

FINANCIAL DISTRESS, REGIONAL INDEPENDENCE AND CORRUPTION: AN EMPIRICAL STUDY IN INDONESIAN LOCAL GOVERNMENTS

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Abstract

This study aims to determine the effect of financial distress and regional independence on the probability of corruption in the local governments, Indonesia. This study used panel data of local governments in Indonesia in 2012 and 2013 with 785 local governments. Data in 2012 and 2013 was used since the trial process for fraud cases takes a long time to get to the permanent legal power decision (inkracht). Data were analyzed using logistic regression analysis. The study results found that financial distress did not affect the probability of corruption. In contrast, regional independence positively affected the likelihood of corruption in the local governments, Indonesia. If the regional independence is high, then the probability of corruption in the local government is also high, vice versa. The study findings were also robust in an independent analysis when the additional test was carried out. Empirically, this study found that the independence of funding sources, independence ratios to meet regional needs, and regional income could be used to detect corruption in Indonesian local governments. While the budget solvency ratio, financial performance ratio of budget, the financial performance ratio of fund equity, and regional financial efficiency could not. The pressure to commit corruption occurs because the region is in an independent state. Therefore, supervision of the implementation of fiscal decentralization needs to be done so that corruption does not happen.

Keywords: *Financial distress, regional independence, corruption, local governments.*

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INTRODUCTION

Corruption is one of the major problems that occur in Indonesia. During 2016, there were 482 cases of corruption in local governments, with a total of 1.101 suspects and a total State government loss of Rp1.45 trillion (Indonesian Corruption Watch, 2017). Although, when compared to other countries, Indonesia is ranked 90 out of 180 countries with a Corruption Perception Index (CPI) score of 37, this score is still below the global average score of 43 (Transparency-International, 2017). It means that corruption is a severe problem that must be addressed in Indonesia.

In the effort to eradicate corruption, the government made improvements ranging from business processes to improvements at the institutional level by setting clear regulations. Issuance of Government Regulation No. 8/2006 concerning Financial Reporting and Performance of Government Agencies is an example of government efforts to encourage government agencies in Indonesia to manage state finances accountably and transparently. The government, assisted by the Corruption Eradication Commission and the judiciary, also takes action against the perpetrators of corruption. In addition, the Audit Board of the Republic of Indonesia (BPK-RI) also issued 100 State Financial Examination Standard Statement No. 20-24 concerning Consideration of Non-compliance, Fraud, and Non-compliance in the State Financial Examination. This standard requires auditors to identify and assess fraud risk factors in their assignments to detect corrupt behavior. However, the number of corruption cases that continue to increase from year to year shows that corruption is still a severe problem in Indonesia that cannot be overcome.

The causes of corruption are various and complex (Tuanakotta, 2016). However, Dorminey et al. (2010) found that academics and practitioners always explained the reasons for corruption using Cressey's fraud triangle theory framework. It is due to fraud triangle theory can explain fraud behavior both at the individual level (Ramamoorti, 2008) and organizational level (Dellaportas, 2013). According to this theory, pressure is a common motivator for trustees to betray the trust by committing unlawful acts, such as embezzlement, corruption, and others. The pressure to commit corruption occurs when individuals cannot share problems with others because of shame and/or legal consequences or social sanctions when the problem is known by others (Cressey, 1953). The results of Cressey's study (1953) on 281 inmates, namely perpetrators of fraud in the organization, found that unlawful acts occurred when the trustee was in an under-pressure situation, namely the condition when the organization experienced financial difficulties and conditions when the organization's managers made a wrong decision.

Studies on pressure factor that encourages trustees to commit fraud are mostly conducted in business entities. For example, the studies conducted by Power (2013), Dorn (2010), Sikka (2010), Lou & Wang (2009) found that fraud occurred when companies failed to meet capital market expectations. While the studies conducted by Lou and Wang (2009), Skousen et al. (2009), Sikka & Hampton (2005), and Albrecht et al. (2004) found that fraud occurred when companies were unable to compete with other companies in similar industries. The pressure to commit fraud in the business entity was assessed by the researchers using financial and non-financial information obtained from the company's financial statements.

