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Saeful Hikam
SBM ITB

Yunieta Yunieta
SBM ITB

Muhammad Rizkarmen

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Audit Opinion and Fraud in Local Government: Case of Indonesia

Saeful Hikam¹, Yunieta Anny Nainggolan², Muhammad Rizkarmen³

School of Business and Management ITB^{1,2,3}

saeful_hikam@sbm-itb.ac.id¹, yunieta@sbm-itb.ac.id², muhammad.rizkarmen@bpk.go.id³

Abstract. This paper aims to examine the relationship between government audit opinion and fraud in local government in Indonesia. We utilize logistic regression analysis to test the hypothesis using a sample of 28 local governments in West Java province in periods of the fiscal year 2012 to 2017. This study finds that audit opinion significantly affects the fraud. There is a strong relationship between audit opinion and fraud. Moreover, the unqualified opinion awarded by The Audit Board of the Republic of Indonesia (BPK RI) to local government represented the real condition of local governments in their good governance and accountability. This finding is also robust when we measure fraud by other proxies namely penalty and state-loss. This study provides a useful suggestion for state audit institution namely BPK RI regarding the importance of regular government auditing. Follow-up the audit recommendations play an important role in improving internal control effectiveness, accountability, governance, and transparency. This improvement will reduce the level of fraud in local governments. This study not only fills the gap of few literature on how to reduce fraud by considering the role of auditing but also measures the important role of government auditing in reducing and preventing fraud.

Keywords: audit opinion, fraudulent financial statement, local government

Abstrak. Penelitian ini bertujuan untuk menguji hubungan antara opini audit pemerintah dan kecurangan di pemerintah daerah di Indonesia. Kami menggunakan analisis regresi logistik untuk menguji hipotesis menggunakan sampel dari 28 pemerintah daerah di provinsi Jawa Barat pada periode tahun fiskal 2012 hingga 2017. Kami menemukan bahwa opini audit secara signifikan mempengaruhi kecurangan. Terdapat hubungan yang kuat antara opini audit dan kecurangan. Selain itu, pendapat Wajar Tanpa Pengecualian yang diberikan oleh Badan Pemeriksa Keuangan Republik Indonesia (BPK RI) kepada pemerintah daerah dapat mencerminkan kondisi nyata pemerintah daerah dalam tata kelola dan akuntabilitas yang baik. Model yang kami kembangkan secara konsisten dapat mengukur kecurangan dengan mengganti variabel dependen menjadi denda dan nilai kerugian negara. Penelitian ini memberikan saran yang berguna untuk lembaga pemeriksaan negara yaitu BPK RI tentang pentingnya audit pemerintah yang berkesinambungan. Tindak lanjut rekomendasi audit memainkan peran penting dalam meningkatkan efektivitas pengendalian internal, akuntabilitas, tata kelola, dan transparansi. Peningkatan ini akan mengurangi tingkat penipuan di pemerintah daerah. Penelitian ini tidak hanya mengisi kesenjangan beberapa literatur sebelumnya tentang bagaimana mengurangi kecurangan dengan mempertimbangkan peran audit tetapi juga mengukur peran audit pemerintah dalam mengurangi dan mencegah kecurangan.

Kata kunci: Opini Audit, Kecurangan Laporan Keuangan, Pemerintah Daerah

INTRODUCTION

The regional government is responsible for realizing the country's goal of achieving a just, developed and prosperous society as mandated in the opening of the 1945 Constitution. To achieve this goal, the government plans the work plan of the budget, approves the regional revenue and expenditure budget together with the Regional House of Representatives, runs the regional revenue and expenditure budget, and is responsible for the implementation of the regional revenue and expenditure budget in the form of local government financial reports. In the implementation of regional revenue and expenditure budgets, local governments must pay attention to the principles of regional finances which include accountability, professionalism, proportionality, openness, and financial audits by independent auditing bodies (Law of The Republic of Indonesia Number 17 of 2003).

Local government financial statements present the

use of regional income and expenditure budget that has been implemented by the local government in one fiscal year. Regional governments in implementing the budget are inseparable from the risks of irregularities in various forms of fraud such as corruption, bribery, and embezzlement (Law of The Republic of Indonesia Number 20 of 2001).

To ensure that the government is free from fraud, the Supreme Audit Board is mandated in Law Number 15 of 2006 concerning the Supreme Audit Board to examine the management and responsibilities of state finances which include financial audits, performance audits, and audits for specific purposes.

The financial audit aims to assess the fairness of the financial statements which explained in the form of audit opinion determined by BPK RI (BPK). In determining audit opinion, BPK consider compliance with government accounting standards, adequate disclosure, compliance with law and regulations, and effectiveness of the internal control system.

This study aimed to examine whether the audit opinion issued by BPK could determine the fraud in local governments. Most of the fraud detection study was conducted in the private sectors (Dalnial, et al. 2014; Kaminski, et al. 2004; Kuncoro & Henderson, 2004; McCarten, et al. 2016; Skousen, et al. 2008; Yu & Yu, 2011). Meanwhile, to the best of our knowledge, there were limited studies on detecting fraud in the context of the public sector. Arifin, et al. (2015) studied whether poor local governance leads to higher non-compliance cases as a proxy of corruption of local governments in Indonesia. They found that poor governance of local governments head to higher non-compliant cases. This result is similar to the study by Ghazali, et al. (2014). More specifically, they demonstrated the fewer non-compliant cases in local government with unqualified audit opinion. In addition to that, interestingly, they also found that corruption does not affect economic growth (Arifin et al., 2015).

