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KETERKAITAN ANTARA OPINI BPK DENGAN LAPORAN KEUANGAN PEMERINTAH DAERAH DAN TINDAK PIDANA KORUPSI

THE RELATIONSHIP BETWEEN THE AUDIT BOARD OF THE REPUBLIC OF INDONESIA'S (BPK) OPINION WITH REGIONAL GOVERNMENT FINANCIAL REPORT AND CORRUPTION

ABSTRACT / ABSTRAK

Laporan Hasil Pemeriksaan BPK atas laporan keuangan suatu entitas pemerintah memuat opini yang merupakan pernyataan profesional pemeriksa mengenai kewajaran informasi keuangan yang disajikan dalam laporan keuangan. Pemeriksa BPK menggunakan empat kriteria dalam mengevaluasi laporan keuangan untuk membentuk opini pemeriksaan, yaitu kesesuaian dengan Standar Akuntansi Pemerintahan (SAP), kecukupan pengungkapan, kepatuhan terhadap peraturan perundang-undangan, dan efektivitas sistem pengendalian intern. Opini wajar tanpa pengecualian diberikan untuk laporan keuangan yang bebas dari salah saji material dan/atau penyimpangan (fraud). Namun masih banyak ketidakpatuhan yang terjadi di berbagai entitas pemerintah dan merugikan negara. Penelitian ini bertujuan untuk menganalisis korupsi yang dilakukan oleh kepala daerah dan pengaruhnya terhadap opini BPK serta membangun model yang menunjukkan hubungan antara opini BPK dengan korupsi yang dilakukan oleh kepala daerah. Penulis menggunakan regresi logistik ordinal dan ditemukan bahwa ada korelasi antara opini BPK dengan korupsi yang dilakukan oleh kepala daerah. Model terbaik dari regresi logistik ordinal menunjukkan bahwa opini BPK secara dominan dipengaruhi oleh kepatuhan keuangan terhadap SAP, peraturan perundang-undangan dan efektivitas sistem pengendalian intern.

BPK audit report on a government financial report contains an opinion that is a professional statement of the auditor regarding the fairness of financial information presented in the financial statement. In forming opinion, a BPK auditor uses four criteria, namely the application of Government Accounting Standard, adequate disclosures, compliance of laws and regulations, and effectiveness of internal control systems. The unqualified opinion is issued to a financial report with no material statements and/or fraud. However, it is widely reported that many irregularities still occur across government entities and cost the state's resources (finance). This study aims to analyze corruption committed by heads of local governments and its influence on BPK opinion build a model which shows the relationship between them. This study uses a model called ordinal logistic regression and found that there is a correlation between BPK opinion with corruption committed by heads of local governments. The best ordinal logistic regression model shows that BPK opinion is dominantly influenced by the compliance of government financial report with Government Accounting Standard, compliance with law and regulations and effectiveness of internal control systems.

KATA KUNCI:

korupsi kepala daerah; regresi logistik ordinal; laporan audit

KEYWORDS:

corruption of local government head; ordinal logistic regression; audit report

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INTRODUCTION

State financial management is aimed at the greatest prosperity of the people. Economic welfare and non-economic prosperity are the two elements that shape the prosperity of the people (Akbar & Djazuli, 2015). Any use of state finances shall be accountable for its management and usage to the public through the House of Representatives (Dewan Perwakilan Rakyat, DPR) and the Regional People's Legislative Assembly (Dewan Perwakilan Rakyat Daerah, DPRD). Therefore, the central and regional (provincial, city/regency) governments, other state institutions, Bank of Indonesia, State-Owned Enterprises (BUMN), Public Service Bodies (BLU), Regional Owned Enterprises (BUMD), and other institutions which manage state finances, must follow the accountability mechanism to manage and use the state finance.

State financial management is the overall activity of a state financial management official in accordance with its position and authority, including planning, implementation, supervision and accountability. Such broad areas of state finance management can be grouped into: sub-sector of fiscal management, sub-sector of monetary management, and sub-sector of separated state assets. In order to support the realization of good governance in the implementation of the state, the management of state finances needs to be held professionally, openly and responsibly in accordance with the basic rules set forth in the 1945 Constitution (UUD 45). Good governance is a conception of a clean, democratic and effective governance (Panjaitan & Shopiana, 2017).

General principles of state financial management that can reflect best practices in the management of state finances (explanation of Law Number 17 of 2003), namely: (1) Results

oriented accountability; (2) Professionalism; (3) Proportionality; (4) Openness in the management of state finances; and (5) Financial inspection by a free and independent audit board.

The Audit Board of The Republic of Indonesia (Badan Pemeriksa Keuangan, BPK) has the duty to audit the management and accountability of state finances conducted by the central government, regional government, other state institutions, Bank Indonesia, state-owned enterprises, public service bodies, regional government enterprises, and other institutions or bodies managing state finances (Paragraph (1) of Article 6 of Law Number 15 Year 2006).

BPK is the state finance management auditing board, which in the performance of its duties regardless of the influence of governmental power, but does not stand above the government. In this increasingly powerful position and greater authority, the function of BPK is in essence consisting of three areas (Asshiddiqie, 2006), namely:

1. Operative functions, namely examination, supervision, and investigation of the control, management and wealth management of the state.
2. Judicial function, which is the authority to demand the treasury and compensation claims against treasurers and non-treasury civil servants who for their actions violate the law or neglect the obligations that cause financial losses and state assets.
3. Advisory function, which gives consideration to the government regarding the management of state finances.

BPK conducts three types of audit on state finances. The three types of audit have different objectives, procedures and types of conclusions, namely:

1. Financial audit aims to assess the fairness of the financial statements in which the

conclusion is set forth in the form of BPK Opinion.

