LOCAL GOVERNANCE AND CORRUPTION: EVIDENCE FROM INDONESIA

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Abstract

This paper examines the impact of local governance on corruption in the context of Indonesia after the decentralization policy which has been implemented following the institutional reforms after the economic damage and political crisis at the end of 1990s. More specifically, we investigate whether poor governance leads to higher non-compliance cases of local government, which can be considered as a proxy for corruption and rent seeking behaviors as a whole. We use data for 446 regions at the municipal/ district level over the 2008-2010 period. Controlling for some regional factors, we confirm that poor governance leads to higher non-compliant cases either number of cases or their amount. No difference effect is found between financially distress and non-distress regions. Our findings also reveal that there is no empirical evidence on the effect of corruption on economic growth. The Indonesian economy has continued to grow in recent years, during and after the global financial crisis, as huge domestic consumption props up growth even though corruption might have reduced private and local government investments. Promoting good local governance should be continued in many aspects as good governance mechanism, especially building a strong internal control system, could minimize the possibility of local officers in such regions engaging in corrupt behavior***.

Keywords: Local Governance, Corruption, Indonesia, Internal Control System, Non-Compliant Cases, Regional Growth

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****This paper is a part of a research project entitled "Local Governance, Rent Seeking and Regional Economies," which is funded by the United States Agency for International Development (USAID) through the SEADI project. We thank Sukarno Wirokartono, Herry Kameswara and seminar participants at Universitas Sebelas Maret for helpful comments and suggestions. All remaining errors are our own.*

1 Introduction

A long lasting debate in the economic literature on the effects of political influence on business and economics has yielded several seminal theories, such as the rent seeking theory (Krueger 1974) and the grabbing hand theory (Shleifer and Vishny 1994; 1998). Basically, these theories explain how political figures (politicians and bureaucrats) take advantage of their positions to obtain private benefits, which could be in the form of corruption, bribes, and other sources of private benefits[1].

Massive corruption still exists in Indonesia, even though several major improvements on regulatory changes, law enforcement, and local government autonomy have been implemented following the institutional reforms after the economic damage and political crisis at the end of 1990s, which impelled the country to become more democratic, decentralized, and deregulated (Henderson and Kuncoro 2011, Mursitama 2006). The reforms may have significantly improved the country's democratization and decentralization levels. However, they have also broadened the abuse of power. On the contrary, Fisman and Gatti (2002), in a cross-country study find that fiscal decentralization is negatively associated with corruption. The changes in political structure and the multiparty system have increased the number of corruption cases that involve local political figures in the executive and legislative branches as the control mechanism of the local parliament does not work properly. One phenomenon, prevalent in almost all regions in Indonesia as an impact of the large local autonomies, is the "little king," where local political figures possess the political power to play dominant roles in all aspects of life and also create corrupt bureaucracies. This coincides with the rent seeking theory (Krueger, 1974) and the grabbing hand theory (Shleifer and Vishny 1994), where bureaucrats and politicians behave in a self-interested way. Reducing and minimizing corruption is an important issue because the sale by government officials of government property for personal gain, almost the

[1] For more a detailed summary on political influence on business and economic see paper of Nys et al. (2015)

same with the definition of rent seeking (Shleifer and Vishny 1993), is an inhibiting and detrimental factor in economic growth (Sarte, 2001; Heckelman and Powell, 2010), because it creates unfair markets, constrains investments, and also directly reduces government spending for development purposes.

The present paper investigates the impact of governance of local government on corruption behavior at the regional level. More specifically, we investigate whether poor governance leads to higher non-compliance cases of local government, which can be considered as a proxy for corruption and rent seeking behaviors as a whole. We focus on the role of governance because poor public governance, more specifically in the budgeting and control systems, may create more incentives for local officers to take private benefits in the form of corruption. For example, in some cases in Indonesia, corruption comes from the exploitation of social aids that are designed in the government budget for the self-interests of local political figures and political parties. A number of empirical papers have also revealed that public governance is a major determinant to corruption (e.g. Aidt *et al*., 2008, Dreher *et al*., 2007).

Furthermore, we consider that the effect of governance on corruption depends on the financial condition of local government. Arguably, when a region is confronted with financial distress, incentives for rent seeking by local officers could be higher (Chen *et al*., 2011). Therefore, we argue that financial distress could be an exacerbating factor on the impact of poor governance on corrupt behavior. Going deeper, we also look at the impact of exogenous components of corruption, such as the effect of local governance on regional economies, measured by regional economic growth.