Avalon, et al. (2018) analyzed the effect of corruption committed by the district head on BPK audit opinion. They found a correlation between corruption committed by district head and BPK Audit Opinion. Thus, auditors should carefully determine audit opinion based on the fraud found in the audit field whether to modify the unqualified opinion or not (Avalon et al., 2018).

Other studies measured the relationship between audit opinion and fraud in the government institution. Kusuma, et al. (2017) study the influence of fraud diamond on fraudulent financial reporting of the public sector. Fraud diamond consists of pressure, opportunity, rationalization and capability. Audit opinion variables in this study used as a proxy of rationalization. They found that audit opinion has no positive effect on fraudulent financial reporting. After that, Astuti & Adrison, (2019) study the relationship between audit opinion and fraud which was proxied by bribery case. They found unrelated significance between audit opinion and bribery case because the bribery is personal type of corruption and was not documented.

Studies on how to reduce fraud by considering the role of auditing is still lacking (J. Liu & Lin, 2012). Moreover, studies in examining the relationship between government and auditing were still limited and none of those studies explain the role government auditing in curbing the corruption (Blume & Voigt, 2011; J. Liu & Lin, 2012; Olken, 2007).

In this study, we measure the effectiveness of audit opinion in explaining the fraud. Moreover, we also measured how the audit opinion determined by BPK able to present the real condition of the local government. As expected by the public that the local government's unqualified opinion means fraud-free organization. We will examine whether the audit opinion able to meet public expectations. We will utilize the fraud case that had been decided by the court which was not considered in the previous studies

(Arifin et al., 2015; Avalon et al., 2018; Sutaryo, et al. 2018). Fraud in this study proxied by the fraud case, the amount of state-loss and the penalty determined by the court. We focus this study in period of 6 fiscal years from fiscal year (FY) 2012 to FY 2017 in the regency, municipal and provincial government in the scope of West Java province.

We also utilize finance ratios of audited local government financial statements as the control variables representing the financial condition of local government in a fiscal year. Financial condition is the government institutions ability to keep its sustainability in giving service and goods to the public (Nollenberger, et al. 2003). Financial ratio plays an important role in measuring the financial condition of government institutions namely its solvency, independency, flexibility and efficiency. To the best of our knowledge, there are no previous study utilizing these set of financial condition ratios. So in this study we will utilize these variable sets as control variables in examining the relationship between audit opinion and fraud.

This study fills the gap in preventing and detecting fraud by measuring the suitability of BPK's audit opinion with the actual conditions in the regional government. To prove the ability of audit opinion in detecting fraud, utilizing the fraud that is legally binding, we evaluate whether audit opinion reflect the fraud level of organizations. We measure this relationship by utilizing financial condition ratios as control variables. We also utilize two measurements other than fraud case such as the amount of state-loss and penalty to make sure the robustness of the model developed.

In recent years the literature aspect in preventing and detecting fraud tends to be separately published. We may find it easier to search for study, research, and publications related to the investigation and detection of fraud than the research on how to prevent it. Zack, (2013) gives solid advice on how to uncover financial statement fraud schemes. Petrucelli, (2012) has a mission in his book to make learning about fraud both fun and easy through cartoons, pictures, and humor to express techniques, tools, and resources to detect fraud in organizations. Moreover, the theory includes the steps of a proactive approach in responding to fraud risk and fraud audit program (Manning, 2011; Vona, 2008) and utilizing data to digital evidence (Marcella Jr & Guilloso, 2012).

Most of those works of literature only concern about the actions of fraud rather than its prevention. Nevertheless, we still can find literature that discuss fraud prevention and detection (Biegelman & Bartow, 2012; Kovacich, 2008; Stamler, et al. 2014). So, this study is not only to try to fill the gap but also provides the two aspects in one research.

A study on fraud prevention and detection is becoming more essential in auditing literature as the fraudster becomes more sophisticated in hiding the fraud. Local government fraud will lead to huge

state-loss and decreasing public trust in government public officials. Fraud will impair efficiency, productivity, and innovation that will make the resource is not effectively allocated into public services (Ghazali et al., 2014). In addition, corruption as a scheme of fraud is a significant problem that harms the economic development, social stability of many countries (J. Liu & Lin, 2012) and public dissatisfaction to the government (Tang, et al. 2018).

Findings show that audit opinion has a significant relationship with fraud in the scope of West Java province. An unqualified opinion of local government's financial statements significantly represents an organization that is free from material fraud and corruption.

This study contributes to the accounting and auditing literature specifically in fraud prevention and detection, internal control, and good governance. Specifically, we contribute to audit literature in exploring the ability of audit opinion reflecting the fraud level in government organizations. Furthermore, this study contribute to the literature the role of financial condition ratio in measuring the relationship between audit opinion and fraud. This study also contributes to the better practice of audit institution in improving the effectiveness of government auditing in reducing and preventing fraud. the findings of this study are expected to help policymakers whether their audit procedures are able to meet the expectation of assignment and public expectation. The remainder of this paper is organized as follows. Hypotheses are developed in the next part before subsequently followed by sections on research methods, results and discussion, and conclusion.