2. Performance audit is an examination of state financial management which consists of examination of economic aspect and efficiency as well as examination of effectiveness aspect. The main results of performance audit are finding, conclusion and recommendations to improve the activities or programs to be more effective, efficient and economical.
3. The audit with a specific purpose is the examination conducted with a specific purpose, outside the financial audit and performance audit. The audit with a specific purpose leads to a conclusion according to the specific purpose of the examination itself. Included in the audit of this particular purpose is an investigative audit which is a more specialized and profound examination leading to disclosure of irregularities.

The BPK audit report on the government financial report contains an opinion which is a professional statement of the auditor regarding the fairness of financial information presented in the financial statements (Article 16 of Law Number 15 Year 2004). BPK opinion is based on the following criteria:

1. Compliance with government accounting standards;
2. Adequate disclosures;
3. Compliance with laws and regulations;
4. Effectiveness of internal control system.

As the output of the financial audit, BPK will publish three types of reports, namely: (1) audit report on financial statement (containing BPK opinion), (2) report on the internal control system, and (3) report on the compliance with laws and regulations. Opinions provided by BPK show the fairness of the presentation of financial statements, especially in conformity with the accounting standards established by the government. Accounting standards can be

said to be a standard quality report that keeps the information presented fairly. This standard is required so that report users are generally not biased as they make decisions based on the information presented in the financial statements. Accounting standards generally govern when a transaction is recorded, with what value is recorded and what information should be disclosed in relation to the transaction.

There are four types of opinions that can be given to the BPK of government financial statements (Ruki, 2012), namely:

1. Unqualified opinion, abbreviated WTP, which means that all material information in the financial statements presented fairly.
2. Qualified opinion, abbreviated WDP, which means that all material information in the financial statements is presented fairly, except for certain parts excluded by BPK.
3. Adverse opinion, abbreviated TW, which means there is material information that is not presented fairly so that it will interfere with the fairness of the financial statements as a whole.
4. Disclaimer of opinion, which means that BPK can not be sure whether material information presented in the financial statements is reasonable or not.

One of the best regional performance paradigms is judged from the financial statements that obtain WTP opinion. The public considers that BPK opinion on the financial statements is a description of the regional financial performance. That is, a good financial statement opinion reflects good regional performance as well (Dewi, 2015).

Indeed, with the opinion of the WTP given by BPK on the fairness of the financial statements, government financial management should have been free from problems or fraud, but in reality there are still many deviations that harm

the state financial (Azis, 2014). WTP Opinion is often used as a "shield" by certain parties who claim that there is no corruption in their ministry or institution because BPK give WTP opinion on its financial report (BPK, 2011). However, there is still an indication of corruption/bribery done by officials at the ministry (Ruki, 2012). Therefore, it is necessary to examine the relationship between BPK opinion with the criminal act of corruption committed by heads of local governments, those are the governors, regents and mayors.

In fact, although the local government financial statements obtained the WTP opinion from BPK, the head of the local government was caught by the Corruption Eradication Commission (KPK) for committing a criminal act of corruption in some regions. This phenomenon indicates that the opinion of the WTP from BPK is not a guarantee that a region is free from corruption committed by the head of local government or other regional officials. Several cases of corruption occurring in some regions with local government financial reports obtained WTP opinion from BPK are presented in table 1.

Regional autonomy system has implicated on the shift of power from central to regional. Similarly, corruption also shifts from the central government to the local government (Azwar & Subekan, 2016). Saputro (2015) said that the transfer of previously centralized authority became decentralized, contributing to the change in corruption behavior that was

previously done at the central level, in the era of regional autonomy shifted to the regions. The number of disclosures of corruption cases, whether committed by officials of the local government apparatus or members of the regional legislative have evidenced that corruption cases are widespread at the local level. Regional autonomy is basically given to the regions so that local governments can improve the efficiency, effectiveness, and accountability of local governments for the achievement of good governance (Mardiasmo, 2009). Rinaldi et al. (2007) revealed that decentralization has implications for the shift of central-local and inter-regional power relations. Various changes open up the possibility of "money politics" by the local government head to gain and maintain the support of the legislature, the use of various financial sources by legislative members as a deposit for political parties and the most common is the desire to enrich themselves. Opportunities for corruption are often caused by differences/inconsistencies in regulations issued by central and regional governments, 'cooperation' between legislative and executive, and the lack of participation and public oversight. In fact, nothing is too new in the modus operandi of corruption of local government. Legislative corruption cases are characterized by the following modes: (i) increasing and enlarging the budget, (ii) channeling APBD funds to fictitious institutions/foundations, and (iii) manipulation of official travel.

Table 1. Cases of corruption of several regional heads who received WTP opinion

No	Local Government Head	Year	Opinion	Case Classification
1	Governor of North Sumatera	2015	WTP	1. Bribery-related Legal Cases 2. Corruption of budget items in APBD
2	Governor of Riau	2012	WTP	Corruption of budget items in APBD
		2014	WTP	Bribery case of Licensing
3	Governor of Papua	2014	WTP	Corruption of Procurement of Goods and Services

Source: Processed from various sources

While in the executive institutions, there are corruption modes as follows: (1) usage of unspent funds without procedure, (2) deviation of procedures for submission and disbursement of local cash funds, (3) remaining APBD, and (4) manipulation in procurement process.