2 Methods

2.1 Data

To test our research questions, we study 446 Indonesian regions at the municipal/ district level over the period of 2008-2010, resulting in 854 region-year observations. We collect data from several sources. Our main sources are the financial reports of local governments, and the audit reports released by the Supreme Audit Council (*Badan Pemeriksa Keuangan*/ BPK). We also use some information from the Indonesia Statistics Bureau (BPS).

2.2 Variables

2.2.1 Corruption

We proxy corruption using two measures, the number of non-compliant cases (CASES) and the natural logarithm of amount of non-compliant cases (LNAMOUNT_CASES) as reported by the BPK in the audit report. Non-compliant cases consist of loss, potential loss, deficiencies of revenues, administrative, inefficiency, and ineffectiveness. We have attempted to collect data on real corruption cases from the Supreme Court, however, we are not able to trace when the corruption actually happens. Therefore, to avoid a time bias, we do not use this proxy. Finally, we employ the non-compliant cases, reported by the BPK in the audit report, as a measure of corruption.

2.2.2 Regional economic growth

As explain earlier, we also examine the effect of exogenous component of corruption which is local governance on regional economic, measured by regional economic growth.

2.2.3 Local governance

To measure local governance, we use two proxies as follows:

a. Internal control system (ICS). The internal control system represents how well the governments manage their internal control, especially with regard to their accounting control system and reporting, budget implementation control system, as well as the structure of internal control. Internal control in the central government and local governments are designed based on the PP No. 60/2008 on Internal Control Standards and Principle. An Internal Control System functions to provide reasonable assurance for achieving effectiveness and efficiency in financial reporting, safeguarding of assets, and compliance with laws and regulations. BPK reports the number of weaknesses on the ICS of local government in the audit report. We use this data as a proxy for local governance. Regions having more weaknesses on their ICS are considered to have poor governance.

b. Audit report (AUDIT). We also use the audit report of BPK as a measure of local accountability. BPK categorizes audit reports into four areas; unqualified (without opinion), qualified (with opinion), adverse, and disclaimer. We create a dummy variable for regions with unqualified audit reports. Local governments with financial reports that are categorized as unqualified can be considered to have good governance.

2.2.4 Financial distress (DISTRESS)

We use the *Debt Service Coverage Ratio* (DSCR) defined in the *PP No. 54/ 2005* to measure the financial distress of local government. A value of 1 is given for regions having DSCR<2.5 (financially distressed regions), and 0 otherwise. Financial distress could be a proxy for incentives for rent seeking because local governments facing a large fiscal deficit have a greater need to expropriate assets from enterprises (Chen *et al*., 2011).

We also interact DISTRESS with the proxies of local governance (ICS and AUDIT) to examine the moderating role of financial distress on the effect of local governance on rent seeking.

2.2.5 Control variables

We include a vector of variables to control for regional specificities. First, we include a natural log of regional revenue (LNREV) and a natural logarithm of total assets of local government (LNTA) to capture the economic size of the local government. Supposedly, the larger the region, the more the likelihood of corruption. We also take into account a set of dummy variables for islands where these regions exist.

2.3 Model

To test the effect of local governance on corruption, we develop this following specification:

$$CASES_{i,t} = \alpha_0 + \alpha_1 ICS_{i,t} + \alpha_2 AUDIT_{i,t} + \alpha_3 LNREV_{i,t} + \alpha_4 LNTA_{i,t} + \alpha_5 FD_{i,t} + \alpha_6 ICS*FD_{i,t} + \alpha_7 AUDIT*FD_{i,t} + \alpha_8 JAWA_i + \alpha_9 SUMATRA_i + \alpha_{10} KALIMANTAN_i + \alpha_{11} SULAWESI_i + \alpha_{11} EASTINDO_i + YEARS + \varepsilon_{i,t} \quad (1)$$

Where i, t represents region and time, respectively. YEARS represents a vector of year (time) dummies.

To estimate this equation, we use a pooled regression with time-fixed effects to control for time differences. We do not apply an individual fixed effects panel data technique as the individual fixed effect is close to the dummies for islands. However, we report the results when we change dummies for islands with individual fixed effects in the robustness check section.

To examine the impact of the exogenous components of corruption on economic growth, we specify the equation as follows:

$$GROWTH_{i,t} = \alpha 0 + \alpha 1 CASES_{i,t} + \alpha 2 LNREV_{i,t} + \alpha 3 LNTA_{i,t} + \alpha 4 JAWA_i + \alpha 5 SUMATRA_i + \alpha 6 KALIMANTAN_i + \alpha 7 SULAWESI_i + \alpha 8 EASTINDO_i + YEARS + \varepsilon i,t \quad (2)$$

We estimate equation 2, the impact of corruption on regional economic growth, using a two-stage least square (2SLS) technique that enables us to overcome the endogeneity problem because corruption is an endogenous variable in our model. The instrument variables for corruption are local governance proxies– internal control system (ICS) and audit report (AUDIT).