Literature Review and Hypothesis Development

Fraudulent financial statement research in the worldwide context continues to grow, where most of them focus on fraud cases in private sectors. In the context of developed country, Kaminski et al., (2004) examined the ability of financial ratios in detecting fraudulent financial reports. They found the ineffectiveness of financial ratios to detect fraudulent financial statement (Kaminski et al., 2004). Skousen et al. (2008) fixed high misclassification rates in Kaminski et al. (2004) using Cressey's (1953) framework that comprises of pressure, opportunity and rationalization adopted from SAS No. 99 to detect fraud. They found the effectiveness of Cressey's (1953) framework in detecting fraud (Skousen et al., 2008). However, a study in emerging country by Dalnial et al (2014) shows the relationship between financial ratio and fraudulent financial statement in Malaysian firms. They found that financial ratios were helpful in fraudulent financial statement detection (Dalnial et al., 2014).

Yu and Yu (2011) examined the relationship between corporate lobbying and fraud detection. They found that regulators need a longer time to detect fraud in lobbying firms. Such delays make the firms potentially experience greater loss (Yu & Yu, 2011).

McCarten et al. (2016) also studied the relationship between corporate lobbying and fraud detection. They found similar result with Yu and Yu (2012) that lobbying firms were able to hide the misconduct in a longer time. In addition, McCarten (2016) found that after 2005, lobbying was not impacting the longer duration in detecting fraud. They argue that the establishment of SOX rules has effectively reduced the influence of lobbying companies in hiding fraud for longer (McCarten et al., 2016).

In the context of the public sector, J. Liu and Lin (2012) examine the role of China's government auditing in corruption control. They found a positive relationship between fraud detection in audit and corruption levels of local government. Moreover, they found that the follow up of the audit results is negatively related to the level of corruption. The better a local government fixes a control weakness that causes fraud, the lower the level of corruption (J. Liu & Lin, 2012).

Ghazali et al. (2014) conducted a survey to provide an overview of local government fraud cases in the context of the Malaysian government. They found that most fraud cases are misappropriation of funds and manipulation of accounts. Furthermore, they found that fraud detected mostly through the auditing process (Ghazali et al., 2014).

In the context of Indonesia, Arifin et al. (2015) studied whether poor local governance leads to higher non-compliance cases as a proxy of corruption of local governments in Indonesia. Using data for 446 municipal/district over 2008 until 2010 period they find that poor governance head to higher non-compliant cases in both financial distress and non-distress region. More specifically, they revealed the fewer non-compliant cases in local government with unqualified audit opinion. Good local governance and strong internal control system contribute to minimizing the possibility of fraud committed by a public official (Arifin et al., 2015).

Fraud detection utilizing the fraud triangle framework by Cressey (1953) was conducted by Maria & Gudono (2017) in local government in Indonesia. They modified some proxies of Skousen et al (2008) so that it may be applied in public sector context. Pressure proxied by budget performance ratio and the ratio of regional independence. Opportunities proxied by the number of Regional Work Unit and population. Rationalization observed directly from the auditee responses to the finding, conclusion, and recommendations of the audit report. They focus the study in the fiscal year of 2013 to 2014 and fraud data in period of 2012 to 2013. Applying factor analysis and then logistic regression they found that Cressey's fraud triangle theory had a positive influence on fraud in local governments in Indonesia. Proxies that useful in detecting the occurrence of fraud are the performance ratio of the budget, the ratio of local independence and the number of SKPD, population, the auditee responses to the findings, conclusions, and recommendations of

audit (Maria & Gudono, 2017).

Sutaryo et al (2018), utilizing the fraud triangle framework of Cressey (1953), tried to detect the fraud in local government in Indonesia. They used performance accountability and regional income as a proxy of pressure, e-government, and internal audit capabilities as a proxy of opportunity, and audit result response and public officials wage as the proxy of rationalization. Applying the multiple linear regression in finding the effect of performance accountability, regional income, e-government, internal audit capabilities, audit response, and public officials wage on corruption in local government in the fiscal year of 2010 to 2013, they found that performance accountability and public official wage have a negative effect on corruption. Besides that, corruption is positively affected by audit response. Meanwhile, there is no relationship between regional income, e-government, internal audit capabilities and corruption (Sutaryo et al., 2018).

Furthermore, study in measuring the relationship between audit opinion and fraud in government institution was limited and conducted with some approaches. Kusuma, et al. (2017) utilized fraud diamond framework (fraud triangle + Capability) to measure the fraudulent financial reporting of the public sector which is proxied by the BPK audit opinion. Fraud diamond framework is explaining the conditions that cause someone to commit fraud. Fraud diamond consists of pressure, opportunity, rationalization and capability. In their study, pressure was proxied by the percentage of budget realization, opportunity was proxied by income transfers from the central government and audit findings of internal control systems, rationalization was proxied by the previous year non-unqualified opinion and capability was proxied by changes of the head district. Utilizing the data of BPK's audit reports of FY 2014 and FY 2015, they found that pressure factors have a negative effect on fraudulent financial reporting, while opportunity and capability factors have a positive effect on fraudulent financial reporting. Meanwhile, pressure factors that proxied by previous year non-unqualified opinion have no significant effect on fraudulent financial reporting. They argued that field audit instrument such as an interview with a suspected perpetrator of fraud is the best way to find the rationalization of fraud (Kusuma et al., 2017).