Umar (2011) concluded that in order to eradicate and prevent corruption in Indonesia, the central and regional governments should make the following efforts:

1. Preemptive activities, including socialization and education of government agencies on financial management and financial system, such as government accounting standards, goods/services procurement system, good governance system, and accountability.
2. Prevention activities, including assisting government agencies (central and local) in local government financial information systems, implementing good local governance, implementing government performance accountability systems, and managing public services.
3. Repressive activities by investigating corruption cases in every sector especially those that create massive damage to society and the environment.

To ensure that the government's financial statements are credible and accountable, a supervisory function is required. In Indonesia, there are two types of auditor: (1) external auditor (BPK), and (2) internal auditor i.e inspectorate general of each government institution (at ministry level), inspectorate at local government level and the State Development Audit Agency (BPKP) at the national level as a whole (Umar, 2011).

An external auditor should understand that the pressure/motive for fraud may be personal pressure, work, or external pressure, and each type of pressure can also occur due to financial pressure or non-financial pressure. They also

need to understand that by knowing a person's opportunity to commit fraud, it will assist them in identifying the person's fraud scheme and measuring fraud risk when an ineffective or non-existent internal control system. Effective internal control can reduce corruption (Nurhasanah, 2016). Free and independent audits of BPK is one of the principles of state financial management. The inspection activities are tasks that require high integrity. In reality, many of the findings of local government financial audits in Indonesia are not in accordance with the facts. This is evidenced by the discovery of many corruption cases in some areas that get WTP opinion from financial audit (Effendy, 2013).

Prevention of corruption practices can not be excluded from the role of BPK. BPK audit results are expected to provide recommendations that lead to improvements to the system, not only reveal the "success" of finding trillions of Rupiah losses. Fundamental mistakes can be overcome with system improvements. Therefore, with the conduct of annual audit, it is reasonable for BPK to ensure that system improvements based on previous recommendations have been acted upon (Gutomo, 2012).

In fact, according to BPK's strategic plan, BPK is progressing from oversight to insight and foresight. This is expected to be in line with the organizational maturity model recommended by the International Organization of Supreme Audit Institutions (INTOSAI), encouraging the Supreme Audit Institution (SAI) to expand its role from oversight to insight and foresight. The model recommended by INTOSAI was developed by the Government Accountability Office (GAO) of the United States SAI in 2006. The model seeks to assist SAIs worldwide in strengthening governance and transparency capacity, and helps to enhance the role of the SAI in preventing and detecting corruption as well as protecting and strengthening accountability (Pramono, 2016).

Formulation of The Problem

The phenomenon occurred in several regions in Indonesia, although the financial statements obtained the WTP opinion from BPK, but the head of that region was caught by law enforcement officers, especially KPK. This phenomenon becomes an interesting topic to be studied with the formulation of the problem as follows:

1. What is the mode of corruption committed by the head of local government?
2. Whether the criteria considered by BPK in providing an opinion on the local government financial statements can be modeled?
3. Is there any effect of corruption committed by the head of local government against BPK opinion?

Research Objectives

Based on background and problem formulation, the objectives of this research are:

1. Describe the criminal acts of corruption committed by the heads of local governments (governor, regent and mayor).
2. Formulate a model that can illustrate the relationship between BPK opinion with the factors that BPK considered in giving opinion on the local government financial report.
3. Analyze the influence of corruption acts committed by the local government head against BPK opinion.

RESEARCH METHODS

This research was conducted at Head Office of BPK RI, Jalan Jenderal Gatot Subroto Kav. 31 Central Jakarta and data processing were conducted in Bogor. The research period is 2 (two) months, i.e. June to July 2017. This study uses secondary data obtained from the Information and Communication Center

(PIK) BPK RI and data obtained from various sources, such as books, journals and reports circulated by credible agencies, institutions and mass media. This research uses 2 (two) data clusters, namely: (1) Data of Financial Audit Report (LHP) along with BPK opinion to Local Government Financial Report (LKPD) period 2004 to 2014, and (2) Data of local government head criminal corruption period from 2004 to 2016. The types and sources of data used in this study, in detail can be seen in table 2.

Table 2. Types and Data Sources

Data Type	Data Source
Financial Audit Report (LHP)	PIK BPK RI
BPK opinion on Local Government Financial Report (LKPD)	PIK BPK RI
Head of local government who is involved in criminal acts of corruption	KPK RI, ICW and various mass media sites

Source: Authors

Data analysis in this study use descriptive statistical analysis and ordinal logistic regression analysis. Descriptive statistical analysis is used to process data of the local government heads (governors, regents, mayors) who are involved or commit criminal acts of corruption. Corruption acts committed by local government heads can be classified into 7 (seven) groups (Ardisasmita, 2006), namely (1) National financial losses; (2) Bribery; (3) Embezzlement; (4) Extortion; (5) Deception; (6) Conflict of interests in procurement of goods and services; (7) Gratification.

Data processing techniques is done by grouping the head of local government involved or conduct corruption offenses based on islands, provinces, cities/regencies and types of criminal acts of corruption. Data processing produces tabulations containing the type, number, percentage, name of the region whose head of local government is involved or

committed a criminal act of corruption from 2004 to 2016. In addition, based on the results of descriptive statistical analysis of the head of the local government involved in corruption cases, it can be made a map of prone zone of corruption of 23 provinces studied.

Ordinal logistic regression analysis is used to describe the relationship between BPK opinion with the factors that BPK considered in giving opinion. BPK opinion is a response variable (dependent variable, Y) measured using ordinal scale with four categories, while the four factors that BPK considered in giving opinion became explanatory variables (independent variable, X). Ordinal logistic regression model is one multinomial model designed to determine the probability of ordinal scale response variables with more than two categories (Syah, 2008). Ordinal logistic regression is a regression with response variable that is categorical and stratified (ordinal). Logistic model for ordinal response data with category c ($c > 2$) is an extension of the logistics model for nominal response data with two categories (binary logistic model). As in other regression models, two or more explanatory variables may be included in the

analysis. The explanatory variables can be either quantitative or qualitative data (Nurlatifah, 2011).

