaluated by the external auditors before determining to what extent the external auditors will rely on the internal audit work. Therefore, various studies examine the relationship between the level of external auditors' reliance and the objectivity of internal auditors. Al-Sukker et al. (2018) proved that the objectivity of internal auditors is the most important factor influencing audit efficiency. Suwaidan and Qasim (2010) reported that the objectivity factor is the most significant, followed by the competence and work performed factors. The study results recommended that the accounting firms can utilize the internal audit function to improve audit efficiency. Al-Sukker et al. (2018) using a mixed method also found that the objectivity of the internal auditors has the greatest positive influence on the external auditors' decision to rely on the work of the internal audit function, which is followed by competence and work performed. Based on theoretical studies and the previous study results, the current study proposes the following hypothesis:

H1. The objectivity of APIP auditors has a positive effect on the level of BPK auditors' reliance on APIP audit work.

2.4.2. Relationship between the competence of APIP auditors and the level of BPK auditors' reliance

Haron et al. (2004) and Argento et al. (2018) found that technical competence and the scope of the audit function are the two most important criteria considered by the external auditors in the decision to utilize internal audit work. Empirical evidence found by Al-Twajry et al. (2004) indicated that external auditors believe that the level of education and professional qualifications are essential factors influencing the decision to utilize internal audit work.

Al-Sukker et al. (2018) found that objectivity, followed by the competence of internal auditors and work performed by the internal auditors, positively affects the consideration of external auditors to use internal audit work. The study also found a significant interactive effect between objectivity and competence, showing that external auditors do not consider the influence of individual factors separately in deciding to utilize internal audit work.

H2. The competence of APIP auditors has a positive effect on the level of BPK auditors' reliance on APIP audit work.

2.4.3. Relationship between the work performed by APIP auditors and the level of BPK auditors' reliance

Argento et al. (2018) reported that work performed is the most significant factor, followed by competence and objectivity. Alkasasbeh (2016) strengthened the findings of the previous study by concluding that the most influencing factor on the level of external auditors' reliance is work performed, followed by competence and objectivity. Mihret and Admassu (2011) found that internal audit performance is the most crucial factor determining the extent to which the level of external auditors' reliance on internal audit work.

Work performed by APIP auditors is a description of the performance results of the internal auditors in carrying out their duties. The work performed describes how the APIP audit work process is in terms of completeness of documentation, quality of the working papers, audit scope and monitoring processes being carried out. This is very important to be taken into consideration by BPK auditors in assessing whether the APIP audit work can be relied upon in the process of auditing financial reports of government entities.

H3. The performance of APIP auditors has a positive effect on the level of BPK auditors' reliance on APIP audit work.

2.4.4. Relationship between the level of BPK auditors' reliance and audit efficiency

One of the benefits of the collaboration between external auditors and the internal audit function is audit efficiency which is obtained by avoiding repetitive work, resulting in a reduction in external audit costs (Pike et al., 2016). Several studies have empirically proved it. Al-Twaijry et al. (2004) and Oussii and Boulila (2018) found that external auditors' reliance can reduce audit costs. Argento et al. (2018) found that the involvement of internal auditors in the work of external auditors is a significant variable in determining external audit costs. Abbass and Aleqab (2013) concluded that synergistic coordination and cooperation between external and internal auditors increase audit efficiency and effectiveness and reduce audit costs.

In addition to cost reduction, audit efficiency can also be connected to audit delay. The length of time for audit completion affects the accuracy of financial report submission and impacts the decision-making by financial report users (Rusmin and Evans, 2017). Pizzini et al. (2015) found that a decrease in audit delay is in line with an increase in the quality of the internal audit function. Audit delays are four days shorter when the internal audit function contributes to external audits. Abbott et al. (2012) also proved that the involvement of the internal audit team can reduce audit delay, increasing audit efficiency. Based on the results of previous studies, this study proposes the following hypothesis:

H4. BPK auditors' reliance on APIP audit work has a positive effect on the audit efficiency.

