

Analysis for corruption and decentralization (Case study: earlier decentralization era in Indonesia)

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Abstrak.

Di banyak negara, hubungan antara desentralisasi pemerintah dan tingkat ekstraksi sewa oleh pihak swasta merupakan elemen penting dalam perdebatan baru pada desain institusional. Topik korupsi secara aktif, terbuka dan diperdebatkan di Indonesia oleh Pemerintah, mitra pembangunan, dan kelompok berbasis luas dari para pemimpin politik dan masyarakat sipil yang terlibat dalam pertemuan dan pertukaran setiap hari. Dalam perdebatan tentang korupsi banyak perhatian diarahkan untuk peran gaji sektor publik, terutama di era desentralisasi. Berdasarkan fenomena ini, penulis ingin menganalisis hubungan antara korupsi dan desentralisasi. Menggunakan OSL model, kita dapat menemukan hubungan positif yang sangat kuat dan konsisten antara dua variabel di seluruh sampel dari daerah, sehingga memberikan beberapa dukungan untuk teori desentralisasi yang menekankan manfaat. Asosiasi ini adalah kuat untuk mengendalikan berbagai kemungkinan potensial dari upaya menghilangkan sebagian variabel serta bias endogenitas.

Kata Kunci: Korupsi, Desentralisasi, OSL Model

Abstract.

In many countries, relationship between decentralization of government activities and the extent of rent extraction by private parties is an important element in the recent debate on institutional design. The topic of corruption was actively, openly and debated in Indonesia by government, its development partners, and a broadly based group of political and civil society leaders are engaged in meetings and exchange on a daily basis. In the ongoing debate on corruption a lot of attention is paid to the role of public sector salaries, particularly in the decentralization era. Based on this phenomenon, the authors want to analyze the relationship between corruption and decentralization. Using OSL model, we can find a very strong and consistent positive association between the two variables across a sample of region, thereby providing some support for theories of decentralization that emphasize its benefits. This association is robust to controlling for a wide range of potential sources of omitted variable bias as well as endogeneity bias.

Keywords: Corruption, Decentralization, OSL Model

INTRODUCTION

The relationship between decentralization of government activities and the extent of rent extraction by private parties is an important element in the recent debate on institutional design. In this paper, we systematically examine this issue empirically, by looking at the cross-country relationship between fiscal decentralization and corruption, as measured by a number of different indices. Fiscal decentralization involves the transfer of taxing and spending powers to sub national level of government. Developing

countries are in general more centralized than most industrialized countries were at a similar stage of development.

As a consequence of much dissatisfaction with the results of centralized economic planning, reformers have turned to decentralization to break the grip of central government and induce broader participation in democratic governance. Thus fiscal decentralization has become an important theme of governance in many developing countries over the past two decades. For developing countries on average, the share of public sector expenditures allocated at the sub national level increased from less than 13% in 1980 to about 20% in the late 1990s. In the same period, there has been a modest increase in the share of local in total taxes.

Fiscal decentralization is the assignment of expenditure and revenue mobilization function to sub national levels of government. The term thus encompasses two distinct public sector functions—spending and taxation—and fiscal decentralization reform can vary in the degree to which each of the two is shifted from the central to a local government level. Where local expenditure is higher than local taxes, the difference is financed by e.g. transfer from the central government, borrowing and/or donor support. Inter governmental transfer are indeed the dominant source of revenues for local governments in developing countries, although there are substantial differences between countries. The advantages to fiscal decentralization are commonly thought to be three fold; a) Preference matching; b) Efficiency through competition and c) Increased accountability

By being closer to its citizens and hence possibly better informed about local preferences, local government is in a better position to provide public goods and services which meet people's needs. Public services can also be made more efficient and perhaps innovative when territories compete with each other for custom of mobile citizen. In addition, by reducing the distance between the government and the governed, fiscal decentralization is expected to stimulate participation and improve accountability.

The disadvantages decentralization may lead to inefficiency decisions and use of resources, if there are positive or negative externalities between regions, or if there are economies of scale or scope in fiscal functions. Shifting more fiscal decisions to local government, may also increase national inequity, and leave the central government with fewer policy instruments to correct this. Moreover if the capacity of local institutions is constrained, fiscal decentralization may transfer tasks to the local level which it is incapable of addressing properly.