If it is assumed that there is an Y-response variable with s-category ordinal scale which are close together (adjacent) and p-explanatory variables denoted by the vector $x' = (x_1, x_2, \dots, x_p)$, then the model used is adjacent category logistic model with adjacent category logit as (Hosmer & Lemeshow, 2000). The model is as follows.

$$a_k(x) = \ln \left[\frac{\phi_k(x)}{\phi_{k-1}(x)} \right] = \alpha_k + x' \beta, k = 1, 2, \dots, K$$

Where:

$a_k(x)$ = BPK opinion for region-k

α_k = Regression intercept

x' = Vector of BPK consideration factors in giving opinion

β = Slop regression coefficient

Data processing technique is done by making data entry table consisting of financial year, regional name, BPK opinion (dependent variable, Y), and four factor variables which become BPK consideration in giving opinion (independent variable, X).

Table 3. Research Variables

Variable Types		Measurement Scale
Response variable (dependent variable)		
Y	BPK opinion on Local Government Financial Report (LKPD)	4 = WTP 3 = WDP 2 = TW 1 = TP
Explanatory Variable (independent variable)		
X ₁	Compliance with government accounting standards	0 = Not comply 1 = Comply
X ₂	Adequacy of disclosure	0 = Not enough 1 = Enough
X ₃	Compliance with laws and regulations	0 = Not obey 1 = Obedient
X ₄	Effectiveness of internal control system	0 = There is no control system 1 = There is a control system, but still weak 2 = There is a good control system
Dummy Variable		
X ₅	Head of the local government involved or committing a criminal act of corruption (fraud)	0 = Not involved 1 = Involved

Source: Authors

The data entry table is then processed using statistical data processing software. Data processing resulted in a model of the relationship between BPK opinion and the factors that BPK considered in giving opinion as well as corruption acts of the Head of Local Government.

Research Variables

Research variables that used in this study consisted of three kinds of variables, namely:

(1) response variable that is dependent variable, (2) explanatory variable that is independent variable, and (3) dummy variable. The variable response (dependent variable) in this research is the BPK opinion (denoted by Y) measured using ordinal scale with 4 (four) categories. The independent variable is 4 (four) factors considered by BPK in giving opinion. Then, the dummy variable is the head of local government who is involved or commits a criminal act of corruption (fraud).

Table 4. Heads of Local Governments involved in Corruption Period 2004 - 2016

No	Province	Number of Heads of Local Government involved in Corruption			Number of Corruption Cases			Amount	
		Governor	Mayor	Regent	Governor	Mayor	Regent	Local Government head	Corruption Cases
1	North Sumatera	2	3	5	3	4	5	10	12
2	Riau	3		7	4		8	10	12
3	West Java	1	2	5	1	2	5	8	8
4	Papua	1		3	1		5	4	6
5	South Sumatera	1	1	3	1	1	3	5	5
6	East Java			4			4	4	4
7	Banten	2		1	3		1	3	4
8	Central Java		2	2		2	2	4	4
9	Aceh	1		1	2		1	2	3
10	East Kalimantan	1		2	1		2	3	3
11	North Sulawesi		1	2		2	1	3	3
12	West Nusa Tenggara			3			3	3	3
13	Bengkulu	1		1	1		1	2	2
14	South Sulawesi		2			2		2	2
15	Riau Islands	1			1			1	1
16	South Kalimantan	1			1			1	1
17	West Kalimantan			1			1	1	1
18	Central Kalimantan			1			1	1	1
19	Central Sulawesi			1			1	1	1
20	Southeast Sulawesi			1			1	1	1
21	Lampung			1			1	1	1
22	East Nusa Tenggara			1			1	1	1
23	North Maluku			1			1	1	1
	Amount	15	11	46	19	13	48	72	80

Source: Processed from various sources

RESULTS AND DISCUSSION

Description of Head of Local Government Corruption in Indonesia

Regional autonomy system has implicated for the shift of power from the central to the regions, likewise as corruption crime shifted also from the central government to the local government. This study provides data on several heads of local governments (governors, mayors, and regent) who engaged or committed criminal acts of corruption (fraud) with various forms/types of criminal acts of corruption. In the last 12 years (2004 - 2016) there were 15 governors of 11 provinces in Indonesia who were involved in corruption cases from the of total 19 cases. The province whose governors are the most involved in corruption cases are Riau Province (three governors), followed by North Sumatera and Banten provinces (two governors respectively). This data shows the fact that almost 33.33% of the 34 provinces in Indonesia, the governor is involved in cases of corruption cases with the

number of cases that ensnare him between 1-2 cases. Based on the number of corruption cases in the period 2004-2016, North Sumatera and Riau are the province that have the most corruption cases with 12 cases, followed by West Java in the third position with 8 cases.

In the same period, the number of mayors and regents involved in corruption acts are 11 (eleven) mayors from 6 (six) cities and 46 (forty six) regents from 20 (twenty) regency. The number of corruption cases involving the mayor is 13 (thirteen) cases, while corruption cases involving the regent are 48 (forty eight) cases. The majority of the mayors involved in corruption cases are the mayors of North Sumatera Province (three mayors), while the majority of regent who are involved in corruption cases is the regent of Riau Province (seven regents). This data indicates the fact that in every city/regency cases of corruption, on the average two mayors/regents are involved in different leadership periods with one case that ensnares them.

