#### **ARTICLE**

# Fiscal Decentralization, Accountability and Corruption Indication

Evidence from Indonesia

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Abstract: In the Corruption Perception Index 2019, Indonesia ranks 90th among 180 countries (Transparency International, 2020). Indonesia still among the lowest rank in the corruption index. This index shows that corruption is an important issue for Indonesia. Therefore, the study aims at examining the determinants of corruption in Indonesia. This study focuses on two important aspects: fiscal decentralization and accountability. Since the enactment of Law Number 22 of 1999, which was then revised by Law Number 32 of 2004, the local government can manage fiscal. It is expected that local governments can use resources for the improvement of the wealth of the citizens. Further, the local government has a responsibility for using the resources. However, there are cases regarding corruption in local government in Indonesia. This study uses secondary data from local government financial statements to search the corruption indication, level of fiscal decentralization, and accountability. The study's sample consists of 94 districts/cities on Java during the 2013-2015 period. The dependent variable in this study is an indication of corruption. Furthermore, the study divided corruption into three aspects: regional losses, potential regional losses, and revenue deficiency. The independent variables in this study were fiscal decentralization and accountability. This study uses multiple linear regression models to test the effect of fiscal decentralization and accountability on Indonesia's corruption indicator. The result of the study shows that fiscal decentralization has a negative impact on corruption indication. The higher degree of fiscal decentralization minimizes the corruption indication in Java island. Meanwhile, fiscal decentralization has a negative effect on regional losses and revenue deficiency. Accountability has no significant on corruption indication. However, accountability has a negative impact on regional losses. In conclusion, both fiscal decentralization and accountability have curb corruption indication in the regional losses aspect.

**Keywords:** Indications of Corruption, Fiscal Decentralization, Accountability, regional losses, revenue deficiency

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## 1. Introduction

This study investigates the effect of fiscal decentralization and accountability on corruption indication in Indonesia. Firstly, the study's objective is to provide empirical evidence on the impact of fiscal decentralization and corruption in the local government and provide empirical evidence on the effect of accountability on corruption. There are three important aspects in the study: fiscal decentralization, accountability, and corruption. One of the important steps in Indonesia is the development of decentralization. Decentralization will give more autonomy to local government. Regional autonomy in Indonesia has been going on since the enactment of Law Number 22 of 1999, which was then revised by Law Number 32 of 2004 regarding Regional Government. Given these regulations, local governments have the authority to administer government affairs in addition to specific areas that remain central government affairs. Regional autonomy is implemented to consider that the autonomous regional government is more aware of its economic, social, and cultural circumstances. Thus, it is expected that regional autonomy able to accommodate the aspirations of the people in the local region and to improve the efficiency and effectiveness of local financial management, thereby increasing social welfare and justice in autonomous regions.

Another important issue regarding regional autonomy is accountability. It is expected that local government will provide better accountability to the citizen, so that level of corruption is decreased. Lederman, Loayaza, and Soares (2015), using a cross-country study, provides evidence that the level of accountability has a significant effect on reducing corruption. This result is confirmed by Ferraz and Finan (2011) argue that better political rules will increase the level of accountability and reduce corruption in Brazil. In Indonesia, Kurniawan (2009) believes that public accountability will reduce the level of corruption. However, the empirical evidence in Indonesia is scarce. Therefore, he suggests more research on accountability and corruption in the Indonesian context.

In the latest Transparency International report (2020), Indonesia has a corruption index score of 40. The highest score for corruption index is 87, achieved by Denmark and New Zealand. Indonesia in the 90th rank among 180 countries. Indonesia still in the lowest rank in the corruption index. Therefore, Indonesia still a long way to go to fight corruption.

A study on the impact of corruption shows that corruption has a negative effect on public benefits (Nye, 1967). In Indonesia's case, corruption has a negative effect on the government's ability to increase citizen wealth (Olken, 2006) and negatively affects the education systems, such as low school enrolment and poor school performance (Suryadarma, 2012). The corruption also has undermined the inflow of foreign direct investment (Qian & Sandoval-Hernandez, 2016). Therefore, corruption has a negative effect on the economic development of the country. Corruption is one of the biggest problems to increase the high level of economic wealth. Indonesia also suffers from the negative effect of corruption (Rinaldi, Purnomo, & Damayanti, 2007).