In addition, Astuti & Adrison (2019) study the relationship between audit opinion and fraud which was proxied by bribery case that have been proved and decided by the Corruption Eradication Commission (KPK) in the period of FY 2008 - 2017. They found unrelated significance between audit opinion and bribery cases because the bribery is personally type of corruption and was not documented. Furthermore, they found that the increase of capital expenditures were significantly affect the bribery case (Astuti & Adrison, 2019).

The definition of audit quality in the literature of

classic audit theory is the possibility of auditor will both discover and report an infringement in the client's accounting system (Deangelo, 1981). Government auditing can improve the transparency of public policies and reduce wasteful spending (Blume & Voigt, 2011; Schelker & Eichenberger, 2010). Olken (2007) conducted a field experiment to examine the effect of Indonesia's government auditing on reducing corruption in over 600 Indonesian village road projects. They found the negative relationship between the government auditing and corruption, that the higher audit frequency will decrease the corruption probability (Olken, 2007). The government auditing by the state supreme audit institution can prevent government officials from corruption (Li, Miao, & Liang, 2011) and also can reveal corrupt activities in local government (Ferraz & Finan, 2008, 2010).

The supreme audit institution plays an important role in conducting the field audit to meet effective government accountability. The state supreme audit institution's mandate, independence, and institutional environment contribute to the strong influence in their effectiveness (Blume & Voigt, 2011) supported by the educational background, experience, and professional competence of auditors (Shuguang, 2007). Auditors have an important role in fraud detection and corruption control as they have been familiar with the financial governance and accounting system (Gong, 2010). These experiences help auditors to discover and to report a breach.

Corruption is defined as the abuse of public power for personal interest (J. Liu & Lin, 2012). There is a well-known proposed model in defining corruption whereas Corruption equals to monopoly power plus discretion minus accountability (Klitgaard, 1998). So that corruption is the combination of the excessive power of public officials, with a lack of supervision, and poor accountability. Poor management control is the main factor that contributes to fraud (Ghazali et al., 2014).

The findings of irregular and illegal activities in government auditing conducted by the highly independent and highly technical and impartial of audit institution, basically is a good reflection of fraud problem in the public financial sector (Ferraz & Finan, 2008; J. Liu & Lin, 2012; Melo, Pereira, & Figueiredo, 2009). Although the audit bodies independence could be negatively affected by political competition and frequency of power alternation (Melo, et al. 2009), corruption cases reveal through the audit process can affect the results of general elections (Ferraz & Finan, 2008, 2010).

It is expected that the audit opinion as a result of the financial audit can describe the actual condition of the government in terms of compliance with government accounting standards, the adequacy of disclosure, compliance with the law, and the effectiveness of the internal control system. Unqualified opinion as the best audit opinion given to local government when its financial statement is free from

material misstatements and fraud. So, the unqualified audit opinion should be a guarantee of a material fraud-free organization.

Most of the previous study mentioned above was analyzing the role of auditing in detecting (Ferraz & Finan, 2008, 2010; Ghazali et al., 2014; J. Liu & Lin, 2012; Maria & Gudono, 2017; Olken, 2007; Sutaryo et al., 2018) and preventing (Li et al., 2011) the fraud. To the best of our knowledge, we found only (Arifin et al., 2015) that found fewer fraud in an unqualified audit opinion of local government. So, there were limited studies in measuring the ability of audit opinion in reflecting the level of fraud in local government. Meanwhile, the best audit opinion namely unqualified opinion (WTP) is expected to meet the public expectation that able to reflect the free fraud government organization.

In this study, we will focus our study in measure the role of audit opinion in reflecting the fraud level of local governments. As audit opinion is the last examination result of accounting data of local government financial statement, we will utilize financial ratios of financial statement to control the relationship between audit opinion and fraud. We adopt the financial ratios from study by Ritonga (2014).

Ritonga (2014) developed a formulation to measure and evaluate the financial condition of government institution. This formulation will be not only a guidance, but also an early warning system for local government in evaluating their financial policy. Financial condition of local government consists of short-term solvency, budgetary solvency, long-term solvency, service-level solvency, financial flexibility, financial independency and regional efficiency ratio (Ritonga, 2014).

Moreover, Ritonga, 2014 defined the financial condition terms as follow:

(a) Short-term solvency as the ability of local government to fulfil short-term obligations; (b) Budgetary solvency is the ability of local government to fulfil operational obligations; (c) Long-term solvency is the ability of local government to fulfil long-term obligations; (d) Service-level solvency is the ability of local government to supply services and goods to the public; (e) Financial flexibility is the ability of local government to get over unexpected events in the future; (f) Financial independency is the ability of local government to execute financial rights in an effective and efficient manner; (g) Regional efficiency ratio illustrates the efficiency of costs incurred to obtain original regional income.

Specifically, we will use audit opinion declared by the Audit Board of the Republic of Indonesia (BPKRI) and examine its relationship to fraud by utilizing financial ratios as control variables. Furthermore, this study will examine the capability of audit opinion given by BPK to local government in describing the real condition of local government that should be free from material misstatement and fraud. Therefore, we

expect that:

H1: Audit opinion has a negative relationship with fraud

RESEARCH METHOD

Data and Measurements

This paper utilizes the audit report of financial statements published by BPK in the scope of West Java Province. We considering West Java Province as our object of study not only because of the limited of manual data collecting from the massive data of financial report of local government in Indonesia, but also West Java Province as one of the province that has the most corruption cases in Indonesia (Avalon et al., 2018). The object of this study consists of 1 provincial government, 9 municipal governments, and 18 regency governments. The total objects examined in this study are 28 entities. We focus this study in the period of six fiscal years (FY) from FY 2012 to FY 2017 in the regency, municipal and provincial government in West Java. Therefore, in total we observe 164 financial reports.