Table 5. Type of Corruption of Local Government Head Period 2004 - 2016

No	Types of Corruption	Corruption Cases	Number of Corruption Cases			Sub Total	Total
			Governor	Mayor	Regent		
1	National financial losses	Markup and markdown price		3	4	7	7
		Bribes to members of DPRD		1	3	4	
		Bribery to executive officers			3	3	
2	Bribery	Bribery to the Licensing executive officer	4		6	10	28
		Bribery to judicial officers (judges / prosecutors) related to legal cases	2	2	7	11	
3	Embezzlement	Corruption of budget items in APBD	7	5	16	28	31
		Embezzlement			3	3	
4	Extortion					-	0
5	Deception					-	0
6	Procurement of goods and services		6	2	4	12	12
7	Gratuities				2	2	2
		TOTAL	19	13	48		80

Source: Processed from various sources

Based on the number of corruption cases involving mayors and regents, then North Sumatra occupies the highest number of mayors and regents involved in corruption (9 cases), followed by Riau (8 cases) in second and West Java (7 cases) in third position.

The BPK Auditor has considered various fraud to be found in the audit process, however, corruption is still common inherent limitation of internal control and audit works, namely: collusion and management override the rules. The mode of corruption conducted by the head of local government is very diverse. This corruption mode can basically be grouped into seven types of corruption as presented in table 5.

Table 5 shows that the most corruption crime committed by heads of local government is **embezzlement** with 31 cases. The second type of criminal act of corruption is **bribery** with 28 cases. Research data about the type of corruption cases of the head of local government presented on figure 1.

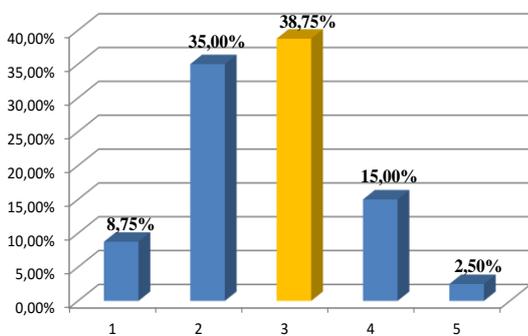


Figure 1. Percentage of corruption cases of the Local Government Head Period 2004 - 2016

Source: Author's data processing and analysis.

Description:

- 1 = National Financial Losses
- 2 = Bribery
- 3 = Embezzlement
- 4 = Procurement of goods and services
- 5 = Gratification

The case of corruption in the embezzlement group consisted of corruption case of budget item in APBD as many as 28 cases and

embezzlement of funds as many as three cases. Meanwhile, the case of corruption in the bribery group consisted of four types of bribery cases, namely: (1) Bribes given by the head of the local government to legislators (DPRD) with the aim to smooth APBD approval; (2) Bribes granted by businessmen to executive officers (heads of local government) for the purpose of obtaining projects in APBD; (3) Bribes granted by businessmen to executive officers (Local Government Heads) for the purpose of obtaining permits for the management of local natural resources; and (4) Bribes granted by local government heads to Judicial officials with the aim of winning the legal cases that wrapped around the head of local government. The most bribery cases conducted by local government head is bribes given by local government head to judicial officer with 11 cases. Next is bribery case given by businessman to executive officer (head of local government) which aims to get permission of natural resource management area with ten cases. The percentage of each bribery case is presented on figure 2.

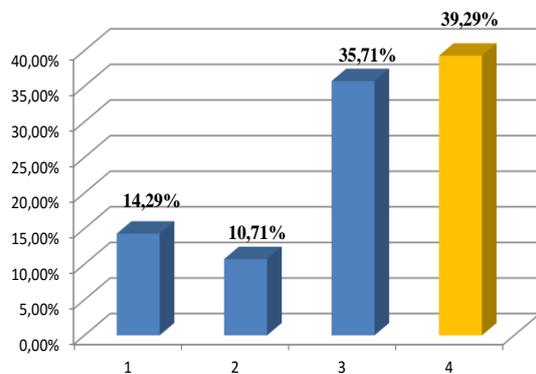


Figure 2. Percentage of each bribery case

Source: Author's data processing and analysis.

Description:

- 1 = Bribes given by the head of local government to legislators
- 2 = Bribes granted by businessmen to executive officers (Local Government Heads)
- 3 = Bribes granted by businessmen to executive officers (Local Government Heads)
- 4 = Bribes granted by Local Government Heads to Judicial officials

Table 6. Number of corruption cases at city/regency level and province.

No	Province	Corruption Cases		Zone
		City / Regency	Province	
		(X)	(Y)	
1	Aceh	1	2	Yellow
2	North Sumatera	9	3	Red
3	Riau	8	4	Red
4	Riau Islands	0	1	Green
5	Bengkulu	1	1	Green
6	South Sumatera	4	1	Yellow
7	Lampung	1	0	Green
8	Banten	1	3	Red
9	West Java	7	1	Red
10	Central Java	4	0	Yellow
11	East Java	4	0	Yellow
12	East Kalimantan	2	1	Yellow

No	Provincial Name	Corruption Cases		Zone
		City / Regency	Province	
		(X)	(Y)	
13	East Kalimantan	0	1	Green
14	West Kalimantan	1	0	Green
15	Central Kalimantan	1	0	Green
16	North Sulawesi	3	0	Yellow
17	Central Sulawesi	1	0	Green
18	Southeast Sulawesi	1	0	Green
19	South Sulawesi	2	0	Green
20	West Nusa Tenggara (NTB)	3	0	Yellow
21	East Nusa Tenggara (NTT)	1	0	Green
22	North Maluku	1	0	Green
23	Papua	5	1	Red
TOTAL		61	19	

Source: Processed from various sources

In this study, regional groupings (regional zones) are based on the number of corruption cases at the provincial and city/regency levels. Green zone indicates that the corruption case in the provincial level is one case or none at all and the number of corruption cases in the city/regency level is less than two cases. The yellow zone indicates that the corruption cases in the provincial level is only two cases and three or four cases for the city/regency level. Red zone indicates that the corruption cases in the provincial level is three cases or more and five cases or more for the city/regency level. Based on the data in table 6, all of the studied provinces can be summarized into three zones, namely:

1. Eleven provinces fall into the green zone category,
2. Seven provinces fall into the yellow zone category, and
3. Five provinces fall into the red zone of corruption.