While national efficiency and equity considerations entail questions of what type of functions to delegate to local levels, the problem of capacity constraint raises question of whether local institutions are capable of taking on added functions, and whether and how to improve local capacity to enable them to do so. The answer will differ from country to country and between local authorities within countries, especially between rural and urban local governments authorities.

Why is corruption? Defined here as the misuse of public office for private gain—perceived to be more widespread in some countries than others? Understanding this is important for several reasons. Corruption has been blamed for failures of certain “developing countries” to develop, and recent empirical research confirms a link between higher perceived corruption and lower investment and growth (Mauro, 1995; World Bank, 1997). Political scandals in countries across the globe have sparked public outrage against corruption in recent years and in dozens of countries discredited governments have been forced out of office. At the same time, corruption is viewed as one the main obstacles that post-communist countries face in attempting to consolidate democratic institutions and open, market economies (Shleifer, 1997).

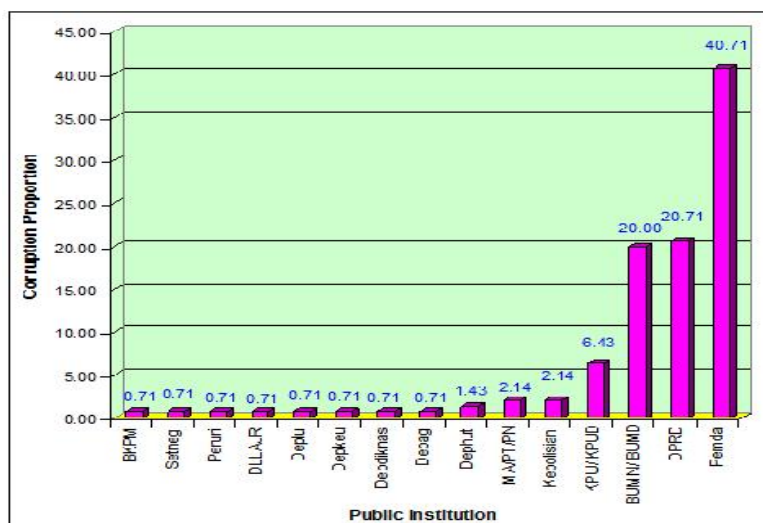
Yet very little is known for sure about what causes corruption to be higher in one place than another. While theories abound and while numerous case studies have examined the details of corruption in particular countries or regions, cross national comparative empirical research is much rarer. Especially the study of causes and consequences of corruption has a long history in economics, dating back at least to the seminal contributions to the rent-seeking literature by Bhagwati (1982), Krueger (1974), Rose-Ackerman (1978), Tullock (1967) and others. However, related empirical work has been rather limited, partly because the degree of efficiency of government institutions cannot easily be quantified. Corruption in particular is a difficult phenomenon to measure, owing to its very nature.

Renewed interest in the topic has recently led a number of researchers to attempt to quantify the extent to which corruption permeates economic interactions by using indices sold by private rating agencies. These indices are typically based on the replies to standardized questioners by consultants located in a variety of countries, and therefore have the obvious drawback of subjective. Nevertheless, the correlation between indices produced by different rating agencies is very high, suggesting that there seems to be certain consensus among observers on the ranking countries according to their degree of corruption (Mauro, 1995).

The difficulty of measuring levels of relative corruption in different countries has presented a major obstacle. Recently, however, economists and political scientists have begun to analyze indexes of “perceived” corruption prepared by business risk analysts and pooling organizations, based on survey responses of businessmen and local residents.

The topic of corruption was actively, openly and debated in Indonesia by government, its development partners, and a broadly based group of political and civil society leaders are engaged in meetings and exchange on a daily basis. In the ongoing debate on corruption a lot of attention is paid to the role of public sector salaries (Megantara, Andie and Noor Fuad, 2003). Corruption commonly entails the providing of service by a public servant or politician in exchange for bribe. Indeed, some economist consider corruption to be means of aiding the economy, particularly in the case of cumbersome regulation, excessive bureaucracy or market restrictions (Bayley 1966, Nye 1967, Huntington 1968, and Leff 1964).

Recently, Indonesian Corruption Watch (ICW) published list of public institution that involve on corruption case (Media Indonesia, 2006). (Graph 1).