Dependent Variable

We employ several dependent variables to measure fraud such as whether there is fraud case or not, the amount of state-loss, and the amount of penalty from the verdict of the Supreme Court of the Republic of Indonesia that available on the website of directory of final decisions <https://putusan3.mahkamahagung.go.id/>.

We limit the fraud cases to only cases that have been proven in court and have been decided by the judge in the period of FY 2012 to FY 2017. Based on the verdict of the Supreme Court of the Republic of Indonesia, we classify the local government as fraudulent and non-fraudulent local government. The measurement of fraudulent local government will be coded by one if the fraud exist and proved, otherwise zero. This coding based on judge's decision whether a fraud defendant must pay a fine and state-loss or must pay a fine with no state-loss.

More specifically, we used another proxy of fraud namely state-loss and penalty as a robustness check of our findings. State-loss and penalty is nominal value expensed and determined by the court as the effect of fraud act against the law. The measurement of state-loss and penalty is the nominal amount that generated from the verdict of the Supreme Court of The Republic of Indonesia. We define the state-loss referring to Law No. 15 of 2006 concerning the Supreme Audit Board that stated "State/Regional Losses are shortages of real, definite and substantial amounts of money, securities, and goods as a result of unlawful acts intentionally and neglectful." Furthermore, this definition is elaborated in the explanation of article 32 paragraph (1) of Law of The Republic of Indonesia Number 31, (1999) concerning Eradication of Corruption Crimes stated that what is meant by

"actually there has been a state financial loss" is a loss that can be calculated based on the findings of the authorized agency or accountant designated public (Law of The Republic of Indonesia Number 20, 2001). Meanwhile, penalty is fines in the form of monetary nominal value determined by a court judge for violating regulations or laws.

Independent Variables

We collect audit opinion data and financial ratios from BPK Financial Audit Reports on Regional Government Financial Reports for fiscal year of 2012 to 2017. There are 8 variables and 24 sub-variables of financial ratios.

Table 1. Independent Variables

Independent Variable & Control Variable	Abbreviations	Formula & Variables Description	Expected Sign	References
Audit Opinion	<i>WTP</i>	Scored 1 for not Unqualified Opinion, otherwise 0 (WTP).	<i>WTP</i> has a negative relationship to fraud that means WTP able to reflect the free-fraud organization	(Arifin et al., 2015; Avalon et al., 2018)
Short Term Solvency (STS)	<i>STSA</i>	(Cash and Cash Equivalent + Short-Term Investment) / Current liabilities The higher value of ratios, the more current assets are available to guarantee the short-term obligations and improving quality of short-term solvency.	<i>STSA</i> has a negative relationship with fraud	(Maria & Gudono, 2017; Nollenberger, et al. 2003; Ritonga, et al. 2014)
Budgetary Solvency (BTS)	<i>BTS4</i>	(Total Revenues - Special Allocation Fund Revenue) / (Total Expenditures - Capital Expenditures) The higher value of all ratios indicates a better ability of a local government to obtain revenue to cover its operating expenditure.	<i>BTS4</i> has a negative relationship with fraud	(Maria & Gudono, 2017; Nollenberger, et al., 2003; Ritonga et al., 2014)
Long-Term Solvency (LTS)	<i>LTSC</i>	Investment Equities / total Assets This ratio measures the portion of local government's total assets that is financed by its own resource. A higher value of this ratio means a higher ability of a local government to meet its long-term liabilities	<i>LTSA</i> has a negative relationship with fraud	(CICA, 1997; Nollenberger et al., 2003; Ritonga et al., 2014)
Service Level Solvency (SLS)	<i>SLSC</i>	Total Expenditures / Population The higher the ratio of total asset value per population, the better local government provides public services to its people	<i>SLSC</i> has a positive relationship with fraud	(Ritonga et al., 2014; Wang, et al. 2007)
Financial Flexibility (FFL)	<i>FFLD</i>	(Total Revenues - Special Allocation Fund Revenue) / Total Liabilities The higher value of this ratio demonstrates a higher level of local government flexibility to face extraordinary events, which could either come from internal sources or be external to the local government organization	<i>FFLD</i> has a positive relationship with fraud	(CICA, 1997; Ritonga et al., 2014)
Financial Independence (FID)	<i>FIDB</i>	Total Own Revenues (PAD) / Total Expenditures The larger the result of ratio, the better is the financial independence of local government	<i>FIDB</i> has a negative relationship with fraud	(CICA, 1997; Maria & Gudono, 2017; Ritonga et al., 2014)
Regional Efficiency Ratio	<i>RER</i>	Region Expenditures Realization / Region Revenue Realization Illustrates the comparison between the amount of costs incurred to obtain local revenue with the realization of the original regional income received.	<i>RER</i> has a negative relationship with fraud	(Maria & Gudono, 2017; Ritonga et al., 2014)

The financial ratio analysis of local governments variables will adopt the ratio analysis model that applied by Maria & Gudono (2017), Ritonga, et al. (2014), and Sutaryo, et al. (2018). Table 3.2 shows the independent variables used in this study:

To test our hypothesis, we run a logistic panel regression (Lim, Loh, & Shih, 2000) with model as follows:

$$\text{Logit}(F) = \left[\frac{P}{1-P} \right] = \beta_0 + \beta_1.WTP + \beta_2.STSA + \beta_3.BTSA + \beta_4.LTSC + \beta_5.SLSC + \beta_6.FFLD + \beta_7.FIDB + \beta_8.RER + \varepsilon$$

where F is a dummy of one if there is a fraud case in local governments in a fiscal year collected from

Table 2. Descriptive Statistics

Variable	Unit	N	Mean	SD	Min	Median	Max
<i>Fraud</i>	Binary	168	0.321	0.468	0	0	1
<i>State-Loss</i>	IDR	168	3.03e+08	1.36e+09	0	0	1.19e+10
<i>Penalty</i>	IDR	168	5.92e+07	1.45e+08	0	0	8.00e+08
<i>WTP</i>	Binary	166	0.47	0.501	0	1	1
<i>STSA</i>	Ratio	162	41.828	179.145	0.095	7.7	1,916.82
<i>BTSA</i>	Ratio	166	1.239	0.175	0.089	1.214	1.677
<i>LTSC</i>	Ratio	166	0.034	0.04	0	0.026	0.284
<i>SLSC</i>	Ratio	168	1,685,261	849,079	0	1,507,187	4,713,387
<i>FFLD</i>	Ratio	166	360.362	1,817.40	1.46	62.173	17,841.90
<i>FIDB</i>	Ratio	166	0.227	0.165	0.033	0.178	1.149
<i>RER</i>	Ratio	157	6.171	3.67	0.87	5.394	20.113

the verdict of the Supreme Court of the Republic of Indonesia, and zero otherwise. Other independent and control variables are defined in Table 1. For robustness, we also run OLS panel regressions by using state loss and penalty as alternative fraud measurements for the dependent variables.

RESULT AND DISCUSSION

Descriptive Statistics

Table 2 presents the descriptive statistic of all variables used in this study:

The descriptive statistics result show that the total observations of this study are equal to 168 objects. The dependent variable of fraud is a dummy variable with a minimum value of 0 and a maximum value of 1. On average, fraud case in the period of FY 2012 to FY 2017 equal to 0.47 that indicates as many as 47% or 79 financial report of local government got other than unqualified opinion. While the remaining 53% or 89 local government financial reports got an unqualified opinion. This condition illustrates the high risk of fraud in the implementation and accountability of state finances in the province of West Java.

The amount of state-loss in the period of FY 2012 to FY 2017 has a mean value of 303 millions with a maximum value of 11,900 millions and a minimum value of 0. The dispersion of state-loss data is high that showed by the standard deviation that equals to 1,360 millions. This showed a huge amount of state-loss as a result of fraudulent act against the law.

The amount of penalty in the period of 6 fiscal years has a mean value of 59.2 millions with the maximum value equal to 800 millions and a minimum value of 0. The standard deviation is high and equal

to 145 millions which is show the high dispersion in the amount of penalty of local governments during FY 2012 to FY 2017.

The amount of penalty in the period of 6 fiscal years has a mean value of 59.2 millions with the maximum value equal to 800 millions and a minimum value of 0. The standard deviation is high and equal to 145 millions which is show the high dispersion in the amount of penalty of local governments during FY 2012 to FY 2017.

WTP is a binary variable of audit opinion which is taking a value of one for local government with an unqualified opinion report, otherwise zero.

On average, STSA equals to 41.828 means that 1 IDR value of current liabilities guaranteed by 41.8 IDR of current assets. The average value is greater than the median value showed that the most of local governments current assets was able to guarantee their current liabilities. The lowest STSA equals to 0.095 which means current assets is lower than current liabilities. The highest STSA equals to 1,916.82 which is means the relatively better local governments current assets in guarantee current liabilities.

Budgetary solvency BTSA has the average value equals to 1.239 means that 1 IDR value of operating expenditure covered by 1.2 IDR of revenues. The average value is similar as that of median means that almost all of the local governments have similar ability to obtain revenue to cover its operating expenditures supported by low value of standard deviations. The lowest BTSA equals to 0.089 which is showed the inability of local government's revenue to cover operating expenditures. The highest BTSA equals to 1.677 which is relatively near to average value.

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LTSC has the average value equals to 0.034 means that only a few amounts of total assets that financed by own investment equities or long-term investments. This average value similar as standard deviation value and median value that showed almost all of the local governments has no sufficient investment equities to acquire assets. As a consequence, the local government has lower ability to meet its long-term liabilities due to limited long-term investment. The lowest value equal to zero is caused by some of local governments with zero value of investment equities. While the highest value equals to 0.284.

SLSC has the average value equals to 1,685,261 means that in average local governments have more than enough capability to provide public services and

goods to people. In serving 1 citizen local government need cost of 1,685,261 IDR expenditures in form of public services or goods. The lowest SLSC value equals to zero is caused by Pangandaran Regency is new autonomy which was starting its operation in FY 2014 while the highest SLSC value equals to 4,713,387.

FFLD has the average value equals to 360.362 means that 1 IDR of liabilities covered by 360 IDR revenue. This value demonstrates a good capability of local government flexibility to face extraordinary events, which could either come from internal sources or be external to the local government organization. The mean value is higher than the median value means that most of the local governments had a good flexibility to face extraordinary events. The lowest FFLD value equals to 1.46 while the highest value equals to 17,841.90.