2.4.5. The moderation role of the institutional environment on the relationship between the level of BPK auditors' reliance and the audit efficiency

Chan et al. (2010) examined the impact of institutional environment and government ownership on the reporting behaviour of local auditors in China. The results showed that the institutional environment affects the auditors' opinion. The study found that an unsupportive institutional environment causes local auditors to give WTP opinions to companies controlled by local governments because the local economy is very strongly influenced by political interference. Arena et al. (2006) investigated the relevance of institutional pressure in developing internal audit departments in Italy. The study concluded that institutional pressures in the form of regulations influence the diversity of audit department characteristics in Italy, where the effect is more substantial when the regulations give sanctions.

Zahra and Chariri (2013) developed the study of (Chan et al., 2010) using an institutional theoretical framework to test the influence of institutional environments and auditor types on audit opinions. The study differentiated the institutional environment into strong and weak institutional environments. The study showed that it is easier for local auditors to give WTP opinions for a weak institutional environment than a strong one.

Abbott et al. (2012) assessed the moderation effect of the environmental characteristic factor in where the internal audit function operates. The survey with 134 respondents showed that the reliance of external auditors by involving internal auditors as assistances in the audit process can reduce audit delay. Based on the explanation above, this study proposes the following hypothesis:

H5. The stronger the institutional environment, the greater the influence of the BPK auditors' reliance on APIP audit work on the efficiency of auditing government entity financial reports.

3. Method

3.1. Sample selection

The population in this study is the BPK Audit Teams at the BPK Representative Office of the Republic of Indonesia in 34 provinces, which audited the financial reports of city and district governments in 2021. That population selection is based on the consideration that the audit of financial reports by the BPK auditors is carried out by one audit team (BPK RI, 2008). The BPK audit

team interacts with the counterpart team which is APIP auditor team. Through the interaction, the BPK audit team can find out the characteristics of APIP in carrying out their duties and functions. The total population of this study is 508 BPK audit teams according to data on the number of cities and districts throughout Indonesia.

The research data are collected by distributing questionnaires in the form of online questionnaires which are sent through BPK Representatives throughout Indonesia to be forwarded to each auditor who meets the predetermined criteria, namely team leaders or technical controllers of the audit teams, who conducted inspections at city or district governments. From the 508 total population, 164 respondents fill out the questionnaires with a response rate of 32.28%. Table 1 presents the demographics of the respondents in this study.

3.2. Variable measurement

This study uses six variables consisting of three exogenous variables, two endogenous variables and one moderating variable. Exogenous variables are APIP auditors' objectivity, competence, and work performed. APIP auditors' objectivity is measured by four indicators which are organizational status, reporting level, independence and top management support. APIP auditors' competence is measured by five indicators which are formal education background, professional certification, education and training, work experience and knowledge of organizational operations. Work performed by APIP is measured by four indicators which are the scope of work, quality of documentation, compliance with standards and risk-based audits. Endogenous variables are BPK auditors' reliance and audit efficiency. BPK auditors' reliance is measured by four levels which are no reliance, low reliance, moderate reliance and high reliance. Audit efficiency is measured by one indicator which is total audit work hours. Meanwhile, the moderating variable is the institutional environment which is measured using scores, in which for district governments, it is given a score of 0, while for city governments, it is given a score of 1, referring to Chan et al. (2010)

3.3. Data analysis

Data analysis is conducted using Partial least Square-Structural Equation Modeling (PLS-SEM) with a help of WarpPLS 8.0 Software. PLS-SEM is selected because 1) the objective of this study is to expand the application of theories in the field of auditing which are the resource dependence theory, source credibility theory and institutional audit theory, 2) the measurement model uses reflective and formative constructs, 3) it does not measure reciprocal relation (Hair et al., 2013). This study uses WarpPLS version 8.0 software to test the hypotheses because it has several advantages; 1) it can test complex relationships simultaneously, 2) it handles all types of measurement scales, 3) it is designed to solve problems in small samples, not normally distributed data in a multivariate manner, missing values existence and multicollinearity problems between exogenous variables (Sholihin & Ratmono, 2021).

3.4. Evaluation of measurement and structural model

Evaluation of measurement is conducted by referring to internal consistency reliability measured using parameters of composite reliability, Cronbach alpha and AVE values. The values of composite reliability and Cronbach alpha should be higher than 0.7. The AVE value should be higher than 0.5.