Based on information obtained from the Corruption Eradication Commission (KPK,

2017), the five provinces that fall into the red zone of corruption since 2016 are included in the KPK assistance program. KPK's assistance program aims to help the province clean up thoroughly through KPK Corruption Prevention Coordination and Supervision Program. Assistance is done to improve the system and human resources. Both of these are necessary to realize the governance of a clean local government. In addition, the roles and responsibilities of BPK as government external auditors have submitted in each audit report recommendations in order to improve the financial management system of government entities.

If the data in table 6 is plotted into a diagram to see the pattern of the spread of corruption cases occurring at the provincial and city/regency levels, then a Cartesian diagram as shown in figure 3 can be produced to describe it. Figure 3 shows a spreading pattern which is linear between cases of corruption that occur at the provincial level with city/regency. If the data in table 7 is plotted into the map of Indonesia, the pattern of corruption cases in 23

provinces in Indonesia can be shown in figure 4. From the 23 provinces studied there are 5 (five) provinces falling into the red zone of corruption, 4 (four) provinces in western part of Indonesia and one in eastern part of Indonesia. The four provinces of the red zone

of corruption in the western part of Indonesia consist of 2 (two) provinces on the island of Sumatra, namely the Province of North Sumatra and Riau, and 2 (two) in Java, Banten and West Java.

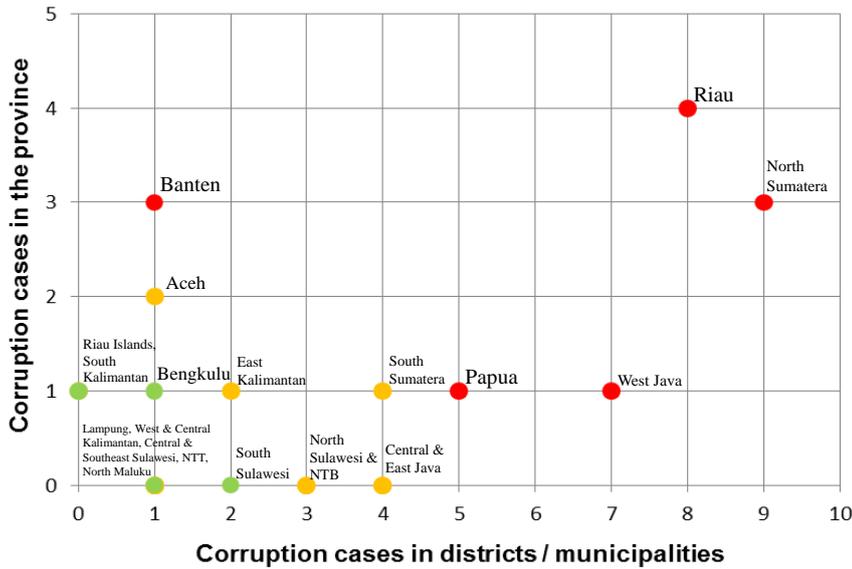


Figure 3. Plotting Number of Corruption Cases of Governor and Regent/Mayor for 2004-2016 period
 Source: Author's data processing and analysis

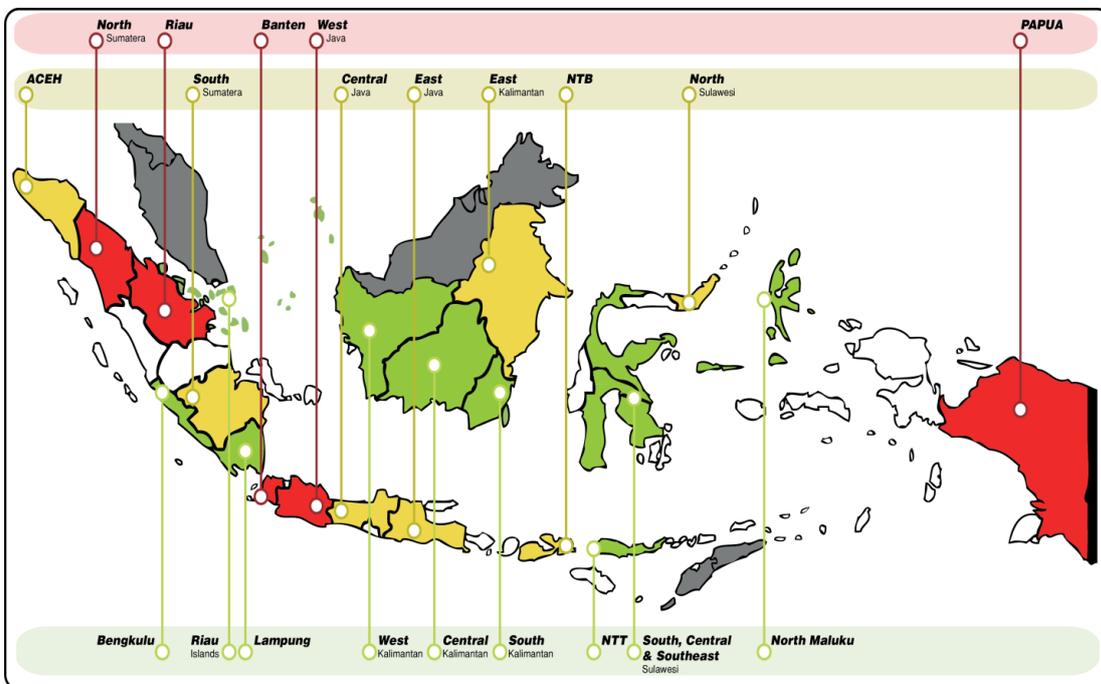


Figure 4. Map of Pattern of Corruption Cases in 23 Provinces
 Source: Author's data processing and analysis