Unfortunately, the results of empirical studies on the pressure to commit fraud in these business entities cannot be directly applied to government entities. There are differences between the objectives of business entities and governments, so that organizational performance between the two entities should be assessed in different ways (Allison, 2004; Shafritz et al., 2011). In business entities, organizational performance is evaluated by maximum profits achievement so that service pressure exists on the efficiency achievement aspect Skousen et al. (2009). On the other hand, the performance of government entities is assessed by whether the budget is managed for the provision of public services or not (Cohen et al., 2012; Ritonga et al., 2012). The difference may have an impact on different conditions that suppress fraud or corruption in the two entities. Thus, a study on the pressure to commit corruption in local government needs to be conducted.

In Indonesia, corruption arises when someone intentionally commits an unlawful act to enrich himself or another person or corporation, harming the financial or economic state (Law No. 20 of 2001). This study aims to determine the pressure factor to commit corruption in local governments, Indonesia. This study tries to answer what conditions can encourage corruption in local governments, Indonesia. Two conditions will be tested in this research. The first condition is financial distress, a condition that occurs when local governments cannot maintain service quality and meet the community's needs (Jones & Walker, 2007; Kloha et al., 2005). Studies on business entities, such as those conducted by Power (2013), Lou & Wang (2009), Skousen et al. (2009), have found empirical evidence that during the condition of financial distress, companies tended to cheat to hide the condition of financial difficulties. However, whether financial distress also encourages corruption in local governments is still a study question. The second condition is regional independence. It is a condition when local governments are not vulnerable to funding sources beyond their control, both from national and international sources (CICA, 1997). Independent areas have significant funding sources to meet the needs of their regions (Ritonga et al., 2012). In Indonesia, local governments can regulate and manage their regions by making public service programs without interference from the central government due to decentralization policy. However, Chang & Geoffrey (2002) found that decentralization made the local government budget absorption focus on maximizing the personal and/or certain group's dominant interests in the organization. This condition led to corrupt practices occurring in the central government and spreader to local governments (Puspitasari & Suwardi, 2016). Therefore, this study also tries to provide empirical evidence to answer the question of whether regional independence encourages corruption in local governments, Indonesia.

So far, researchers in the field of Accounting and Finance in government entities only focused on efforts to identify accounting changes within government organizations rather than examining corruption (Jacobs, 2005; Stalebrink & Sacco, 2007; Goddard, 2005 & Heald, 2005). Thus, only a few studies on corruption in government entities (Stalebrink & Sacco, 2007). The topic of fraud or corruption in Indonesia has been studied by Muhtar et al. (2018), Maria & Gudono (2017), Ganie-Rochman & Achwan (2016), and (Arifin et al., 2015). This study intends to improve the weaknesses of dependent variable measurement in Maria & Gudono's (2017) study that assessed corruption from cases in the investigation and/or judicial processes. Corruption cases that are still in the investigation and/or justice processes certainly still have the opportunity to obtain a

decision of not a corruption act. It might provide different findings on factors that suppress corruption in the governments, Indonesia. Therefore, this study measured corruption by looking at corruption cases with permanent legal force (*inkracht*).

The study samples were local governments at the district and city levels during the 2012 and 2013 fiscal years, with a total sample of 785 local governments. The selection of the 2012 and 2013 fiscal years was carried out because, in Indonesia, the trial process for fraud cases takes a long time to get to the permanent legal power (*inkracht*) decision. In Indonesia's judicial process, the defendants have the right to pursue legal efforts ranging from ordinary trials, appeals, and cassation (Maria et al., 2019a; Maria et al., 2019b). Therefore, the local governments' corruption cases in those years with *inkracht* decision can be used as a sample of this research. Data were analyzed using logistic regression analysis. The study results found that the condition of regional independence positively affected the probability of corruption in local governments, Indonesia. In contrast, financial distress was found not to affect the likelihood of corruption in Indonesia's local governments. These findings were also robust in a separate analysis of all variables used as a proxy for measuring financial distress and regional independence. Additional testing results found that only the independence of funding sources, the ratio of financial independence to meet local needs, and the amount of regional income that could detect corruption in local governments, Indonesia.