One of the important development in Indonesia's fight against corruption is the establishment of The Corruption Eradication Committee (KPK) in 2002 (Umam, Whitehouse, Head, & Adil Khan, 2020). In the KPK annual report 2016 (KPK, 2017), there is information that during 2004-2016, there were 58 regional heads that have implicated in the corruption case. Around 3.6 corruption/years. However, in 2017, the number of regional heads arrested because of corruption increased to 13 cases. In 2018, from January to July, 15 regional heads were arrested because of the corruption case. This shows that corruption still a major issue in local government governance.

The Corruption Eradication Committee (KPK) always gives the government officer a message that KPK will monitor unusual transactions between government officers and the other party. KPK recently intensify the monitoring effort to reduce the corruption level in Indonesia. However, the corruption case still increased recently. Prabowo (2014) argues that it is important to know how people are deciding to

commit corruption. He believes that the understanding of behavior will give effective measures to reduce corruption. However, another study, such as Elbahnasawy and Revier (2012) argues that the level of law enforcement is important to reduce the level of corruption. A higher level of law enforcement will minimize the corruption activity. This study emphasized the law-enforcement effect. Furthermore, Judge, McNatt, and Xu (2011) argue that the level of political, economic, social, and culture have a significant relationship with corruption. The country in the stage of developing economics also has a higher probability of corruption(Treisman, 2000). The level of economic development and growth have a significant effect on the corruption level.

However, the unintended effect of regional autonomy, as mention by Rinaldi et al. (2007) and Silitonga, Anthonio, Heyse, and Wittek (2016) is the rise of a corruption case in Indonesia. Kurniawan (2011) argues that decentralization provides the opportunity for local heads to engage in corruption. Therefore, the Indonesian government should be careful with regional autonomy. Alfada (2019) also provides evidence that fiscal decentralization positively affects the corruption case in Indonesia. However, the evidence from other countries provides the different effects of fiscal decentralization on corruption (Arikan, 2004; Lessmann & Markwardt, 2010). Arikan (2004) provides evidence that fiscal decentralization minimizes the level of corruption.

This study tries to fill the gap regarding the lack of research on accountability and corruption in the Indonesian context, as suggested by Kurniawan (2009). This study investigates the effect of fiscal decentralization and accountability on local government corruption using the Indonesian context. Further, corruption will divide into three components: regional losses, potential regional losses, and revenue deficiency. It is expected to provide a better picture of how both fiscal decentralization and accountability affect corruption. This study focuses on the local government in Java Island.

There are two objectives in this study. Firstly, to test the effect of fiscal decentralization on the indication of corruption, and secondly, to examine the impact of accountability on corruption. The result of the study shows that both variables are significant determinant factors of the indication of corruption. Fiscal decentralization has negatively affected the indication of corruption. Thus, fiscal decentralization has reduced the indication of corruption.

On the other hand, accountability has no significant effect on the indication of corruption. Furthermore, the study divides corruption into regional losses, potential regional losses, and revenue deficiency. Fiscal decentralization significantly affects three aspects of the corruption of indication, while accountability significantly affects regional losses and potential regional losses. These result shows the importance of fiscal decentralization and accountability to tackle the corruption.

## 2. Literature Review and Hypothesis Development

Transparency International defines corruption as "the abuse of entrusted power for private gain" (TI, 2017). In a government officer's context, corruption happens when someone uses his/her power as a government official for his interest. It will negatively affect the public interest. Furthermore, Chetwynd, Chetwynd, and Spector (2003) argue that corruption is a misuse of unilateral conduct by government officials such as nepotism, embezzlement, and abuse linking public and private officials, such as extortion, bribery, and fraud.

According to the legal perspective, the definition of corruption is described in Law no. 31 of 1999 junto Law no. 20 of 2001. Under the Act, seven categories classified as corruption: (1) financial loss, (2) bribery, (3) malfeasance, (4) extortion, (5) tort, (6) conflict of interest in procurement, and (7) gratuities (KPK, 2006). Of the various definitions of corruption described above, there is a common thread, which is corruption is the existence of abuse of public interest by government person for personal interest or group with various forms and ways mentioned above.