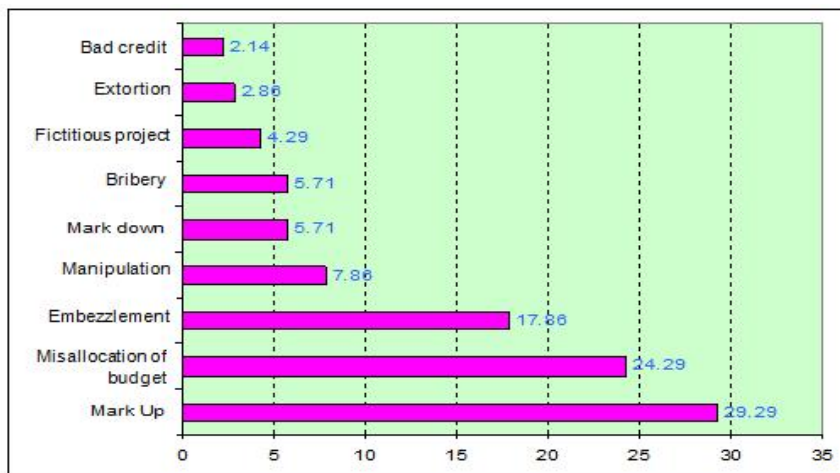
Graph 1. Corruption in public institution

Source: Indonesia Corruption Watch, 2006.

Notes:

- BKPM = Investment Coordinating Board
- Setneg = Ministry of the State Secretariat
- Peruri = Money Printing Public Company of the Republic of Indonesia
- DLLAJR = City Land Transportation Agency
- Deplu = Ministry of Foreign Affairs
- Depkeu = Ministry of Finance
- Depdiknas = Ministry of National Education
- Depag = Ministry of Religious Affairs
- Dephut = Ministry of Forestry
- MA/PT/PN = Supreme Court (MA)/ Provincial High Court (PT)/ District Court (PN)
- Kepolisian = Indonesian National Police
- KPU/KPUD = General Elections Commission (KPU)/ Regional General Elections Commission (KPUD)
- BUMN/BUMD = State-owned enterprises (BUMN)/Regionally-owned Enterprises
- DPRD = Legislative Council at the provincial or regional level
- Pemda = Regional Government

ICW states that the most corrupted institution is dominated by local public institution like local government (Pemda), and local legislative (DPRD). The main corruption modus is mark up budget, and misallocation of budget. The Graph 2 describe many modus of corruption.



Graph 2. Modus of corruption (%)
 Source: Indonesia Corruption Watch, 2006.

PROBLEM STATEMENT

Based on this phenomenon, the authors want to analyze the relationship between corruption and decentralization. Recent theoretical models make opposing predictions on the relationship between corruption and decentralization: models that emphasize interjurisdictional competition or direct monitoring of bureaucrats generally favor decentralization while those that focus on coordination of rent-seeking or bureaucrats. The type of decentralization, often matters in these models: in particular, whether revenue generation and expenditure, or just expenditure, is decentralized, will influence the extent bureaucratic corruption.

It would therefore be useful to analyze the empirical relationship between corruption and decentralization. Furthermore, based on Fisman. Raymond and Roberta Gatti Model (2002) and Mauro Model (1995), this paper wants to analyze the relationship between corruption and decentralization by adding control variables, it is important to be extremely cautious before interpreting correlations in a causal sense. An

additional drawback of the indicators of corruption that are currently available is that they do not distinguish among the various types of corruption, such as, for example high level versus low level corruption, or well-organized versus poorly-organized corruption, other classification.

This paper has the main aims. The first one is to present further results on the effects of corruption on decentralization especially by adding control variables and by using a pool data set. This article consists of several sections, first section describe background why corruption become interest topic to analyze. The following section outlines leading theories of what causes and consequences of corruption. Section 3, describes the data and presents the statistical. Section 4 discusses the results and various sensitivity analyses. Section 5 concludes.