North Sumatra, Riau, West Java and Papua are provinces rich in natural resources, meanwhile Banten is a new province which formerly part of West Java Province from West Java Province.

Ordinal Logistic Regression Modeling of BPK Opinion

The Ordinal Logistic Regression Analysis is used to construct a model of the relationship between the factors under consideration by BPK in giving opinions (independent variables X) and the results of BPK opinion (dependent variable, Y), as well as considering the effect of corruption on Head of Local Government (dummy variable). Table 7 presents the amount of correlation coefficient between 6 variables used, namely: Y, X1, X2, X3, X4, and X5.

Table 7. The Correlation between research variables

Variabel	Y	X ₁	X ₂	X ₃	X ₄
X1	0.859				
p-value	0.000				
X2	0.755	0.830			
p-value	0.000	0.000			
X3	0.002	0.028	0.027		
p-value	0.971	0.658	0.667		
X4	*	*	*	*	
p-value	-	-	-	-	
X5	-0.027	-0.007	-0.002	0.014	*
p-value	0.668	0.914	0.974	0.819	-

Source: Author's data processing and analysis

Description: correlation scale between -1 to +1

The general formula for calculating the correlation coefficient between two variables X and Y is:

$$r_{xy} = \frac{S_{xy}}{S_x S_y}$$

$$S_{xy} = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{n - 1}$$

$$S_x = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}} \quad \text{dan} \quad S_y = \sqrt{\frac{\sum (y_i - \bar{y})^2}{n - 1}}$$

Information:

r_{xy} = Correlation coefficient between X and Y

S_{xy} = Standard deviation between X and Y

S_x = Standard deviation X

S_y = Standard deviation Y

X_i, Y = Value of X and Y variable

\bar{x}, \bar{y} = Average X and Y

n = Amount of data

Based on the data in table 7, it can be summarized that the correlation among research variables areas follows:

1. The response variable of BPK opinion (Y) has correlation with X1, X2 and X3 respectively of 0.859, 0.755 and 0.002, meaning that there is a positive linear relationship pattern between the conformity factor of LKPD with Government Accounting Standards (variable X1), adequacy disclosure factor of financial transaction data in LKPD (variable X2), and compliance with laws and regulations factor (variable X3).
2. The X1 variable has a correlation with the X2 variable of 0.83, as well as the correlation with the X3 variable of 0.028.
3. The X2 variable has a correlation with the X3 variable of 0.027.
4. The X4 variable has no correlation with all variables. This is due to the data obtained in this study are all constant value, which is worth 1. It means that the internal control system already exists but still weak.
5. The correlation between the response variable (dependent variable) of the BPK opinion (Y) and the independent variable X5 is negative, which means that the corruption case of the head of local government (X5) will reduce the assessment of the factors that BPK considered in giving opinion.

To obtain the best ordinal logistic regression model, a model simulation is performed based on a combination of explanatory variables (independent variable). The model simulation uses a combination of five explanatory variables, four explanatory variables and three

explanatory variables. Based on the combination of explanatory variables, there are ten model simulations tested for the goodness of the model. Ten simulation models, those are:

- Model 1 : $Y = f (X_1, X_2, X_3, X_4, X_5)$
- Model 2 : $Y = f (X_1, X_2, X_3, X_4)$
- Model 3 : $Y = f (X_1, X_3, X_4, X_5)$
- Model 4 : $Y = f (X_2, X_3, X_4, X_5)$
- Model 5 : $Y = f (X_1, X_3, X_4)$
- Model 6 : $Y = f (X_2, X_3, X_4)$
- Model 7 : $Y = f (X_1, X_2, X_3, X_5)$
- Model 8 : $Y = f (X_1, X_2, X_3)$
- Model 9 : $Y = f (X_1, X_3, X_5)$
- Model 10 : $Y = f (X_2, X_3, X_5)$

One criterion that can be used to see the goodness of the model is to calculate the deviance coefficient, i.e. the difference between the value of the alleged and the value of the observation. These ten models produce deviance quantities as presented in table 8. The best model is the model that has the smallest deviance coefficient. The smallest deviance is Model 5 that only includes the free variables X_1 , X_3 and X_4 . After a further variant is exported to X_4 , since the value is constant, the X_4 variable does not affect the deviance coefficient (the presence or absence of the X_4 variable in the model does not change the amount of deviance produced).