Table 1. Questionnaire delivery and return details

Information	Value
Number of target respondents from all regencies and cities throughout Indonesia	508
Respondents who do not respond/give answers	324
Respondents who respond/give answers	184
Response rate	36.22%

The validity is measured based on convergent validity and discriminant validity. Convergent validity refers to the principle where the constructs have a high correlation or relationship with manifest variables (Latan & Ghozali, 2016). The assessment of convergent validity of reflective indicators is based on the value of the loading factor. Reflective indicators are valid if the value of the loading factor is higher than 0.7.

4. Results

The results of construct reliability and convergent validity tests are presented in Table 2

Table 2 shows that the composite reliability dan Cronbach alpha values meet the reliability criteria because they are higher than 0.7 (Hair et al., 2013), and the values of AVE are higher than 0.5. The convergent validity also meets the criteria because the loading range values of all the indicators are higher than 0.7. It means that all indicators in the reflective constructs are valid in measuring the constructs.

The validity of the research instrument is also assessed based on the results of the discriminant validity test. Discriminant validity is carried out to ensure that each concept of each latent variable is different from other variables. The Fornell-Lacker criterion approach is used by comparing the average variance extracted (AVE) roots with the correlation between latent/construct variables (Sholihin & Ratmono, 2021). Based on the Fornell-Lacker criterion approach, the model has good discriminant validity if the AVE root value of each exogenous construct exceeds the correlation between that construct and other constructs. Table 3 shows that the AVE root values of all constructs (diagonal values) consistently exceed the correlation between constructs, which means that all indicators in the reflective constructs meet the required discriminant validity criteria.

After evaluating the measurements, the next stage of the SEM-PLS analysis is to evaluate the structural model by looking at the fit goodness. The fit goodness is presented in Table 4. It shows that all criteria, including Average Path Coefficient (APC), Average R-Square (ARS), Average Adjusted R-Square (AARS), Average Block VIF (AVIF), Average Full Collinearity VIF (AFVIF), and Tenenhaus GoF met the criteria (Kock, 2022) so the causal relationship analysis can be continued.

Table 2. Respondent demography profiles

Variable	Category	Frequency	Percentage
Gender	Male	107	65.2%
	Female	57	34.8%
Age	25–35 years	7	4.3%
	35–45 years	103	62.8%
	45–50 years	46	28%
	>50 years	8	4.9%
Education	Bachelor	137	83.5%
	Graduate	27	16.5%
Years of service	5–10 years	3	1.8%
	10–15 years	41	25%
	>15 years	120	73.2%
Team Role	Leader	133	81%
	Technical controller	31	19%

Table 3. The results of reliability and convergent validity tests

Variables	Number of indicators	Composite reliability	Cronbach Alpha	AVE	Loading range
Objectivity	8	0.963	0.956	0,875	0.841–0.925
Competence	9	0.943	0.932	0.805	0.757–0.807
Work performed	5	0.961	0.950	0.912	0.878–0.934
Reliance	1	1.000	1.000	1.000	1.000
Audit efficiency	1	1.000	1.000	1.000	1.000
Institutional environment	1	1.000	1.000	1.000	1.000
IE*REL	1	1.000	1.000	1.000	1.000

The test results of the research model using WarpPLS version 8.0 software are presented in Figure 2, which shows the standardized path coefficient, p-value and determination coefficient of R-Squared.

The test results of the research model show that the five hypotheses proposed in this study are statistically confirmed. The summary of the results of hypothesis testing is presented in Table 5.

Table 5 shows that the three characteristic attributes of APIP auditors (objectivity, competence, and work performed) have a positive and significant influence on the level of BPK auditors' reliance on the APIP audit work.

First, the objectivity of APIP auditors is positively related to the level of BPK auditors' reliance on the APIP audit work. One standard deviation of an increase in APIP objectivity increases the 0.198 level of BPK auditors' reliance ($p < 0.01$). The result of this study supports the previous studies by Suwaidan and Qasim (2010) and Al-Sukker et al. (2018) reporting that the objectivity of internal audit function has the most significant positive influence on external auditor decisions to rely on the work of the internal audit function. This finding is also in line with other studies which concluded that objectivity is a factor that influences the level of external auditors' reliance on the work of internal auditors (Desai et al., (2017); Haron et al., (2004); Krishnamoorthy, (2002); Mihret & Admassu, (2011); Obeid, (2007)).