A meta-analysis study by Judge et al. (2011) gives an emphasis for three factors as determinants of corruption: economics, politics/legal, and social culture. Elbahnasawy

and Revier (2012) investigated the determinants of corruption using a cross-country study. The result of their study shows that better law enforcement is the main factor in reducing corruption. Kwon (2013) conducted a cross-country study on the effect of fiscal decentralization on corruption. Kwon (2013) divides the sample into developed and developing countries. The study results show that fiscal decentralization has a negative effect on corruption in the developed country. However, fiscal decentralization increases the probability of corruption in a developing country. Kwon (2013) provides evidence of the importance of the institutional factor of each country. Further, the degree of accountability also an important factor in reducing corruption. According to Fisman and Gatti (2002), they provide evidence that fiscal decentralization curbs corruption. This study confirms by Oto-Peralías, Romero-Ávila, and Usabiaga (2013), who find that the higher degree of fiscal decentralization effectively reduces corruption.

According to Law No.32 of 2004 on Regional Government, decentralization and deconcentration in article 1, paragraph 7 and 8 are defined as: "Decentralization is the transfer of government authority by the Government to the autonomous regions to regulate and manage government affairs in the system of the Unitary State of the Republic of Indonesia."

A previous study by Oto-Peralías et al. (2013) investigated the correlation between fiscal decentralization and corruption using 31 OECD countries during the 1986 - 2010 periods. Their study shows that fiscal decentralization has mitigated the negative effect of corruption on public deficits. Interestingly, they find that public spending is lower in the country with a higher level of corruption. Therefore, fiscal decentralization has a negative effect on corruption. Choudhury (2015) also examines the relationship between fiscal decentralization and corruption. The study shows that fiscal decentralization reduces the level of corruption. Moreover, fiscal decentralization has a positive effect on public governance. Furthermore, Choudhury (2015) argues that fiscal decentralization is not endogenous to corruption. This result is in line with Tumennasan (2005) who find that fiscal decentralization put positive effect to push public official not involved in corruption activity. This effect will be more pronounced if the local government has more power to use their local revenue. Fisman and Gatti (2002) also use a cross-country study to investigate the relationship between fiscal decentralization and corruption. The result of their study in line with Tumennasan (2005), Oto-Peralías et al. (2013), and Choudhury (2015) that fiscal decentralization has negatively affect corruption.

A study by Arikan (2004) provides a theoretical argument that fiscal decentralization has a negative effect on the level of corruption. Further, the study uses empirical evidence to confirm the expectation that fiscal decentralization positively affects anticorruption. This study confirms by Ivanyna and Shah (2011), who find strong evidence that better fiscal decentralization reduces corruption.

Peixoto, Rocha, Nishijima, and Postali (2012) investigate the relationship between fiscal decentralization and corruption in Brazil using a specific primary healthcare program. The study finds that fiscal decentralization has no significant effect on corruption in the context of primary healthcare programs in Brazil.

On the other hand, Lewis (2014) provides evidence that fiscal decentralization has a significant difference with expectation. The level of service delivery by local government has no significantly different from the previous period. Thus, fiscal decentralization has not increased local government performance. This result in line with Pepinsky and Wihardja (2011), who find that fiscal decentralization has no significant effect on economic performance. Shon and Cho (2020) investigate the effect of fiscal decentralization and corruption using the USA case. Shon and Cho (2020) apply data from 1990 to 2010 of fiscal decentralization and corruption. Their study shows that fiscal decentralization has a positive effect on the level of corruption in the USA. Thus, the decision to give higher fiscal decentralization provides more opportunities to increase the level of corruption. Alfada (2019) investigate the effect of fiscal decentralization on corruption in Indonesia using provincial data. Alfada (2019) employ 19 provincial data during 2004-2014 observation. The result of the

study shows that expenditure decentralization has a positive effect on corruption. Thus, fiscal decentralization increases the probability of corruption at the provincial level in Indonesia. Silitonga et al. (2016) compare the corruption case before and after decentralization era in Indonesia. The result shows that the number of local actors is increasingly involved in corruption during the decentralization era.

Kurniawan (2011) argues that fiscal decentralization has provided an opportunity for regional heads to engage in corruption. The empirical evidence shows a dramatic increase in the number of regional heads that have been implicated in corruption cases. Alfada (2019), Rinaldi et al. (2007), and Rahayuningtyas and Setyaningrum (2018) also provide evidence that fiscal decentralization in Indonesia positively affects corruption. Therefore, fiscal decentralization has provided an opportunity for government officers to engage in corruption activity.