THEORETICAL APPROACH

Definition of corruption

Numerous definitions for the term corruption have been proposed and cited in academic research and policy-relevant literature on corruption. Perhaps the most widely cited definitions of corruption in the public sector and the one used in the current study denotes corruption as:

The abuse of office for private gain

Public office is abused by private gain when an official accepts, solicits, or exhorts a bribe. It is also abused when private agents actively offers bribes to circumvent public policies and processes for competitive advantage and profit. Public office can also abused for personal benefit even if no bribery occurs, through patronage and nepotism, the theft of state assets, or the diversion of state revenues (World Bank, 1997:8)

Alternative definitions of corruption include “the degree of misuse of public power for private benefit”, and “the likeliness to demand illegal payments in high and low level of government”. However, not all types of corruption involve direct monetary payments, as a government official may receive more subtle benefits from corrupt activities, such as political support. Public official may demand bribes to do what they are supposed to do anyway (i.e. so called “speed” or “grease money”) or accept bribes to do what they are not supposed to do, such as overlook the underreporting of tax liabilities (Bardhan, 1997).

Theories of decentralization

A variety of models have been developed to examine the political economy of decentralization, leading to very different implications for the relationship between decentralization and corruption. Broadly speaking, these models emphasize several basic factors: (a) interjurisdictional competition; (b) monitoring and direct accountability; (c) dispersion of decision-making powers; d) competence and bureaucratic “quality”.

The first one, initially developed by Brennan and Buchanan (1980), emphasizes competition in product markets, political competition reduces the ability of bureaucrats to extract rents in exchange services. Jin et al (1999) further highlight the fact that competition among localities will more generally discourage governments from establishing interventionist and distortion policies that might drive away valuable factors of production to less interventionist jurisdictions. Interjurisdictional competition, therefore, predicts lower levels of corruption in decentralized economies.

These ideas have attracted considerable attention in the policy world, and Wei (2000) has even suggested that countries set up corruption-free zones to force other

localities to improve their own bureaucracies. Persson and Tabellini (2000) consider the impact of decentralization where bureaucrats are agents trying to minimize effort and maximize the probability of re-election. Agents in centralized bureaucracy are responsible for a multitude of tasks that affect many localities; by contrast, under decentralization, each politician is responsible for a specific task that is particular to a single jurisdiction.

The intuition is that, under decentralization, politicians are held directly accountable for their actions. Instead, under centralization, all that matters is aggregate performance, which attenuates the link between effort and rewards. Thus, under decentralization, more direct accountability should improve politician' performance. A similar line of reasoning underlies many accounts of the success of decentralization in practice in that it brings decision-making closer to those that are affected. For example, Wade (1997) suggests that India's over centralized top-down structure was largely responsible for corruption in the irrigation bureaucracy. However, even among this class of models, it is not unambiguously true that decentralization reduces corruption: if decentralization creates multiple tiers of government, it could weaken accountability, since voters would have greater difficulty attributing blame for failures and credit for successes.

The relationship between corruption and decentralization: theory

There has been considerable debate on the merits of government decentralization. Tiebout (1956) says that decentralization leads to greater variety in the provision of public goods, which are tailored to better suit local populations. Prud'homme (1995) and Tanzi (1996) have argued that there exist many imperfections in the local provision of services that may prevent the realization of benefits from decentralization. For example, local bureaucrats may be poorly trained and thus inefficient in delivering public goods and services.

On other side, Besley and Coate (1999) have shown that, with the exception on heterogeneity of preferences, there is relatively little theoretical decentralization must be justified by political economy explanations. One such possibility, which has received much attention, is that accountability and behavior of bureaucrats may differ between centralized and decentralized system.

Huther and Shah (1998) find a negative correlation between corruption and decentralization. However, they look only at the unconditional correlation between fiscal decentralization and corruption. There many factors that would obviously be highly correlated with both variables: in particular, income is highly correlated with quality of governance, however measured and is also strongly correlated with decentralization (it is well known that development is generally accompanied by decentralization). Hence, problems of omitted variable bias are extreme in such an analysis.

Treisman (2000) finds that federalist countries have higher rates of corruption. Treiman's measure of decentralization is a simple dummy variable, reflecting whether a country has a federal structure, which may not accurately reflect the true extent of decentralization of powers and resources in a given country.

The causes of corruption: theory

In original literature on rent seeking, the existence of rents (typically, government induced ones) constitutes the ultimate source of rent-seeking behavior. Building upon these theoretical; contributions, recent empirical studies analyze the possible causes of corruption by regressing indices of corruption on potential explanatory variables.