Second, the competence of APIP auditors is also related to the level of BPK auditors' reliance on the APIP audit work, where one standard deviation of an increase in APIP competence increases 0.132 level of BPK auditors' reliance ($p = 0.04$). The result of this study supports several previous studies which stated that the higher the competence of the internal auditors, the higher the level of external auditors' reliance on the internal audit work (Al-Sukker et al., (2018); Desai et al., (2017); Haron et al., (2004); Krishnamoorthy, (2002); Obeid, (2007); Regoliosi & Martino, (2019); Suwaidan & Qasim, (2010)).

Third, the work performed by APIP auditors is also found to be positively related to the level of BPK auditors' reliance. The output of WarpPLS 8.0 software shows that one standard deviation of an increase in work performed can increase 0.446 level of BPK auditors' reliance ($p < 0.001$). The finding of this study is in line with the result of a study by Hamdallah (2020) reporting that the work performed is the factor that has a more significant influence compared to competence and objectivity factors. Furthermore, the finding is also in line with the finding of previous studies which stated that the work performed affects the level of external auditors' reliance on internal audit work (Al-Sukker et al., (2018); Desai et al., (2017); Mihret & Admassu, (2011); Quick & Henrizi, (2019); Suwaidan & Qasim, (2010)).

Table 4. Constructs of discriminant validity

Variable	Objectivity	Competence	Work performed	Reliance	Audit efficiency	Institutional environment	IE*REL
Objectivity	(0.875)	0.556	0.551	0.461	0.130	0.240	-0.281
Competence	0.556	(0.805)	0.668	0.597	0.212	0.280	-0.279
Work performed	0.551	0.668	(0.912)	0.653	0.359	0.187	-0.153
Reliance	0.461	0.597	0.653	(1.000)	0.342	0.258	-0.348
Audit efficiency	0.130	0.212	0.359	0.342	(1.000)	-0.148	0.445
Institutional environment	0.240	0.280	0.187	0.258	-0.148	(1.000)	-0.336
IE*Reliance	-0.281	-0.279	-0.153	-0.348	0.445	-0.336	(1.000)

Figure 2. The test results of the research model.

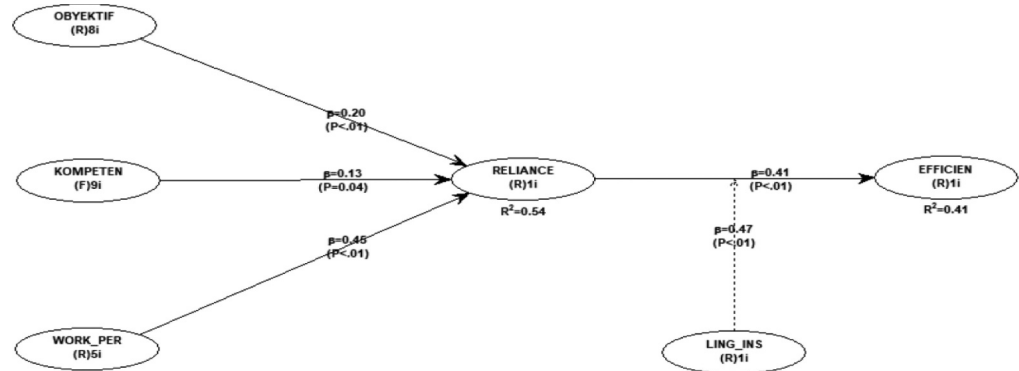


Table 5. Model fit and quality indices

Model fit and quality indices	Value	Sign	Rule of thumb	Conclusion
Average path coefficient (APC)	0.331	$P < 0.001$	$P\text{-value} < 0.05$	Fit
Average R-squared (ARS)	0.474	$P < 0.001$	$P\text{-value} < 0.05$	Fit
Average adjusted R-Squared (AARS)	0.466	$P < 0.001$	$P\text{-value} < 0.05$	Fit
Average block VIF (AVIF)	2.979		≤ 5	Fit
Average full colinearity VIF (AFVIF)	2.003		≤ 5	Fit
Tenenhaus GoF	0.650		small > 0.1 medium ≥ 0.25 large ≥ 0.36	Fit