This study provides several contributions. First, it contributes to the development of accounting and auditing in the public sector. It provides empirical evidence that the usefulness of the information available in financial statements is to detect pressure for corruption in local governments. Second, it contributes to the auditors; the study results provide a red flag of regions with high potential for corruption. As a result, auditors will be more skeptical in preparing audit procedures and processes to detect corruption. Third, it contributes to the community to supervise areas that have a high potential for corruption.

Identification of events or conditions that suppress corruption in local governments, Indonesia, in this research used a framework of fraud triangle theory (Cressey, 1953). This theory is used because it has been proven effective in explaining the phenomenon of fraud both in going public companies Skousen et al. (2009); Suyanto (2009) and in the local governments (Maria & Gudono, 2017; Muhtar et al., 2018). According to the fraud triangle theory, pressure is the main factor that encourages a person to do something (Cressey, 1953). It occurs since individuals as trustees have problems that cannot be told to others, and the problems are believed to be resolved if the individuals commit fraud. Therefore, considering the example of pressure cited in the Statement on Auditing Standards (SAS) No. 99 and referring to previous studies on fraud or corruption, the study hypothesis developed.

The studies conducted by Lou and Wang (2009), Skousen et al. (2009), and Suyanto (2009), described financial pressure that occurred if there were performance targets expected by organizations and third parties that were not achieved or known as financial distress. Financial targets and demands from external parties based on SAS No. 99 are the component of the pressure to commit fraud according to the fraud triangle theory. In local governments, the condition when performance targets are not achieved is known as financial distress. Local governments cannot provide public services following quality standards due to the unavailability of funds (Cohen et al., 2012; Jones & Walker, 2007). During financial distress, local governments

can make regional loans regulated in Government Regulation No. 30 of 2011. However, Maria & Gudono (2017), Maria et al. (2018) found that local governments preferred to revise the budget rather than make loans in financial distress. The more funds from the loan, the more the burden of the Regional Expenditure Budget when the loan was due. Budget revisions are common practices (Suyanto, 2009). However, the budgeting process in the local governments is political and strong political power in the decision-making process, and it makes corruption easy to occur during the process (Abdullah, 2012; Isaksen, 2005; Maria & Halim, 2020). Therefore, to examine the relationship between financial distress and corruption in local governments, Indonesia, the first hypothesis of this study is stated as follows:

H1: When the local governments are in a state of financial distress, the probability of corruption is increasing.

Lou & Wang (2009) also identified pressures to commit fraud in business entities when the economy and industry threatened financial stability. According to the fraud triangle theory, economic stability based on SAS No. 99 is also a component of pressure to commit fraud. In local governments, economic stability refers to the condition of the region's economic development as measured by the size of regional income (McConnell et al., 1999; Rodrik, 2000). Independent regions do not rely on the transfer of funds from the central or provincial government. This is because they have a high regional income to financing their programs (Ritonga et al., 2012; Perwita Sari et al., 2018). According to resource dependency theory, organizations whose lives depend on outside funding sources will usually tend to be more obedient to orders from funders (Pfeffer & Salancik, 1978). In the local government, regions whose lives depend on subsidies from the central/provincial government tend to be more obedient to orders from the central/provincial government. Still, it is not applied to independent regions (Gudono, 2017). The decentralization leads corrupt practices to be spread from the central government to local governments (Puspitasari & Suwardi, 2016; Maria & Halim, 2020). Independent regions tend to commit fraud in their regional budgets and expenditures (Syurmita, 2014). Uptake of funds in the autonomous areas is more widely used to fund personnel expenditure than for regional development activities and/or public service activities (CICA, 1997; Setyaningrum & Safitri, F, 2012; Syurmita, 2014; Maria et al., 2019a). Therefore, to examine the relationship between regional independence and corruption in the local governments, Indonesia, the second hypothesis of this study is stated as follows:

H2: When the local governments are in an independent condition, the probability of corruption is increasing.

RESEARCH METHOD

The population of this study was all local governments in Indonesia. The samples were limited to the local governments at the district and city levels during the 2012 and 2013 fiscal years. The selection of the 2012 and 2013 fiscal years was carried out because there were many corruption cases in the local governments in those years that had permanent legal power (inkracht). The

research sample was selected using the purposive sampling method based on two criteria. First, the local government that has been audited by the Audit Board of the Republic of Indonesia. Second, the type of audit is a financial statements audit. The composition of the study samples is presented in Table 1. The data used in the analysis were secondary. Local government data on corruption cases were obtained from the Supreme Court. Other data in independent variables were collected from the Audit Board of the Republic of Indonesia. The corruption cases observed in this study were corruption cases in the Regional Budget in the 2012 and 2013 fiscal years.