The previous study provides evidence that fiscal decentralization has a negative effect on corruption (Arikan, 2004; Fisman & Gatti, 2002; Ivanyna & Shah, 2011; Oto-Peralías et al., 2013; Tumennasan, 2005) because the local government can use local revenue to increase economic growth. The local government has more information on the local condition. Therefore, the local government can use the government fund for better wealth. Therefore, the hypothesis of this study is as follows:

H1: fiscal decentralization negatively affects indications of local government corruption.

The main concept of accountability is the agent who has an obligation to account for the decisions and actions of the principal (Tippett & Kluvers, 2010). Mardiasmo (2009) explains that the notion of accountability is an obligation of the holder (agent) to provide accountability, present the report and disclose all activities and activities that are his responsibility to the principal, who has the right to hold the responsibility. González and Albalate (2018) investigate the effect of transparency on the level of corruption in Spain. The study shows that the level of transparency negatively affects corruption. Thus, the higher level of transparency reflects the higher level of accountability.

Previous research on determinants of corruption was conducted by Javaid (2010). The main factor of corruption in Pakistan is the lack of accountability. Therefore, he argues that one important step for the Pakistan government to fight against corruption is to increase accountability. This research stresses the importance of accountability to reduce corruption. Lederman et al. (2005) investigate the effect of accountability on corruption using a cross-country sample. The result of the correlation shows a strong relationship between both periods. Further test using multiple regression shows that accountability has a negative effect on corruption. A higher degree of accountability will help the government to reduce the number of corruption.

Ferraz and Finan (2011) investigated the effect of electoral accountability and corruption in Brazil. Their study shows that the incentives for electoral accountability effectively reduce corruption in the local government in Brazil. Therefore, accountability is an important mechanism to reduce corruption. Although in the case of Indonesia, regional heads use their discretion to increase donation expenditure in the election year (Setiawan & Rizkiah, 2017; Setiawan & Setyorini, 2018).

Kurniawan (2009) argues that public accountability and active involvement from the public to monitor local government will give pressure on local government to reduce corruption activity. Therefore, Kurniawan (2009) conducted more research on accountability and corruption in the Indonesian context. Furthermore, Suhardjanto, Syafruddin, Andini, and Rahmatika (2018) investigate the effect of accountability on corruption at the provincial level using the Indonesian context. Suhardjanto et al. (2018) use audit findings as their proxy for accountability. Their research shows that audit findings, audit findings follow up, and auditor's opinion negatively affects corruption at the provincial level in Indonesia. This result confirms the expectation that accountability has a negative effect on corruption. Olken (2007) investigate the effect of government and grassroots monitoring on corruption level using the Indonesian context. The intensifying government monitoring through government audits provides

better monitoring compare to grassroots participation. Therefore, Olken (2007) argues that the top-down approach to minimize corruption still important in Indonesia.

Rahayuningtyas and Setyaningrum (2018) conducted a study on government governance's effect on Indonesia's corruption using local government context during 2011 – 2013. The result of their study shows that good government governance has a negative effect on corruption. Therefore, a better accountability level will reduce the level of corruption in the Indonesian local government. On the other hand, Heriningsih (2014) does not find a significant effect of accountability, such as audit opinion and internal control weakness, on the level of corruption in the Indonesian local government.

The previous study shows that the higher level of accountability has reduced corruption (Ferraz & Finan, 2011; González & Albalate, 2018; Lederman et al., 2005; Rahayuningtyas & Setyaningrum, 2018; Suhardjanto et al., 2018). It is important to increase the level of accountability to fight against corruption. Therefore, it is expected that accountability has a negative effect on corruption. The second hypothesis is as follow:

H2: accountability negatively affects indications of government corruption.

### 3. Methods

This study using a quantitative method to achieve the objective of the study. Specifically, this study uses secondary sources such as local government financial statements, Performance Accountability Report of Government Agencies (LAKIP), and Indonesian Central Bureau of Statistics. This study focuses on quantitative methods because it gives more precise data on the variables such as corruption, fiscal decentralization, and accountability.