3 Results and discussions

Table 1 reports the descriptive statistics for variables. Table 2 presents the correlation matrix among variables. Our proxies of local governance are found to meet the expectations on their correlations with the proxies of corruption.

Table 1. Descriptive statistics

CASES is the number of noncompliant cases. LNAMOUNT_CASES is the amount of noncompliant cases. GROWTH is the regional economic growth (in percentage). ICS is the number of weaknesses on the internal control system. AUDIT is the audit report of local government budget, taking a value of 1 for regions with unqualified audit report. DISTRESS is a dummy of financial distress, taking a value of 1 for those facing financial distress. LNREV is the natural logarithm of region' revenue, while LNTA is the natural logarithm of total assets of local government.

	CASES	LNAMOUNT_CASES	GROWTH	ICS	AUDIT	DISTRESS	LNREV	LNTA
Mean	13.574	21.740	6.176	8.952	0.062	0.255	24.105	27.923
Median	13.000	21.860	5.690	8.000	0.000	0.000	24.006	27.943
Maximum	51.000	27.664	249.040	36.000	1.000	1.000	27.551	31.116
Minimum	1.000	14.798	-15.160	1.000	0.000	0.000	19.843	24.175
Std. Dev.	6.584	1.571	8.787	4.426	0.241	0.436	1.035	0.771
Skewness	1.204	-0.374	24.795	1.370	3.630	1.123	0.126	-0.669
Observations	854	854	854	854	854	854	854	854

Table 2. Correlation matrix

CASES is the number of noncompliant cases. LNAMOUNT_CASES is the amount of noncompliant cases. GROWTH is the regional economic growth (in percentage). ICS is the number of weaknesses on the internal control system. AUDIT is the audit report of local government budget, taking a value of 1 for regions with unqualified audit report. DISTRESS is a dummy of financial distress, taking a value of 1 for those facing financial distress. LNREV is the natural logarithm of region' revenue, while LNTA is the natural logarithm of total assets of local government.

	CASES	LNAMOUNT_CASES	GROWTH	ICS	AUDIT	DISTRESS	LNREV	LNTA
CASES	1							
LNAMOUNT_CASES	0.471	1						
GROWTH	0.021	0.003	1					
ICS	0.274	0.161	0.026	1				
AUDIT	-0.126	-0.077	-0.021	-0.062	1			
DISTRESS	-0.044	-0.014	0.044	0.034	-0.017	1		
LNREV	-0.130	-0.077	-0.070	-0.019	0.027	0.066	1	
LNTA	-0.103	0.035	-0.031	-0.014	0.068	0.068	0.750	1

Table 3 presents the regression results on the effect of local governance on corruption. Column 1 and 2 reports the results when the dependent variable is the number of noncompliant cases, while columns 3 and 4 present the results when we use the natural log of the amount (nominal value) of non-compliant cases as a proxy for rent seeking.

Table 3. Regression results of equation 1

CASES is the number of noncompliant cases. LNAMOUNT_CASES is the amount of noncompliant cases. ICS is the number of weaknesses on the internal control system. AUDIT is the audit report of local government budget, taking a value of 1 for regions with unqualified audit report. DISTRESS is a dummy of financial distress, taking a value of 1 for those facing financial distress. LNREV is the natural logarithm of region' revenue, while LNTA is the natural logarithm of total assets of local government. ICS*DISTRESS is the interaction between ICS and DISTRESS. AUDIT*DISTRESS represents the interaction between ICS and DISTRESS. The values in parentheses are standard errors. ∗, ∗∗ and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Non-Compliant Cases (CASES)		Amount of Non-Compliant (LNAMOUNT_CASES)	
	1	2	3	4
Weaknesses on Internal Control System (ICS)	0.366***	0.348***	0.051***	0.045***
	(0.046)	(0.059)	(0.006)	(0.006)
Audit Report (AUDIT)	-2.860***	-3.029***	-0.527**	-0.604**
	(0.356)	(0.555)	(0.219)	(0.272)
Financial Distress (DISTRESS)	-0.915	-1.657	-0.111	-0.376
	(0.596)	(1.245)	(0.150)	(0.325)
Natural Log Regional Revenue (LNREV)	-0.361	-0.367	-0.234**	-0.235**
	(0.312)	(0.301)	(0.097)	(0.094)
Natural Log Total Assets (LNTA)	0.100	0.118	0.445***	0.450***
	(0.527)	(0.537)	(0.117)	(0.117)
ICS*DISTRESS		0.076		0.027
		(0.106)		(0.019)
AUDIT*DISTRESS		0.741		0.355
		(0.674)		(0.424)
Constant	14.428**	14.282**	14.326***	14.266***
	(6.918)	(7.209)	(1.202)	(1.228)
Year dummies	Included	Included	Included	Included
Island dummies	Included	Included	Included	Included
Method	OLS	OLS	OLS	OLS
Number of Regions	446	446	446	446
Number of Observations	874	874	869	869
Period	2008-2010	2008-2010	2008-2010	2008-2010
R-Squared	0.119	0.12	0.083	0.084