On average, FIDB equals to 0.227 means that 1 IDR of expenditures covered by 0.227 IDR of its own revenues. This average value is relatively similar as both value of standard deviation and median. The lowest FIDB value equals to 0.033 and the highest values is equals to 1.149. These value shows that local governments have weak financial independence. Local governments relied heavily on sources of funding beyond their control or influence and have a high financial dependency on the central government.

On average, RER equals to 6.171 means that the

local government needs costs of 6 IDR to generate 1 IDR revenue. This average value is slightly above that of the median. This finding shows that local governments are relatively able to generate income efficiently. The lowest RER value equals to 0.87 while the highest value equals to 20.1.

The Relationship of Audit Opinion and Fraud

Table 3 shows the regression results for estimating the relationship of audit opinion and fraud.

This study aimed to investigate the relationship between the BPK audit opinion and fraud in local governments. Specifically, we evaluate the effectiveness of the financial audit field in assessing the financial statement of local government regarding the compliance with government accounting standards, adequate disclosure, compliance with law and regulations, and the effectiveness of the internal control system. It is expected that when local governments able to meet these four criteria, they will achieve the goal of state purpose which stated in the opening of the constitution of the Republic of Indonesia. This goal achievement also reflected in good governance, transparency, accountability, excellent public service, and free from material fraud. Finally, one of the measurements that represent good governance is audit opinion declared by BPK. Therefore, we expect that audit opinion is positively significant related to fraud.

Table 3 presents that audit opinion (WTP) may

Table 3. The Relationship of Audit Opinion and Fraud in West Java Province from FY 2012 to FY 2017

Variables	Fraud		Penalty		State-loss	
	Coef.	Odds Ratio	Coef.	Odds Ratio	Coef.	Odds Ratio
WTP	-1.106***	0.331	-0.969**	0.379	-1.129**	0.323
STSA	-0.014	0.986	-0.009	0.991	-0.031	0.969
B TSA	0.181	1.199	0.719	2.051	0.117	1.124
LTSC	-6.676	0.001	-3.220	0.039	-1.872	0.153
SLSC	-3.031e-07	0.999	-1.84e-07	0.999	-1.709e-07	0.999
FFLD	0.003	1.003	0.001	1.001	0.003	1.003
FIDB	-2.850*	0.058	-2.0004	0.135	-4.344*	0.013
RER	-0.170**	0.843	-0.120	0.887	-0.137	0.872
cons	1.958	7.088	0.114	1.120	1.36	3.822
N. Obs	153		153		153	
R-Square	0.0778		0.0550		0.0858	

Notes: The ***, **, and * represent p-values of 0.01, 0.05, and 0.10

explain the fraud case negatively significant at 1 percent level, consistent with our hypothesis. The WTP coefficient is negative (-1.106) indicates that the WTP negatively affect the fraud. Specifically, the fraud decreases when audit opinion is turn to unqualified opinion, vice versa. The WTP odds ratio is equals to 0.331 means that when the WTP is changes to unqualified opinion, the odds of fraud decrease by 66,9% (= 1 - 0,331) as compared to non unqualified opinion. This finding shows that financial statements of local

governments that obtain unqualified audit opinion is believed free from material misstatement and fraud.

Supporting our hypothesis, using penalty as an alternative measure of fraud, audit opinion is negatively significant in explaining fraud at 5% level. The WTP coefficient is negative (-0.969) indicates that the WTP negatively affect the fraud. Particularly, the penalty decrease 0.969 billion IDR when audit opinion is change to unqualified opinion. The WTP odds ratio is equals to 0.379 means that when the WTP is

turn to unqualified opinion, the odds of fraud decrease by 62,1% ($1 - 0.379$) as compared to non unqualified opinion. The result when using state-loss as the measure of fraud is also aligned with our hypothesis that WTP may explain the fraud negatively significant at 5% level. The WTP coefficient is negative (-1.129) indicates that the WTP negatively affect the fraud. Specifically, the state-loss decrease by 1.129 billion IDR when audit opinion is change to unqualified opinion. The WTP odds ratio is equals to 0.323 means that when the WTP is turn to unqualified opinion, the odds of fraud decrease by 67,7% ($= 1 - 0.323$) as compared to non unqualified opinion. In result, we find that audit opinion significantly affects the fraud. The results are consistent with Arifin et al. (2015). The findings extend previous study that found the significant relationship of the audit process and fraud (Ferraz & Finan, 2008, 2010; Ghazali et al., 2014; Li et al., 2011; J. Liu & Lin, 2012; Maria & Gudono, 2017; Olken, 2007; Sutaryo et al., 2018).

Discussion

This study finds that audit opinion significantly affects the fraud. When a local government accept an unqualified opinion of their financial statement, it is illustrating the success of the government in maintaining good financial governance with better transparency and accountability. In result they also able to prevent fraud possibility with effective internal control. This finding aligned with (Avalon et al., 2018) that the determination of audit opinion taking into account fraud cases found during the audit field process.