The sample of the study consists of local government in Java Island during 2013 – 2015. There are 94 local governments in Java Island with three years of observations. The data collection uses purposive sampling with several criteria: first, local government in Java Island whose financial statements for 2013 - 2015 have been audited by the Supreme Audit Board of the Republic of Indonesia / Badan Pemeriksa Keuangan (BPK RI). Second, there are findings of regional losses, potential regional losses, and revenue deficiency in the Report on Examination Result (LHP) for non-compliance with laws and regulations that are an integral part of BPK RI Audit Reports Report on Local Government Financial Reports. Third, the availability of evaluation result data of Performance Accountability Report of Government Institution implemented by Ministry of State Apparatus Utilization and Bureaucratic Reform (Kemenpan-RB).

The dependent variable of the study is corruption indication. Further, corruption indication divided into three regional category losses, potential regional losses, and revenue deficiency. The independent variable of the study consists of fiscal decentralization and accountability. This study uses three control variables: the size of local government, economic level, and human development index.

The dependent variable in this study is an indication of corruption of regency/municipality government on Local Income and Expenditure Budget. The indication of corruption in this study is measured by the natural log of the nominal amount (rupiah) of the findings in the Examination Result Report (LHP) for non-compliance with laws and regulations which are an inseparable part of the BPK RI Audit Report on Local Government Financial Report.

Fiscal decentralization is a proxy with the ratio of Local Own Revenue (PAD) and equity funds ((PAD, Profit Sharing, and Non-Tax Revenue), DAU, DAK)) to total expenditure for one fiscal year. This study's accountability was measured by the Performance Accountability Report of Government Agencies (LAKIP) in 2013 - 2015 issued by Kemenpan-RB.

The size of local government is measured by the log of total assets of local government. Further, the economic level is identical to the level of financial establishment of a region. The economic level is measured by Gross Regional Domestic

Product (PDRB) per capita of Regency / City in a natural logarithm of nominal amount (rupiah). Human Development Index (HDI) is a composite index of education, health, and purchasing indices. It is expected to measure human development's success rate as reflected by a well-educated, healthy and long-lasting, skilled, and incomegenerating population to be viable (Indonesian Central Bureau of Statistics/BPS, 2012: 18). The Human Development Index is measured by the HDI value per district/city issued by the Central Bureau of Statistics 2013-2015.

The current study uses three years of data from the local government in Java island. Therefore, this study use panel data to test the hypothesis. This study uses the following equation to test the effect of accountability and fiscal decentralization on corruption indication:

KORUP =  $\alpha$  +  $\beta$ 1 DEST +  $\beta$ 2 AKUN +  $\beta$ 3 ASET +  $\beta$ 4 EKONOMI +  $\beta$ 5IPM +  $\epsilon$ 

Keterangan:

KORUP = Log Natural Corruption Indications

DEST = Fiscal Decentralization

AKUN = Accountability

ASET = The size of Local Government EKONOMI = Economic Level of Local Government

IPM = Human Development Index

This study apply e-views software for statistical testing of research hypothesis because e-views software able to test the panel structure data.

## 4. Results and Discussion

The study sample consists of 94 local governments in Java island for the 2013 – 2015 periods. The final samples are 282 local government-year. Table 1 provides the statistics descriptive for the study.

Table 1. Statistics Descriptive

Variable	Mean	Max	Min	StdDev
Korup	3209.08	70232.12	2.00	6707.48
Dest	0.805	1.009	0.283	0.064
Akun	50.839	80.220	29.460	7.663
Aset	4432406	38605938	1351756	487479
Ek	34.302	348.01	11.910	39.424
IPM	68.816	83.780	60.190	5.055

KORUP = Corruption Indications (millions), DEST= Fiscal Decentralization, AKUN= accountability, ASET= The size of Local Government, Ek = Economic Level of Local Government, IPM = Human Development Index

From Table 1, we can see that the average value of indication of corruption is 3,209.076 millions with a standard deviation of 6,707.48 million. The minimum value of corruption indicated 2 million is in Banyumas Regency in 2013, and the maximum value was 70,232.12 million in Gresik Regency in 2013. The mean value of fiscal decentralization is 0.805, with a standard deviation of 0.064. The minimum value for fiscal decentralization is 0.283 is in South Tangerang City in 2014, and the maximum value is 1.009 is in Pasuruan in 2014.