Model 5 is the best model because it has the smallest deviance value (2.69). The function of model 5 is $Y = f (X_1, X_3, X_4)$ which illustrates that the opinion of BPK is more dominantly influenced by the compliance of LKPD with Government Accounting Standard (SAP), Compliance with laws and regulations, and effectiveness of internal control system. Based on model 5, the overall test is done to obtain ordinal logistic regression model. Test results on model 5 are presented in table 9. Table 9 explains that there are 4 possible values of Y, namely:

- 1. $Y_i = 1$, if $Y_i^* \leq -4.608$
- 2. $Y_i = 2$, if $-4.608 < Y_i^* \leq -2.456$
- 3. $Y_i = 3$, if $-2.456 < Y_i^* \leq 2.456$
- 4. $Y_i = 4$, if $Y_i^* \geq 2.456$

Formula of Y_i^* to classify the results of calculations to 4 possible Y values are as follows:

$$Y_i^* = -8.49X_1 + 1.837X_3$$

Based on the above formula, we can estimate the BPK opinion to be achieved by entering the values X_1 and X_3 into the equation. If the value of Y_i^* obtained is equal or greater than 2.456, then the BPK opinion to be obtained is Unqualified Opinion (WTP). Conversely, if the value Y_i^* obtained is equal or less than -4.608 , then the BPK opinion to be obtained is a disclaimer of opinion. The alleged logit model obtained are:

- 1. $L_1(x) = \text{Log} \left(\frac{\hat{\pi}_1}{1-\hat{\pi}_1} \right) = -4.608 - 8.49X_1 + 1.837X_3$
- 2. $L_2(x) = \text{Log} \left(\frac{\hat{\pi}_2}{1-\hat{\pi}_2} \right) = -2.456 - 8.49X_1 + 1.837X_3$
- 3. $L_3(x) = \text{Log} \left(\frac{\hat{\pi}_3}{1-\hat{\pi}_3} \right) = 2.456 - 8.49X_1 + 1.837X_3$

Logit model is a model that represents each category of the Y_i^* value. There are four categories on the Y_i^* variable, and the logit model formed 3 models. The reference value used in the logit model is the value of $Y = 4$, meaning that the WTP opinion becomes a reference opportunity for LKPD to obtain the WTP opinion. Therefore the model formed in table 9 only consists of models for values $Y=1$, 2, and 3.

Table 8. Deviance Coefficient Value

	Model									
	1	2	3	4	5	6	7	8	9	10
Deviance	18.52	17.03	4.69	9.50	2.69	7.23	18.52	17.03	4.69	9.50

Source: Author's data processing and analysis

Table 9. Logistic Regression Analysis

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Y = 1]	-4.608	2.905	2.517	1	0.113	-10.301	1.085
	[Y = 2]	-2.456	2.747	0.799	1	0.371	-7.841	2.928
	[Y = 3]	2.456	2.747	0.799	1	0.371	-2.928	7.841
Location	[X ₃ =0]	1.837	2.748	0.447	1	0.504	-3.550	7.224
	[X ₃ =1]	0	.	.	0	.	.	.
	[X ₁ =0]	-8.490	1.200	50.073	1	0.000	-10.842	-6.138
	[X ₁ =1]	0	.	.	0	.	.	.
	[x ₄ =1]	0	.	.	0	.	.	.

Source: Author's data processing and analysis

From the three logit models, the relationship between X₁ and Y is negative, whereas between X₃ and Y is positive, and consistent for each model. Of these three models we can get the logit value to be included in the calculation of probability in the following equation:

$$\hat{\pi}_1 = \frac{\exp(-4.608 - 8.49X_1 + 1.837X_3)}{1 + \exp(-4.608 - 8.49X_1 + 1.837X_3)}$$

$$\hat{\pi}_2 = \frac{\exp(-2.456 - 8.49X_1 + 1.837X_3)}{1 + \exp(-2.456 - 8.49X_1 + 1.837X_3)}$$

$$\hat{\pi}_3 = \frac{\exp(2.456 - 8.49X_1 + 1.837X_3)}{1 + \exp(2.456 - 8.49X_1 + 1.837X_3)}$$

The $\hat{\pi}_1$ equation denotes the magnitude of LKPD opportunity to get disclaimer of opinion (Y=1), $\hat{\pi}_2$ equation indicates the magnitude of LKPD opportunity to get adverse opinion (Y=2), and $\hat{\pi}_3$ equation indicates the magnitude of LKPD opportunity to get qualified opinion (Y = 3). These three equations are compared against the reference value, ie the value of Y = 4 or LKPD opportunity to get unqualified opinion. $\hat{\pi}_i$ equation results in a probability value of magnitude between 0 to 1. This equation is used to predict the category Y based on input variables which are X₁ and X₃. The greatest opportunity value

indicates that the predicted results of the object belong to category Y having the largest $\hat{\pi}_i$.

CONCLUSION

Based on the results of research that has been done, it can be concluded as follows:

1. The most corruption type conducted in the period 2004-2016 is embezzlement. The dominant case of bribery is a bribe to a judicial officer (judge/prosecutor) related to a legal case against a head of local government.
2. Corruption committed by the heads of local government (Governors, Regents and Mayors) in 23 observed provinces can be grouped into three zones, namely twelve provinces falling into the green zone category, six in the yellow zone category and five provinces that fall into the red zone of corruption. The five provinces that fall into this category of red corruption zone are included in the KPK assistance programs.
3. The best ordinal logistic regression model that best describes the relationship

between BPK opinion and the factors that BPK considered in giving opinion is model 5. Model 5 gives the equation that BPK opinion is a function of LKPD compliance with SAP, compliance with laws and regulations, and effectiveness of internal control system.

4. Due to the data for X_4 variables obtained in this study are all constant, i.e. 1, then the ordinal logistic regression equation obtained is: $Y_i^* = -8.49X_1 + 1.837X_3$.
5. The existence of criminal acts, that is corruption (fraud) Head of Local Government will reduce the assessment of the factors considered by BPK in giving opinion.
6. To obtain a better ordinal logistic regression model, further studies are needed with more data.

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