A number of possible causes of corruption are related to the extent of government intervention in the economy, and more generally to variables (such as the level of import tariffs or civil services wages) that are determined by government policy. When pervasive regulations exist and government officials have an excessive degree of discretion in applying them, private parties may be willing to pay bribes to government officials in order to obtain any rents that the regulations may generate. Identification of such policy-induced sources of corruption is obviously helpful in bringing it under control. The following are some of the sources of corruption that have been identified in the literature.

- a. The original rent seeking literature emphasizes trade restrictions as the prime example of government-induced sources of rents (Krueger, 1974). For example, in the presence of quantitative restrictions on imports of certain good, the necessary import licenses are very valuable and importers may be willing to bribe the relevant official in order to obtain them. More generally, protection of home industries from international competition generates rents that local entrepreneurs may be willing to pay for, in the form of bribes. Ades and Di Tella (1994) find that the sum of imports and exports as a share of GDP is significantly associated with lower corruption.
- b. Government subsidies (including tax expenditures) can constitute sources of rents, as argued by Clements, Hugounenq and Schwartz (1995). Ades and Di Tella (1995) explain corruption as a function of industrial policy, showing that subsidies to manufacturing as a proportion of GDP are related to corruption indices.
- c. Price controls are also a potential sources of rents, and of the ensuing rent-seeking behavior. For example, entrepreneurs may be willing to bribe government officials to maintain the provision of inputs at below market prices.
- d. Similarly, multiple exchange rate practices and foreign exchange allocation schemes lead to rents. For example supposing that, in a given country, state owned commercial banks conduct rationing of foreign exchange by allocating it according to the priorities established by each bank manager, then entrepreneurs may be willing to pay bribes in order to obtain the necessary foreign exchange to purchase their imported inputs.
- e. Low wages in the civil service relative to private sector wages or per capita GDP are also a potential source of (low level) corruption, following efficiency-wage mechanisms (Kraay and Van Rijckeghem, 1995 and Hague and Sahay, 1996). When civil service pay is too low, civil servants may be obliged to use their positions to collect bribes as a way of making ends meet, and in any case their expected cost of being caught and fired is correspondingly low. It might be useful to take such considerations into account when face with difficult tradeoffs on whether an excessive civil service wage bill should be lowered through cutting salaries or through reducing the number of staff..

At the same time, there are a number of other sources of rents that are not due to government policy. In their presence, policy makers need to be alert to the fact that rent-seeking behavior may be more likely to arise. Furthermore, attempts to evaluate the effects of certain aspects of government policy on corruption need to take these other factors into account, The following are some of these additional causes of corruption.

- a. Natural resource endowments constitute a textbook example of sources of rents, since they can typically be sold at a price that far exceeds their cost of extraction. Sachs and Warner (1995) argue that resource-rich economies may be ore likely to be subject to extreme rent-seeking behavior than resource-poor economies are..
- b. Finally, sociology factors may contribute to creating an environment in which the availability of rents is more likely to result in rent seeking behavior. Shleifer and

Vishny (1993) suggest that countries where the population consists of several different ethnic groups are more likely to be characterized by a less organized and therefore more deleterious type of corruption. This hypothesis is used in Mauro (1995), where it is found that an index of ethnolinguistic fractionalization is correlated with corruption. Tanzi (1994) argues that public officials are more likely to do favors to their relatives in societies where family ties are strong.

The consequences of corruption: theory

Corruption has a number of adverse consequences that economists and policy makers are concerned about. In particular, recent empirical evidence seems to suggest that corruption lowers economic growth. There is a wide range of channels through which this may happen.