Table 1: Composition of research samples

Panel A: Sample Selection	
Local government financial reports in 2012-2013	1.016
Less:	
Local government financial reports in 2012 that did not present the complete data	116
Local government financial reports in 2013 that did not present the complete data	115
	(231)
The number of observations of this study	785

Panel B: Classification of Local Government Corruption and Non-Corruption Samples						
	The fiscal Year 2012		The fiscal Year 2013		Total	
	n	%	n	%	n	%
Local government corruption	182	46,43	191	48,60	373	47,52
Local government non-corruption	210	53,57	202	51,40	412	52,48
Total	392	100	393	100	785	100

A summary of operational definitions and measurement of variables in this study are presented in Table 2.

Corruption in Local Government, Indonesia as a Dependent Variable: This study used the definition of corruption as regulated in Law No. 20 of 2001 concerning Amendments to Law No. 31 of 1999 concerning Eradication of Corruption in Article 2, which states:

“Every person who unlawfully commits an act of enriching himself or another person or a corporation that can harm the State's finances or the State's economy is punished...”.

In this study, corruption was measured by giving a score of 0 for local governments that did not commit corruption and a score of 1 for local governments that committed corruption based on the decision of the Supreme Court (MA) on corruption cases that occurred in local governments, Indonesia in 2012 and 2013 fiscal years.

Financial Distress and Regional Independence as Independent Variables: This study used two independent variables. The first independent variable was financial distress. The size of the condition of financial distress in business entities is well established. Still, the difference in the organizational environment between business entities and government entities makes the financial

distress condition between the two entities different. Studies on the financial condition measurement in the local governments have been carried out since the 1980s by many researchers.

Table 2: Measurement of Variable

Variable	Proxy	Code	Measurement	Reference
Corruption	Corruption	CORRUP	The 0 scores for local governments that did not commit corruption and 1 score for local governments committed corruption.	Supreme Court 2018
Financial distress	Budget solvency	TREXP	Total Regional Revenue is divided by Total Regional Expenditure.	BPK-RI 2014, 2013
	Financial performance of the budget	PER _{GW}	The difference between Total Regional Revenue and Total Regional Expenditure is divided by Total Regional Revenue.	
	Financial performance of the fund equity	PER _{FUND}	The difference between Total Revenue and Total Expenditure is divided by Total Fund Equity.	
Regional Independence	Regional Financial Efficiency	ETR	The total realization of Regional Expenditures is divided by the total realization of Regional Revenues.	BPK-RI 2014, 2013
	Independence of funding sources	PADTR	The Regional Origin Revenue is divided by Total Regional Revenue.	
	Independence of fulfillment of regional needs	PADEXP	The Regional Origin Revenue is divided by Total Regional Expenditure	
	Regional Origin Revenue	PAD	Natural logarithm of regional tax results, regional retribution results, management of separated regional assets, and other legitimate regional original revenue.	
Control	Regional Size	SIZE	The number of Regional Work Units.	BPK-RI 2014, 2013

However, there has been no agreement on the criteria to measure local governments that experience financial distress (Ritonga, 2014). This study used financial ratios such as previous study findings to measure financial distress in local governments. The financial ratios used to measure financial distress are presented in Table 2, namely budget solvency ratio (Ritonga et al., 2012), the financial performance ratio of budget, and financial performance ratio of fund equity (Jones & Walker, 2007; Atmaja, 2012; Sutaryo. et al., 2010) and regional financial efficiency ratios (Atmaja, 2012). The higher the value of the budget solvency ratio means that the financial performance ratio of the budget and financial performance ratio of fund equity of the local government is in good condition. Still, the higher value of the regional financial efficiency ratio shows that the local government is inefficient.