Furthermore, the current study finds a positive relationship between the BPK auditors' reliance and audit efficiency. The data in Figure 2 and Table 6 show that one standard deviation of an increase in the level of BPK auditor's reliance increases 0.409 level of audit efficiency ($p < 0.001$). This data indicates that the higher the level of BPK auditors' reliance on APIP audit work, the higher the efficiency level of auditing local government financial reports. This finding supports some previous studies by Suwaidan and Qasim (2010), Endaya (2014) and Argento et al. (2018) reporting that coordination and cooperation between external and internal auditors influence audit efficiency and effectiveness (increase audit effectiveness and reduce audit costs).

Analysis of multigroup is performed to examine categorical moderating variables. Based on the results of the multigroup analysis shown in Table 7, there are statistically significant T and p values which are obtained using both the pooled standard error method and the Satterhwaite method. Thus, it can be concluded that there is a significant difference in the path coefficient of the level of auditors' reliance on audit efficiency between district government respondents and city government respondents. This shows that the institutional environment is a moderating variable. Thus, it can be interpreted that the institutional environment where BPK auditors carry out audits of financial reports strengthens the influence of the level of BPK auditors' reliance on APIP audit work on the audit efficiency. The results of this study support previous empirical studies stating that in a stronger institutional environment, the influence of external auditors' reliance on the level of audit efficiency will be stronger (Abbott et al., (2012); Argento et al., (2018); Endaya, (2014)). The results of this study are also in line with other studies reporting that the institutional environment

Table 6. Hypothesis testing

Hypothesis	Parameter (β)	P-value	Conclusion
Objectivity \rightarrow Reliance	0.198	0.004	Confirmed
Competence \rightarrow Reliance	0.132	0.042	Confirmed
Work Performed \rightarrow Reliance	0.446	<0.001	Confirmed
Reliance \rightarrow Audit Efficiency	0.409	<0.001	Confirmed
Reliance*Intititutional Environment \rightarrow Audit Efficiency	0.468	<0.001	Confirmed

Table 7. Analysis of multigroup

Inputs		
N1	128	(District Government size)
N2	36	(City Government size)
Beta1	0.2730	(District Government beta, or path, coefficient)
Beta2	0.6630	(City Government beta, or path, coefficient)
SE1	0.0830	(District Government standard error)
SE2	0.1050	(City Government standard error)
Outputs: Pooled standard error methd		
Tm	2.7322	(T value for multi-group difference effect)
Pm	0.0035	(P value for multi-group difference effect, one-tailed)
Pm'	0.0069	(P value for multi-group difference effect, two-tailed)
Outputs: Satterthwaite method		
Tm	2.9139	(T value for multi-group difference effect)
Pm	0.0020	(P value for multi-group difference effect, one-tailed)
Pm'	0.0040	(P value for multi-group difference effect, two-tailed)

influences the decision to give an opinion by auditors (Chan et al., 2010; Arena et al., 2006; Zahra and Chariri, 2013).

5. Discussion and conclusion

This study finds that the three characteristics of internal auditors, which are objectivity, competence and work performed, are positively related to the BPK auditors' reliance on APIP audit work in conducting audits of local government financial reports in Indonesia. These findings of this study support the source credibility theory which states that a person may be more easily persuaded if the source is credible, and credibility increases in line with the increased objectivity. BPK auditors, who assess that APIP auditors are objective, will more easily believe the information provided by APIP auditors. Oppositely, when BPK auditors assess that APIP auditors are less objective, the BPK auditors are difficult to be persuaded and doubt the information from APIP auditors, so they are reluctant to rely on this information in their decision-making process. The findings in this study are also in line with the source credibility theory which explains that competence is an essential

construct in assessing the level of trust in information sources. The communicant will trust the information source more and will tend to accept the message conveyed if the information source has competence in his field (Hovland et al., 1953). In the context of auditing local government financial reports, the BPK auditors will more easily trust and use the results of APIP audit work to facilitate their audits, if the BPK auditors assess that the APIP auditors' competency is good.