- a. In the presence of corruption, entrepreneurs are aware that a portion of the proceeds from their investments may be claimed by corrupt officials. Payment of bribes is often required up front if the necessary permits are to be issued. Therefore, corruption may be interpreted to act as a tax-though of a particularly pernicious nature, given the need for secrecy and the uncertainty that comes with it-which correspondingly reduces incentives to invest. Mauro (1995) provide tentative empirical evidence that corruption lowers investment and economic growth. The magnitudes of these effects are considerable: a one standard-deviation improvement in corruption indices drawn from Business International (BI) causes investment to rise by 5 percent of GDP and the annual per capita GDP growth rate to rise by half a percentage point. The evidence seems to suggest that a large portion the effects on economic growth takes place through the effects on investment. Using indices from the International Country Risk Guide (ICRG), Keefer and Knack (1994) obtain broadly similar results and, in their estimates, institutional variables have a significant direct effect on growth in addition to the direct effect through investment.
- b. Murphy, Sheifler and Vishny (1991) argue that in situations where rent-seeking provides more lucrative opportunities than productive work does, the allocation of talent will be worse: the more talented and highly educated individuals will be more likely to engage in rent-seeking than in productive work, with adverse consequences on their country's growth rate.
- c. The possibility that corruption might reduce the effectiveness of aid flows, through the diversion of funds, is of particular relevance to developing countries. The vast literature on aid flows has addressed the question of whether the fungibility of aid resources may imply that aid flows ultimately finance unproductive public expenditures. Perhaps as a result of this ongoing debate, many donor countries have focused increasingly on issues of good governance, and in some cases where governance is judged to be very poor, some donors have scaled back their assistance..
- d. Corruption may also bring about loss of tax revenue when it takes the form of tax evasion or the improper use of discretionary tax exemptions. Strictly speaking, these phenomena fall under the definition of corruption only when there is a counterpart payment to the tax official responsible.
- e. By affecting tax collection or the level of public expenditure, corruption may lead to adverse budgetary consequences. Alternatively, in the case where it takes the form of the improper use of directed lending at below market interest rates by public sector financial institution, corruption may result in an undesirable monetary stance.
- f. The allocation of public procurement contracts through a corrupt system may lead to lower quality of public infrastructure and services. For example, corrupt bureaucrats

could allow the use of cheap materials in construction of buildings or bridges that would subsequently collapse.

- g. Finally, corruption may affect the composition of government expenditure, a possibility that the empirical section of this paper focuses on. Corrupt government official may be more likely to choose to undertake types of government expenditure that allow them to collect bribes and to maintain them secret, Shleifer and Vishny (1993) suggest that large projects on specialized items-whose exact value is difficult to monitor lead to more lucrative opportunities for corruption. More generally, opportunities for levying bribes may be expected to be more abundant on items produced by firms operating in oligopolistic markets, where rents are available. A priori, one might expect that it is easier to collect substantial bribes on large infrastructure projects or high-technology defense equipment than on textbooks and teachers salaries. For example, Hines (1995) argues that international trade in military aircraft is particularly susceptible to corruption. In other areas such as health, the picture is less clear cut: opportunities to collect bribes may be abundant in the case of hospital buildings and state of the art medical equipment, but may be more limited in the case of doctors and nurses salaries. Previous empirical work on the potential links between corruption and the composition of government expenditure composition by using a data set in U.S. cities. He finds that the increased the share of total municipal expenditure allocated to road and sewer investment, which in turn increased the growth in city manufacturing employment..

HYPOTHESES

Based on phenomenon and theoretical background, we derive the following hypotheses:

H₁ : corruption will be lower decentralization (negative correlation)

H₂ : corruption will be lower education (negative correlation)

H₃ : corruption will be lower population (positive correlation)

H₄ : corruption will be lower GDP (negative correlation)

H₅ : corruption will be higher tax revenue (negative correlation)

DATA DESCRIPTION

The data for our analyzing are pool data set in Indonesia (2001-2002). We could not make larger periods for our research because data of corruption is only available by aggregate data since 2003. Unfortunately, we need data of corruption by province in Indonesia for our analyzing.

As our principal measure of corruption (CORRUPT), we use *the numerous of canceled local regulation*. This has not been most commonly used in previous work in the economies literatures, because limited data corruption by province in Indonesia. We make this proxy based on Megantara Model (2003), that policy consistency and policy coordinating are the most indicating for the seriousness of corruption. Corruption was affected by rule credibility, policy credibility, and resource adequacy and predictability. The empirical result of Megantara Model means that when rule credibility, policy credibility as well as resource adequacy and predictability are good the less corrupt in the public official. This data is drawn from Ministry of Finance in Indonesia for 2001-2002.