The mean value of the accountability score was 50.83, with a standard deviation of 7.66. The minimum accountability score was 29.46 in Subang Regency 2014, and the maximum value was 80.22 in Bandung in 2015. The economic or PDRB/capita level range from 11.910 to 348.01, with the mean value, was 34.302. The standard deviation for economics was 39.424. Table 1 also provides statistics descriptive on human development index that range from 60.190 to 83.780. The mean value for the human development index is 68.816, with a standard deviation of 5.055. The range of human development index of a sample was 60.190 to 83.780.

**Table 2.** Provide information on the result of hypothesis testing

Variable	Corruption Indication	KD	PKD	КР
А	-1,052	1,617	-7,954	-3,239
	-1,018***	-1,326***	1,131***	-1,005**
DEST				
	(0,000)	(0,004)	(0,009)	(0,027)
	-0,315	-0,879*	3,564***	-0,147
AKUN				
	(0,233)	(0,058)	(0,004)	(0,160)
	0,001	0,001	-0,001	2,280
EK				
	(0,663)	(0,366)	(0,226)	(0,940)
	-0,008	-0,018	0,002	-0,007
IPM				
	(0,208)	(0,119)	(0,834)	(0,317)
	0,924***	0,767***	0,522***	1,069***
Aset				
	(0,000)	(0,000)	(0,000)	(0,000)
F-Test	6,747	5,123	0,852	3,942
Prob	0,000	0,000	0,519	0,002
Ajusted R <sup>2</sup>	0,095	0,071	-0,013	0,066

<sup>\*,\*\*,\*\*\*</sup> Significant at 10%, 5%, 1%

Description: KD = Regional Losses; KP = revenue deficiency; PKD = Potential regional loss; DEST, fiscal decentralization = (PAD + Balancing Fund) / (Total Expenditure); AKUN, accountability = Value of Performance Accountability Evaluation Report of Government Agency Performance Year 2013-2015 by KemenPAN-RB; Ek, Economic Level = Total GRDP per capita; IPM, Human Development Index = Score from Central Bureau of Statistics; Aset, Local Government Size = Total Assets of Local Governments in Local Government Financial Statements in Balance Sheet.

Table 2 shows that fiscal decentralization has a negative effect on the level of corruption. The higher level of fiscal decentralization has reduced the level of corruption in the local government in Indonesia. This result confirms the hypothesis that fiscal decentralization has a negative impact on the level of corruption. Fiscal decentralization shows how local government able to use the local revenue based on the local conditions. Therefore, the local government able to put the government fund in the right place. This study does not confirm the previous study such as Alfada (2019), Rinaldi et al. (2007), Rahayuningtyas and Setyaningrum (2018), Shon and Cho (2020), and Silitonga et al. (2016), who find that fiscal decentralization has a positive effect on the level of corruption. Other studies, such as Lewis (2014), also argue that Indonesia's decentralization does not meet the expectation and does not positively affect economic performance (Pepinsky & Wihardja, 2011). Although fiscal decentralization still has a problem on the application in the local government in Indonesia (Lewis, 2014), it still has bright side such as reduce the corruption in the local government in Java island.

The result of this study that shows the negative effect on corruption has confirmed the previous study such as Arikan (2004), Choudhury (2015), Fisman and Gatti (2002), Ivanyna and Shah (2011), Oto-Peralías et al. (2013), and Tumennasan (2005). Fisman and Gatti (2002) argue that fiscal decentralization has provided an opportunity for regional heads to shows their performance. In fiscal decentralization, local heads have been authorized to exercise their discretionary on the government fund. Therefore, local heads can show their better performance during fiscal decentralization. This will reduce the corruption activity. Tumennasan (2005) also argues that fiscal decentralization creates a better environment for the anti-corruption and better performance government; thus, it is expected that fiscal decentralization has a negative effect on the corruption indication.

Furthermore, the study investigates the effect of fiscal decentralization on the three aspects of corruption indication. Fiscal decentralization has a negative effect on regional losses and revenue deficiency. The higher level of fiscal decentralization has reduced the level of regional losses and revenue deficiency. This result shows that fiscal decentralization has incentives for local government to reduce the regional losses and minimize revenue deficiency. However, fiscal decentralization has a positive effect on the potential regional losses.