The second independent variable was the condition of regional independence. This study used the regional independence ratio of funding sources, the regional independence ratio of the meeting of regional needs, and the size of regional income as a proxy to measure the condition of

regional independence. The level of regional independence shows regional dependence on external funding sources (Ritonga et al., 2012). Regional autonomy can also be demonstrated by the extent to which regional income can meet the regional needs Ritonga et al. (2012) and the amount of regional income owned (Syurmita, 2014). The higher the regional independence ratio means the level of regional dependence on external funding sources is lower.

Control Variable: A strong correlation between the size of the organization and fraud was indicated by previous studies such as conducted by Beasley (1996), Bonner et al. (1998), Lou & Wang (2009). Large organizations usually had a better internal control system than smaller organizations (O'Reilly et al., 1998), so fraud's tendency would be lower in large organizations (Bonner et al., 1998; Beasley et al., 1999; Lou & Wang, 2009). The organization's size in this study used a proxy of Regional Work Units (SKPD)¹. This proxy was chosen according to Setyaningrum & Safitri (2012). SKPD shows the level of functional differentiation in local government, namely the condition to which the organization is divided into functional departments.

This study used analytical tools: **first**, compared two sample groups, namely local governments that committed corruption and did not commit corruption using the Wilcoxon-Signed Rank Test. Second, the test results were used to ensure two similar sample groups were used for further tests. Third, criteria for comparison of 2 sample groups used criteria such as those used in the study conducted by Skousen et al. (2009) and Suyanto (2009), which was based on the organization's size. Finally, this study used the number of Regional Work units as a proxy to measure the organization's size in the local governments.

Second, a hypothesis test was carried out using logical regression analysis (Hair et al., 2011). Logistic regression analysis was chosen because this study analyzed the dependent variable, which had the possibility of between 1 and 0 (corruption or non-corruption). This analysis was used to determine the effect of financial distress and regional independence on the probability of corruption in the local governments, Indonesia. A partial regression coefficient test in the logistic regression model was done using Wald Test statistic with a significance level (α) of 5%. If the significance value was <0.05 , the regression coefficient was significant, and the study hypothesis was supported. The logistic regression model that was tested in this study is presented in equation 1 below:

$$CORRUP_{it} = \beta_0 + \beta_1 FD_{it} + \beta_2 RI_{it} + \beta_3 SIZE_{it} + \varepsilon_{it} \dots\dots\dots (1)$$

CORRUP is a local government where there are corruption cases that have permanent legal force (inkracht), i is the district/city local government, t is the year, β_0 is a Constanta, β_1 - β_2 is the coefficient of the independent variable, β_3 is the coefficient of the control variable; financial distress (FD), regional independence (RI), regional size (SIZE).

¹ Regional Work Unit (SKPD) is a regional unit in local government as the user of budget/goods (Minister of Home Affairs Regulation No. 21/2011). Since the implementation of Government Regulation No. 18/2016 concerning Regional Unit there was a change in the name or term of SKPD that became Regional Unit Organization (OPD). This study used the term SKPD to call the regional unit since the observation year of this study was 2012 and 2013 fiscal years.

The formation of a score of independent variables in this study used a weighted average of the scores of the variable forming dimensions to be measured, such as score formation as used by the United Nations Development Program (UNDP) when forming the Human Development Index (HDI)². The variable financial distress and regional independence scores were calculated using the formula in equation 2 and 3 below:

$$FD = \frac{1}{4}(TREXP + ETR + PER_{GW} + PER_{FUND}) \dots\dots\dots (2)$$

$$KD = \frac{1}{3}(PADTR + PADEXP + PAD) \dots\dots\dots (3)$$

FD is financial distress, RI is regional independence, budget solvency (TREXP), regional financial efficiency (ETR), the financial performance of the budget (PERGW), financial performance of funds equity (PERFUND), independence of funding sources (PADTR), independence of fulfillment of needs area (PADEXP), local revenue (PAD).