The empirical facts of this study indicate that at a practical level, from the three characteristic aspects of APIP auditors, BPK auditors consider that the work performed is the essential aspect to be considered in determining the level of reliance on APIP audit work in auditing local government financial reports. It means that BPK auditors pay great attention to the work performed aspect of APIP auditors, which describes the APIP audit work process in terms of documentation completeness, the quality of working papers, audit scope and supervision processes.

Furthermore, when the BPK auditors' assessment of the characteristic attributes of APIP auditors is positively related to the level of BPK auditors' reliance, it will positively influence the audit efficiency. An increase in the level of BPK auditors' reliance on APIP audit work increases the efficiency of audits of the local government financial reports. These findings support the relational coordination theory which explains the importance of coordination and interaction relationships between lines within an organization to achieve work efficiency. The relational coordination theory states that in a work environment that faces a high level of dependence, limited time and uncertainty conditions, the relational coordination will increase the effectiveness and efficiency of work results through intense communication between actors (Gittel, 2011). The utilization of internal audit work by external auditors is a form of synergy between external and internal auditors in the inspection of financial reports, both physically and through documents whose results can be used by external auditors for decision-making.

Finally, the results of this study show that the institutional environment where the BPK auditors conduct audits of financial reports strengthens the influence of the level of BPK auditors' reliance on audit efficiency. In other words, auditors in a stronger institutional environment tend to have better audit efficiency than auditors in a weaker institutional environment. These findings are in line with the institutional theory which states that organizations are shaped by the institutional environment that surrounds them (DiMaggio & Powell, 1983). Therefore, the behaviour of organizational actors or decisions taken within the organization is influenced by the institutional environment where the organization is located (Scott, 2014).

6. Research implications

This study is expected to broaden the body of knowledge in the field of accounting and auditing, by developing a conceptual framework for the coordination relationship between external and internal auditors referring to relational coordination theory, source credibility theory and institutional theory. The results of this study prove that relational coordination between the two government audit functions (BPK and APIP) can provide benefits, namely the efficiency of carrying out financial report audits through the avoidance of repetitive work. In addition, the operationalized credibility of the internal auditors in the form of competence, objectivity, and quality of work results will have implications for the external auditors' assessment that the audit evidence comes from more trusted and reliable sources and provides higher diagnostic values. Thus, this study is expected to be a reference for future researchers who focus on coordination and collaboration between external and internal auditors by increasing the relational coordination between the two audit functions.

For practitioners, understanding the interaction between BPK and APIP auditors is expected to contribute to the development of government audits, especially in optimizing the role of the two audit functions in realizing good governance and clean government. The findings of this study are expected to provide input for the governments in formulating strategies and policies to increase synergy between the two government audit functions in order to strengthen their respective roles

in implementing audits of government institutions in Indonesia because until now the role of government audit institutions in Indonesia is considered not optimal which is indicated by the large number of corruption cases involving government officials, and the high number of BPK findings related to weaknesses in the government internal control system.

7. Limitation and future study directions

This study has several limitations, including (1) This study uses categorical variables, namely a strong institutional environment and a weak institutional environment. The city government environment is classified as a strong institutional environment because it has higher economic activity, financial market developments, and a law enforcement framework than the district government environment. This can lead to bias in the results of this study because, with the potential that exists in several districts, these regions may have a higher level of economic activity than certain city governments. (2) This study does not analyse in more depth how much the efficiency level is obtained from the use of the APIP audit work by BPK auditors and the difference in the level of audit efficiency between the city governments and district governments, so this study cannot provide a quantitative picture of the difference in the level of audit efficiency resulting from the utilization of APIP audit work by BPK auditors.

For further study, researchers can use more measurable indicators for institutional environment variables, for example, the level of Local Own Revenue, Gross Regional Domestic Product, education level, availability of health service facilities, and public service facilities as indicators for classifying strong and weak institutional environments. Future researchers can analyse in more depth how much the level of audit efficiency is obtained by utilizing the APIP audit work by BPK auditors. It can provide a real picture related to the benefits of conducting audits effectively through the synergy between the two audit functions. Further study needs broader samples by involving all BPK audit team members to see if there are differences in perceptions between audit team members and audit team leaders because sometimes audit members are more directly involved in fieldwork and interact directly with their audit counterparts.

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