We find strong evidence on our two measures of local governance. As expected, the higher the number of weaknesses in the internal control system (ICS), the higher the noncompliant cases, as well as the nominal value of noncompliant cases. Moreover, regions with unqualified audit reports are found to have fewer noncompliant cases, as shown by the negative coefficients of the audit report variable on our proxies for corruption. In general, our findings confirm that poor local governance is associated with corruption, in line with the findings of Aidt et al. (2008) and Dreher et al. (2007). Regions with poor governance might create more incentives for local officers to take private benefits in the form of corruption.

Turning to the moderating effect of the fiscal condition of regional government on rent seeking behaviors, we do not find evidence that budget deficits, proxied by financial distress, strengthen the impact of poor governance on corruption, which can be seen through the insignificant coefficients on the interactions between local governance measures and financial distress. These results do not confirm the findings of Chen *et al*. (2011), in the context of China, that financial distress could also be an exacerbating factor for rent seeking behaviors as it drives a greater need for local offices to seek private benefits.

Table 4. Regression results of equation 2

This table presents the regression results on the impact of corruption on regional economic growth. CASES is the number of non-compliant cases. LNAMOUNT_CASES denotes the amount of non-compliant cases. GROWTH is the regional economic growth (in percentage). ICS is the number of weaknesses on the internal control system. AUDIT is the audit report of local government budget, taking a value of 1 for regions with unqualified audit report. DISTRESS is a dummy of financial distress, taking a value of 1 for those facing financial distress. LNREV is the natural logarithm of region' revenue, while LNTA is the natural logarithm of total assets of local government.

	Dependent Var: GROWTH	
Non-Compliant Cases (CASES)	0.113	
	(0.167)	
Amount of Non-Compliant Cases (LNAMOUNT_CASES)		0.831
		(1.144)
Financial Distress (DISTRESS)	0.814	0.820
	(0.698)	(0.705)
Natural Log Regional Revenue (LNREV)	-1.108**	-0.990*
	(0.467)	(0.545)
Natural Log Total Assets (LNTA)	0.786	0.416
	(0.593)	(0.784)
Constant	9.128	-0.019
	(12.330)	(20.835)
Year dummies	Included	Included
Island dummies	Included	Included
Method	2SLS	2SLS
Number of Observations	859	854
Period	2008-2010	2008-2010
Wald	chi2(9) = 17.26 (0.04)**	chi2(9) = 17.39 (0.04)**

Table 4 presents the regression results on the impact of corruption on regional economic growth. Using a 2SLS method, our empirical results do not show that corruption is negatively correlated with economic growth as shown by insignificant coefficients of the proxies of corruption. It might not be too surprising in the context of Indonesia. Massive corruption in Indonesia might have constrained private investments and have reduced local government spending for development purposes. However, huge domestic consumption has kept the economy growing. Arguably, the Indonesian economy has continued to grow in recent years, during and after the global financial crisis, as huge domestic consumption props up growth, even though corruption might have reduced private and government investments.

We do some robustness checks to ensure the findings. First, we alternate the proxy of local governance to the transparency of local governments. We measured transparency based on the extent to which they disclose information on their website. We created an index that ranges from 0–15 to calculate the transparency of local government. However, we have to do our estimation via crosssection research, as we retrieved data only in one period. We find little evidence that transparency of local governments reduces incentives for corruption by local officers. Second, we exclude dummy variables for islands. This enables us to estimate our empirical model using a

fixed-effect panel data technique. The results are unchanged when accounting for our main variables. Third, we exclude regions in Java and Bali Islands, as these two islands are considered the most developed islands. For some variables, the coefficients are eroded. However, the results of local governance variables are consistent. Fourth, we orthogonalize the natural log of revenue and the natural log of total assets because their correlation is relatively high. Again, we still find consistent results on our main variables. Fourth, we orthogonalize the natural log of revenue and the natural log of total assets because their correlation is relatively high. Again, we still find consistent results on our main variables. Fifth, we change regional economic growth to investment growth (domestic and foreign) as the factor that is impacted by corruption. As the data on investment at the provincial level are not available, we do regressions at the provincial level. We find little evidence that corruption is negatively associated with investment growth.