Third, an additional test was carried out to assess the robustness of the results of previous tests, namely conditions that suppressed corruption in local governments by testing all independent variable forming proxies of this study using logistic regression analysis so that it can be known what financial ratios that could be used to detect corruption in local governments, Indonesia. The logistic regression model for the additional test is presented below.

$$CORRUP_{it} = \beta_0 + \beta_1 TREXP_{it} + \beta_2 PER_{GW_{it}} + \beta_3 PER_{FUND_{it}} + \beta_4 ETR_{it} + \beta_5 PADTR_{it} \dots\dots (4) \\ + \beta_6 PADEXP_{it} + \beta_7 PAD_{it} + \beta_8 SIZE_{it} + \varepsilon_{it}$$

CORRUP is a local government where there are corruption cases that have permanent legal force (inkracht), i is the district/city local government, t is the year, β_0 is a Constanta, β_1 - β_7 is the coefficient of the independent variable, β_8 is the coefficient of the control variable; budget solvency (TREXP), regional financial efficiency (ETR), the financial performance of the budget (PERGW), financial performance of funds equity (PERFUND), independence of funding sources (PADTR), independence of fulfillment of needs area (PADEXP), local revenue (PAD), regional size (SIZE).

RESULTS AND DISCUSSION

Result

Table 3 presents descriptive statistics of local governments that committed corruption and did not commit corruption. The results of descriptive statistics showed that 373 local governments committed corruption and 412 local governments that did not commit corruption. The mean values

²Human development index (HDI) was used to measure the overall achievement of a State based on three dimensions of human development, namely life expectancy, knowledge, and gross domestic product (Central Bureau of Statistics, 2004).

of the Regional Work Unit for local governments that committed corruption and did not commit corruption were 50.38 and 49.30, respectively, with a standard deviation of 19.17 and 21.50. The values indicated that the regional size variable with the proxy of Regional Work Unit had fewer variable data. The most significant number of Regional Work Units was the Buton District, Southeast Sulawesi, with 212 Regional Work Units. At the same time, Banjar District, South Kalimantan, had the least number of Regional Work Units as many as 17 Regional Work Units. The test results of 2 sample groups found the Z Wilcoxon-signed rank test value of 1.679 and p-value = 0.093. This value meant no difference in the size between the corruption and non-corruption local government sample groups, so the samples were suitable for this study.

Table 3: Descriptive statistics and the results of the Wilcoxon-signed rank test

		Local government corruption (n=373)	Local government non-corruption (n=412)
Regional Work Units	Mean	50.38	49.30
	Median	48.00	44.00
	Standard deviation	19.17	21.50
	Maximum	179	212
	Minimum	17	18
Z Value Wilcoxon Test = 1,679			
p-value= 0,093			

*Note: SIZE: regional size, * significant at p <0.05.*

Source: data processed

The hypotheses test in this study was carried out using logistic regression analysis. Table 4 presents the hypothesis test results of this study. Based on the test results on the model using the G test statistic, the value of the G test statistics was 521.535 and p-value = 0.000. Since the p-value was <0.05, then H₀ was rejected, which meant that there was at least one independent variable that affected the fraud incidence in Indonesia's local governments. Because the simultaneous model test rejected H₀, it can be partially tested using the Wald test to determine the accuracy of the partial model test. The test result found that financial distress (0.199) did not affect Indonesia's probability of corruption in local governments. Thus, H₁ was not supported. On the other hand, the hypothesis test results found empirical evidence that regional independence (0.000) had a positive effect on the probability of corruption in local governments, Indonesia, so H₂ was supported.

The R² value of 0.648 showed that financial distress and regional independence explained the situation/condition that caused corruption in the local governments, Indonesia of 64.8 percent, while the rest of 35.2 percent was explained by other variables outside this study. The accuracy of the opportunity function model in logistic regression can be seen based on the accuracy of the model in the classification of study objects (Gudono, 2012). Table 5 shows corruption incidence in local governments, Indonesia, which can be appropriately qualified and wrongly qualified. Four hundred twelve local governments were predicted did not commit corruption. Still, observations showed that only 347 local governments did not commit corruption, while the remaining 65 local

governments were incorrectly predicted as local governments that committed corruption. So, the accuracy of the prediction of non-corruption was 347/412 (84.2 percent).