We measure decentralization (DECENTR) as the sub national share of total government spending. The numerator is the total expenditure of sub national (local) governments, while the denominator is total spending (state) government. The underlying data are drawn from the Ministry of Finance for the years 2001-2002. The

share of local spending (revenues) over total spending (revenues) has been widely used as a proxy for the extent of decentralization (Pryor, 1968; Oates, 1972; Panizza, 1999). Oates suggest that, although imperfect DECENTR should be a good measure of fiscal decentralization since the extent of public authority’s activities in taxation and in the expenditure of public funds is surely component of fundamental importance in determining its influence on the allocation resources (Oates, 1972:197).

In addition to controlling for the level of economic development, we include in the regression an education (ENROLL) as suggested by Mauro (1997). The other control variable are GDP (GDP), and population (POP) as suggested by Mauro (1997), Fisman and Gatti (2002), Tax revenue suggested by Martinez (2004).

EMPIRICAL RESULTS

Our basic specification is

$$CORRUPT_i = \alpha + \beta_1 DECENTR_i + \beta_2 ENROLL_i + \beta_3 \text{LogPOP}_i + \beta_4 \text{Log GDP}_i + \beta_5 \text{Log TAX}_i + \epsilon_i$$

The following table reports coefficients from OLS estimation on data from a cross section 90 region. Significance of the estimates is based on White-corrected standard errors.

Table 1. OLS cross-national study. dependent variable: corruption

Dependent Variable: LOG(CORRUPT?)

Method: GLS (Cross Section Weights)

Sample: 2001 2002

Included observations: 2

Number of cross-sections used: 73

Total panel (unbalanced) observations: 78

White Heteroskedasticity-Consistent Standard Errors & Covariance

Cross sections without valid observations dropped

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.342951	0.264145	-5.084138	0.0000
LOG(DECETR?)	0.204286	0.020447	9.991109	0.0000
LOG(ENROLL?)	0.216173	0.052372	4.127685	0.0001
LOG(POP?)	-0.033406	0.025851	-1.292220	0.2004
LOG(GDP?)	0.027495	0.017070	1.610768	0.1116
LOG(TAX?)	-0.215587	0.012011	-17.94934	0.0000
Weighted Statistics				
R-squared	0.785007	Mean dependent var	0.574580	
Adjusted R-squared	0.770076	S.D. dependent var	1.033621	
S.E. of regression	0.495625	Sum squared resid	17.68637	
F-statistic	52.57878	Durbin-Watson stat	3.018583	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.197090	Mean dependent var	0.408125	
Adjusted R-squared	0.141332	S.D. dependent var	0.559677	
S.E. of regression	0.518621	Sum squared resid	19.36570	
Durbin-Watson stat	5.950248			

Our measure of decentralization enters the regression with a positive and strongly significant sign, indicating that region with more decentralized expenditure have higher corruption. The other independent variabel such a education (ENROLL)

also indicating a positive and strongly significant sign, indicating that region with higher education level tend to corrupt, so do the tax variable that indicating significant but have negative sign. It means that region with the higher tax tend to less corrupt. Two variabel independent, population and GDP indicating strongly sign but they are not significant related to the region corrupt.

CONCLUSION

In this paper we have made an initial assessment of the relationship between decentralization and corruption. We find a very strong and consistent positive association between the two variables across a sample of region, thereby providing some support for theories of decentralization that emphasize its benefits. This association is robust to controlling for a wide range of potential sources of omitted variable bias as well as endogeneity bias.

Although data availability limits the conclusiveness of our result, the evidence in the paper raises a number of interesting issues for further investigation, including whether particular types of decentralization are more effective in combating corruption, and whether there are specific government services where decentralized provision has a particularly strong impact on rent-extraction.