Based on the findings, the audit opinion declared by BPK able to reflect the fraud level of local governments. Furthermore, the field audit take an important role in revealing and preventing fraud in local governments (Ferraz & Finan, 2008, 2010; Ghazali et al., 2014; Li et al., 2011; Olken, 2007). Specifically, The BPK has effectively prevented the opportunity for corruption through issuing recommendations for improvement and sanctions for any findings of control weaknesses or findings of non-compliance with applicable laws and regulations. Based on these recommendations, the BPK also monitors the improvement process carried out by the regional government so that it can assist regional governments in realizing accountable and transparent state financial governance. Whereas the auditee response to the findings, conclusions and recommendations of audit is an important variable to prevent fraud in the future (Maria & Gudono, 2017; Sutaryo et al., 2018). This evidence also supports the previous study that found the positive relationship between fraud detected in audit and corruption level of local government (J. Liu & Lin, 2012).

Local government compliance in implementing BPK's recommendations on audit findings can increase the effectiveness of internal control and prevent material fraud. Under these conditions, local

governments can get the best opinion namely WTP from the BPK which illustrates the lack of material corruption cases. Thus, WTP opinion by BPK is in accordance with the conditions in the field and in accordance with public expectations that the regional government is free from material corruption cases (Arifin et al., 2015; Ferraz & Finan, 2008; J. Liu & Lin, 2012; Melo et al., 2009).

This study contributed to the literature in revealing the reflection ability of audit opinion declared by BPK in representing fraud level in local government institutions. Thus, audit opinion also can take a role as a fraud detection and prevention. As the previous study that evaluates the role of auditing to reduce and to prevent fraud is still scarce (Blume & Voigt, 2011; J. Liu & Lin, 2012; Olken, 2007). The examination of audit opinion regarding its ability to represent the government organization fraud level is still lacking as well. Furthermore, this study contribute to the literature in utilizing the financial condition ratios to measure the relationship between audit opinion and fraud.

Practically, the finding of this study also contributes to the better practice of the audit process conducted by BPK on evaluating their effectiveness in revealing and preventing fraud. Audit process starting from planning such as formulating audit procedures, conducting the audit procedures, applying audit procedures alternative if needed due to the condition in field audit, composing audit findings, measuring the materiality value of fraud, and determining audit opinion.

So, the audit opinion declared by the BPK seems to be able to reflect the real condition of fraud level in local governments. Furthermore, the findings of this study can provide advice and consideration in determining BPK audit strategies and policies in the future. This study also shows the ability of audit opinion in representing the government organization fraud level.

On control variables, The FIDB coefficient is equal to -2.850 and the FIDB odds ratio is equals to 0.058. This findings means that when FIDB is rise, the odds of fraud decrease by 94,2% ($1 - 0.058$). Moreover, this study finds that FIDB determines fraud negatively at marginal level, showing the effect of financial independence on fraud at 90% confidence level. Besides that, the RER coefficient is equals to -0.170 and the RER odds ratio is equals to 0.843. This findings means that when RER is rises, the odds of fraud decrease by 15,7% ($= 1 - 0,843$). Furthermore, RER negatively affects fraud at 95% confidence level. This implies the relationship between fraud and regional efficiency ratio. This finding is not similar with the previous study by Maria & Gudono (2017) which was found that the performance ratio of the budget and the ratio of local independence significantly affects fraud. Since there were thin previous studies on utilizing the finance ratio to detect the fraud in the public sector, our findings contribute to the body of literature in public sector fraud detections specifically by utilizing

financial performance conditions.

CONCLUSION

This paper not only supports previous literature but also complement the previous studies (Arifin et al., 2015; Avalon et al., 2018; Blume & Voigt, 2011; Ferraz & Finan, 2008, 2010; Ghazali et al., 2014; Li et al., 2011; J. Liu & Lin, 2012; Maria & Gudono, 2017; Olken, 2007; Schelker & Eichenberger, 2010; Sutaryo et al., 2018) by evaluating the relationship between audit opinion and fraud in local governments. Specifically, we aim to evaluate the role of government auditing in detecting and reducing fraud in local governments in the scope of West Java province.

This research examines the relationship between the audit opinion and fraud in local governments. We evaluate the ability of audit opinion declared by BPK in reflecting the real condition level of fraud in local governments institutions. Does the best audit opinion represents the free-material fraud in local government institutions? To answer these objectives research, we utilize a sample limited to all local governments in the scope of West Java province that consists of 1 provincial government, 9 municipal governments and 18 regency governments.

We find that local governments audit opinion significantly affects and has a strong relationship with fraud. This finding show that audit opinion awarded by BPK to local government able to represent the real condition of local governments in their good governance, accountability and free from material fraud.

Furthermore, an ongoing audit process is proven to assist local governments in reducing opportunities for corruption cases and increasing transparency and effectiveness with good and accountable governance. The local government's seriousness in following up on BPK's findings by implementing BPK's recommendations also contribute to increase the effectiveness of internal control and prevent fraud in the future. Finally, Local governments with unqualified opinions able to maintain their internal control to prevent and to reduce fraud.

This study provides a useful suggestion for audit institution namely BPK regarding the importance of regular government auditing. Furthermore, we underline the importance of monitoring the follow-up of the audit results in accordance with the recommendations set by the BPK improved internal control effectiveness, accountable governance and transparency have proven to be able to reduce the level of corruption in local governments.

Finally, subject to data availability, future research can consider exploring the effectiveness of audit opinion in reducing the fraud in more provinces in Indonesia. Considering each local government in all provinces in Indonesia has more diverse characteristics and cultures, future study may add other sociological dan psychological factors that related to fraud motivation in a large samples. Besides that,

exploring a hybrid of public sector financial ratio in detecting fraud is fruitful agenda research.

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