Table 4 Hypothesis Testing Results

$$CORRUP_{it} = \beta_0 + \beta_1 FD_{it} + \beta_2 RI_{it} + \beta_3 SIZE_{it} + \varepsilon_{it}$$

Variable	B	Wald	Significant	Odds Ratio
Financial distress	1.585	1.649	0.199	4.878
Regional independence	7.733	194.192	0.000*	2281.719
Control: SIZE	-0.033	31.885	0.000*	0.967
Constant	-63,433	196.350	0.000*	
LR Index = 521.535 (p<0.000)				
Pseudo R ² = 0.648				

Note: SIZE: regional size, * significant at p < 0.05.

Source: data processed

Meanwhile, the local governments predicted to commit corruption were 373, but observations showed that only 310 local governments committed corruption. Meanwhile, the remaining 63 local governments were incorrectly predicted as local governments that did not commit corruption. So, the accuracy of the prediction of corruption was 310/373 (83.1 percent). Thus, overall, the model predicted the accuracy of corruption prediction in local governments, Indonesia, by 83.7 percent.

Table 5. Accuracy of Model Predictions

Observed		Predicted		Percentage Correct
		Corruption	Non-Corruption	
Corruption	Non-Corruption	347	65	84.2
	Corruption	63	310	83.1
Overall Percentage				83.7

Source: data processed

An additional test was carried out to assess the robustness of conditions that suppress the corruption incidence in the local governments resulting from the previous test by testing all proxies that form financial distress and regional independence in the probability of corruption in local governments, Indonesia. Tests were carried out by logistic regression analysis. The test results are presented in Table 6.

Based on the results of an additional test, the variables of independence of funding sources, independence of meeting regional needs, and regional income were variables that provided consistent results in influencing the probability of corruption in local governments, Indonesia. This result is consistent with the previous test, which showed that other variables that were the proxies for measuring financial distress in local governments, such as budget solvency, financial performance of the budget, financial performance of fund equity, and regional financial efficiency, were significantly found not to affect corruption. This study finding is in line with the study conducted by Maria et al. (2018). They found that fraud in the local governments, Indonesia could

be detected by the ratio of funding sources independence, independence ratio to meet the regional needs, and the amount of regional income.

Table 6 Additional Testing Result

$$CORRUP_{it} = \beta_0 + \beta_1 TREXP_{it} + \beta_2 PER_{GW_{it}} + \beta_3 PER_{FUND_{it}} + \beta_4 ETR_{it} + \beta_5 PADTR_{it} + \beta_6 PADEXP_{it} + \beta_7 PAD_{it} + \beta_8 SIZE_{it} + \varepsilon_{it}$$

Variable	B	Wald	Significant	Odds Ratio
Financial distress				
TREXP	-6.222	0.568	0.451	503.661
PER _{GW}	-0.677	0.044	0.834	0.508
PER _{FUND}	-0.171	0.346	0.620	1.187
ETR	-0.073	0.000	0.993	0.929
Regional independence				
PADTR	62.771	6.823	0.009*	4.958
PADEXP	48.566	4.376	0.036*	0.000
PAD	2.297	67.367	0.000*	9.9941
Control: SIZE	-0.032	23.722	0.000*	0.968
Constant	-62.491	12.252	0.000*	
LR Index = 535.602 (p<0.000)				
Pseudo R ² = 0.660				

Note *TREXP*: budget solvency; *PER_{GW}*: financial performance of the budget; *PER_{FUND}*: financial performance of fund equity; *ETR*: regional financial of efficiency; *PADTR*: independence of funding sources; *PADEXP*: independence of fulfillment of regional needs; *PAD*: regional origin revenue; *SIZE*: regional size, * significant at p<0.05.

Source: data processed

Discussion

The Effect of Financial Distress on The Probability of Corruption in the Local Governments

The first hypothesis states that when local governments are in a state of financial distress, the possibility of increased corruption is not supported when empirical testing is carried out. The pressure of corruption in the local governments, Indonesia was not caused by the financial distress condition of the local governments. The study finding was in contrast with the results of studies on fraud conducted in to go public companies, as performed by Lou and Wang (2009), Skousen *et al.* (2009), Suyanto (2009). Fraud pressure in business entities arisen when companies were in a state of financial distress because fraud was committed to hide the temporary difficulties experienced by the companies so that investors and creditors still wanted to invest funds in the companies. Unlike in business entities that tend to hide financial distress, local governments report the condition of the region as it is. The performance in local government is measured from budget uptake for public service activities. When the local government is in a state of financial distress, the local government tends to report the actual conditions so that the central/provincial government can provide financial assistance. This result is in line with Maria *et al.* (2018) research findings that there are differences in fraud pressure between local governments and business entities.