4 Conclusion

We study the effect of local governance on rent seeking behaviors, more specifically corruption in the context of Indonesia using an empirical method. Using data for 446 Indonesian regions at the municipal/district level over the period of 2008-2010, we find that poor local governance, measured by weaknesses in the internal control system by audit reports, is significantly associated with corruption, proxied by the number of noncompliant cases as well as amount of the cases. Our results do not show that financial distress exacerbates the impact of poor governance on rent seeking. Our findings also reveal that there is no empirical evidence on the effect of corruption on economic growth. We argue that the Indonesian economy has continued to grow in recent years, during and after the global financial crisis, as huge domestic consumption props up growth even though corruption might have reduced private and local government investments. In additional, we find little evidence that corruption is correlated with lower investment growth, which we present as a robustness check.

Nevertheless, we admit some limitations. First, our study uses only a short period of time (3 years). Second, we do not separate the noncompliant cases, our proxy of corruption, into a more specific kind of case, as one might argue that not all noncompliant cases should be considered as kinds of corruption.

Although several caveats should be considered to interpret our findings, several policy implications are provided according to our empirical results. Of course, promoting good local governance should be continued in many aspects. A good governance mechanism, especially building a strong internal control system, could minimize the possibility of local officers in such regions engaging in corrupt behavior.

References

1. Aidt, T., Dutta, J., Sena, V. 2008. Governance regimes, corruption and growth: Theory and evidence. *Journal of Comparative Economics* 36, 195–220.
2. Chen, C.J.P, Li, Z., Su, X., Sun, Z. 2011. Rent-seeking incentives, corporate political connections, and the control structure of private firms: Chinese evidence. *Journal of Corporate Finance* 17, 229–243.
3. Cole, I.M., Chawdhry, M.A. 2002. Rent Seeking and Economic Growth: Evidence from a Panel of U.S. States. *Cato Journal* 22, 211-228.
4. Dreher, A., Kotsogiannis, C., McCorriston, S. 2007. Corruption around the world: Evidence from a structural model. *Journal of Comparative Economics* 35, 443–466.
5. Fisman, R., Gatti, R.. 2002. Decentralization and corruption: evidence across countries. *Journal of Public Economics*, 83, 325-345.
6. Heckelman, J.C., Powell, B. 2010. Corruption and the Institutional Environment for Growth. *Comparative Economic Studies* 52, 351–378.
7. Henderson, J.V., Kuncoro, A., 2011. Corruption and local democratization in Indonesia: The role of Islamic parties. *Journal of Development Economics* 94, 164–180.
8. Krueger, A.O. 1974. The Political Economy of the Rent Seeking Society. *American Economic Review* 64, 291-303.
9. Mohtadi, H., and Toe, T. 1998. Growth, Lobbying and Public Goods. *European Journal of Political Economy* 14, 453–73.
10. Mork, K. 1993. Living with Lobbying: A Growth Policy Coopted by Lobbyists Can Be Better Than No Growth Policy at All. *Scandinavian Journal of Economics* 95, 597–605.
11. Mursitama, T.N., 2006. Creating relational rents: The effect of business groups on affiliated firms' performance in Indonesia. *Asia Pacific Journal of Management* 23, 537–557.
12. Nys, E., Tarazi, A, Trinugroho, I. 2015. Political Connections, Bank Deposits and Formal Deposit Insurance. *Journal of Financial Stability*, Forthcoming.
13. Priks, M. 2011. Firm competition and incentive pay: Rent seeking at work. Economics Letters 113, 154–156.
14. Sarte, P-D. G. 2001. Rent-seeking bureaucracies and oversight in a simple growth model. Journal of Economic Dynamics & Control 25, 1345-1365.
15. Shleifer, A., Vishny, R.W., 1993. Corruption. Quarterly Journal of Economics 108, 599-617.
16. Shleifer, A., Vishny, R.W., 1994. Politicians and firms. Quarterly Journal of Economics 46, 995-1025
17. Shleifer, A., Vishny, R.W., 1998. The grabbing hand: government pathologies and their cures. Cambridge, Massachusetts: Harvard University Press.