Table 2 shows the result of the effect of accountability on corruption indication. The result shows that accountability has no significant impact on the corruption indication. Therefore, the change in the accountability index will not affect the corruption indication. This result does not confirm the hypothesis that expects the negative effect of accountability on the corruption indication. The result of the study does not prove the previous study such as Ferraz and Finan (2011), González and Albalate (2018), Lederman et al. (2005), Rahayuningtyas and Setyaningrum (2018), and Suhardjanto et al. (2018), who find that accountability has a negative effect on the level of corruption. This research is in line with Heriningsih (2014), who find no significant impact of accountability on the level of corruption. Thus, this study might not be able to provide empirical evidence on the effectiveness of accountability to reduce the corruption indication in the local government in Java island.

The study also investigates the effect of accountability on the three aspects of corruption indication. Table 2 shows that accountability has a negative effect on regional losses. This result confirms the expectation that accountability has effectively reduced the level of regional losses in the local government. Therefore, the higher level of accountability score will have to reduce the level of regional losses. The result of the study confirms the expectation that accountability negatively affects regional losses in case of regional preventive losses, the result of the study in line with Ferraz and Finan (2011), Lederman et al. (2005), Rahayuningtyas and Setyaningrum (2018), and Suhardjanto et al. (2018). On the other hand, accountability has a positive effect on the potential regional losses in the local government. The result of the study shows that both fiscal decentralization and accountability have a positive effect on the potential regional losses. Further, the current study found no significant effect of accountability on the revenue deficiency.

Table 2 also shows the effect of the control variable on the corruption indication. The economic level has no significant effect on corruption indication. Therefore, the change in economics level will not have a significant effect on the change of corruption indication level. This result strengthens the three aspects of corruption indication: regional losses, potential regional losses, and revenue deficiency in the local governance. The change in economic level has no effect on regional losses, potential regional losses, and revenue deficiency in the local governance. Furthermore, the human development index also has no significant effect on the corruption indication. The human development index does not give significant pressure to reduce the corruption level. The next statistical testing on the effect of the human development index on the three aspects of corruption indication also provides no significant effect. The change in the human development index does not affect regional losses, potential regional losses, and revenue deficiency. The local government size has a positive

effect on the corruption indication. The local government with bigger size have more probability of higher corruption indication. Thus, corruption is more likely to happen in the bigger size of local government. This result robust to three aspects of corruption indication: regional losses, potential regional losses, and revenue deficiency.

### 5. Conclusion

This study investigates the effect of fiscal decentralization and accountability on the corruption indication in the local government in Java island, Indonesia. The result of the study shows that fiscal decentralization has a negative effect on corruption indication. Thus, the higher level of fiscal decentralization will have a positive effect on anti-corruption. Based on this result, it is important to increase the level of fiscal decentralization to reduce the level of corruption indication. This negative effect of fiscal decentralization also happened to regional losses and revenue deficiency.

The study does not find evidence of the negative effect of accountability on the corruption indication. The accountability does not become strong enough to motivate for lower corruption indication. However, accountability able to reduce the number of regional losses. The higher accountability score will have a positive effect on the local revenue, the value of regional losses decreases. This result partially supports the importance of accountability to reduce the corruption level. Accountability has a significant effect on revenue deficiency. Both fiscal decentralization and accountability have a positive effect on the potential regional losses. Thus, it is important to monitor the potential regional losses.

The implication of the study is, first, the importance of fiscal decentralization to reduce the corruption level. Although recently, a lot of regional heads have been implicated by corruption cases. However, it is important to encourage more fiscal decentralization. There is a mechanism to reduce corruption, as suggested by Olken (2007), that government audits have an important function to reduce corruption. Better government audit function will help the fiscal decentralization to reduce the corruption level. Second, although accountability has no significant effect on the corruption indication. However, it has significantly reduced regional losses. It is suggested that government still give more emphasis on accountability to reduce regional losses.

The limitations of the study were: first, the study focuses on the Java island only. According to Kuncoro (2002) shows that Java and non-Java have a different patterns of characteristics. Therefore, it is suggested for future studies to analyze the effect of fiscal decentralization and accountability on the corruption indication using local government in Indonesia. Second, the study focus on the two aspects, both fiscal decentralization, and accountability, of determinants of corruption indication in Indonesia. Therefore, it is suggested for future studies to analyze other factors of determinants of corruption.

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