The Effect of Regional Independence on The Probability of Corruption in The Local Governments
The second hypothesis states that when the local governments are in an independent condition, the probability of corruption increases, which was supported when empirical testing is carried out. The pressure to commit corruption in local governments was due to the good regional economic stability, as indicated by the increasing value of the regional autonomy ratio and regional income. A positive correlation between regional independence and corruption showed that the more independent the region, the higher the probability of corruption in the local government. This study finding is in line with the discovery of the studies conducted by Chang & Geoffrey (2002), Syurmita (2014), Setyaningrum & Safitri (2012), Maria et al. (2018), Maria et al. (2019a) that independent region tended to commit fraud or corruption in their regional budgets. This is because the uptake of the budget would be more widely used to fund personnel expenditure rather than for regional development activities and/or public service activities.

The implementation of decentralization policy also exacerbated corrupt practices in Indonesia's local governments (Puspitasari & Suwardi, 2016; Maria et al., 2019a; Maria & Halim, 2020). The full authority given by the central government to the local government leads to an independent region, that is, an area whose life is not dependent on subsidies from the central/provincial government, which tends to be disobedient to the rules (Gudono, 2017). This freedom is misused to corrupt practices by creating programs that focus on maximizing specific personal and/or group interests dominant in the organization rather than in the public interest (Chang & Geoffrey, 2002; Hartono et al., 2014; Syurmita, 2014). This result is evidenced by Indonesia's number of corruption cases involving regional heads and legislative leaders (Maria & Halim, 2020). KPK data (2019) shows that throughout 2004-2019, 119 regional heads were acted upon by the KPK and have been proven to commit corruption.

Independent or prosperous regions have a lot of regional income (Syurmita, 2014), so that the regions may have an unused budget (surplus). However, unlike business entities that assess surplus as management achievement, the surplus in the local government is not preferred. According to Abdullah (2012) and Gosling (2015), a surplus signal that local governments are not working optimally in providing public services. This signal makes local governments spend surplus by doing corruption and raising additional programs outside public preferences (Hartono et al., 2014). Therefore, supervision of the implementation of fiscal decentralization is necessary so that corruption does not occur in the local governments (Wu, 2005; Maria et al., 2019a; Maria & Halim, 2020). As expected, the size of the region was significantly and negatively correlated with corruption, as has been demonstrated in the studies conducted by Bonner et al. (1998), Beasley et al. (1999), Lou and Wang's (2009).

CONCLUSIONS

This research aims to test the conditions that supported corruption in local governments, Indonesia. Three hundred seventy-three local governments committed corruption, and 412 did not commit

corruption. Local governments were used to develop and test the logistic regression model to estimate the probability of corruption incidence in local governments, Indonesia. This study found that the condition of regional independence was a factor that pressured the trustees in the local governments to commit corruption. In contrast, financial distress was found not to affect corruption in local governments, Indonesia. Furthermore, there was a positive correlation between regional independence and corruption. This correlation means that the more independent the regions, the more the probability of corruption. The additional test found that funding sources independence, ratio to meet regional needs independence, and regional income could be used to detect corruption in local governments, Indonesia. While the budget solvency ratio, financial performance of the budget, financial performance of fund equity, and regional financial efficiency could not.

This research provides theoretical implications by finding empirical evidence that the pressure factor that is an element of fraud triangle theory (Cressey, 1953) is a condition/ situation that encourages corruption in Indonesia's local government. The pressure to commit corruption occurs because the region is in an independent state. Therefore, supervision of the implementation of fiscal decentralization needs to be done so that corruption does not happen. However, this study has the limitation that might be a matter of consideration for future studies. This study only examined the pressure factor to commit corruption in local governments, Indonesia, regarding financial pressure. In contrast, according to Murdock (2008), the pressures to commit fraud can be in the form of financial pressure, non-financial pressure, and socio-political pressure. Therefore, future studies can try to explore the factors that encourage people to commit corruption in local governments, for example, justice or tone at the top.

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