REFERENCES

- Ades, Alberto and Di Tella, Rafael, 1994, "Competition and corruption" Institute of Economics and Statistics Discussion Papers 169. University of Oxford.
- _____, 1995, "National champions and corruption: some unpleasant competitiveness arithmetic". University of Oxford. Photocopy.
- Barro, Robert, 1992, "Human capital and economic growth". in policies for long run economic growth. Federal Reserve bank of Kansas City: 199-216.
- _____, 1990, "Government spending in a simple model of endogenous growth." *Journal of Economy*, 98, no.5, part 2, S103-S125.
- Bhagwati, Jagdish, 1982, "Directly unproductive, profit-seeking (dup) activities." *Journal of Political Economy*, 90, no.5.
- Clemets, Benedict, Rejane Hugounenq, and Gerd Schwartz, 1995, "Government subsidies: concept, international trends and reform options", IMF Working Papers 95/91. Washington, DC: International Monetary Fund.
- Easterly, William, 1990, "Endogenous growth in developing countries with government induced distortions." In Vittorio Corbo, Stanley Fischer and Steve Webb, *Policies to Restore Growth*. Washington DC: The World Bank.
- Fisman, Raymond, and Roberta Gatti, 2002, "Decentralization and corruption: evidence across countries", *Journal of Public Economics* 83: 325-345.
- Hague, Nadeem Ui, and Ratna Sahay, 1996, "Do government wage cuts close budget deficits? IMF Working Papers 96/19. Washington, DC: International Monetary Fund.
- Hines, James, 1995, "Forbidden payment: foreign bribery and american business." NBER Working Papers 5266. Cambridge, MA: National Bureau of Economic Research.
- Keefer, Philip, and Stephen Knack, 1995, "Institutions and economic performance: cross-country tests using alternative institutional measures." *Economics and Politics*.
- Kraay, Aart, and Van Rijckeghem, Caroline, 1995, "Employment and wages in public sector-a cross-country study." IMF Working Papers 95/70. Washington, DC: International Monetary Fund.

- Krueger, Anne, 1974, "The Political economy of the rent-seeking society." *American Economic Review* 64, No.3 (June): 291-303.
- Levine, Ross and David Renelt, 1992, "A sensitivity analysis of cross-country growth regressions." *American Economic Review* 82, No.4 (September): 942-963.
- Loayza, Norman, 1996, "The economics of informal sector: a simple model and some empirical; evidence from Latin America." The World Bank. Photocopy.
- Martinez. Jorge-Vazquez, F. Javier Arze, Jameson Boex, 2004, "Corruption, fiscal policy and fiscal management, USAID Report (October).
- Mauro, Paolo, 1995, "Corruption and growth." *Quarterly Journal of Economics* CX, no.3 (August): 681-712.
- _____, 1997, "The Effect of Corruption on growth, investment and government expenditure: a cross country analysis, in *Corruption and the global economy*, K.A. Elliot, ed., Eashington D.C., Institute for International Economics, pp.83-107.
- _____, 1998, corruption and the composition of government expenditure, *Journal of Public Economics*, vol.69:263-279.
- Megantara, Andie and Noor Fuad, 2003, "The impact of institutional environment on public official performance: does institutional environment affect the rate of corruption?," *Jurnal Keuangan Publik* vol.1, no.1 (September):1-23.
- Murphy, Kevin, Andrei Shleifer and Robert Vishny, 1991, "Allocation of talent: implications for growth." *Quarterly Journal of Economics*, 106.
- Raunch, James, 1995, "Bureaucracy, infrastructure and economic growth: evidence from U.S. Cities During the Progressive Era." *American Economic Review* 85, no.4 (September): 968-979.
- Rose-Ackerman, Susan, 1978, *Corruption: a study in political economy*, New York, NY: Academic Press.
- _____, 1996, Democracy and grand corruption, *International Social Science Journal*, vol.48. no.3.
- _____, 1997, Corruption and development, Paper presented at the annual Bank Conference on Development Economics, Washington D.C.
- _____, 1999, *Corruption and government: causes, consequences and reform*, Cambridge University Press.
- Sachs, Jeffrey, and Warner, Andrew, 1995, "Natural resource abundance and economic growth." NBER Working Papers 5398. Cambridge, MA: National Bureau of Economic Research.
- Shleifer, Andrei, and Robert W. Vishny, 1993., *Corruption*, the quarterly journal of economics, 108 (August): 599-617.
- Tanzi, Vito, 1994, "Corruption, governmental activities and markets." IMF Working Papers 94/99. Washington, DC: International Monetary Fund.
- Taylor, Charles L. and Michael C Hudson, 1972, *World handbook of political and social indicators*. Ann Arbor, MI: ICPSR.
- Treisman, Daniel, 2000, "The causes of corruption: a cross-national study", *Journal of Public Economics* 76: 399-457.
- Tullock, Gordon, 1967, "The welfare costs of tariffs, monopolies and theft." *Western Economic Journal* 5.
- Vernon, Henderson, and Ari Kuncoro, 2006, "Sick of local government corruption" "Vote Islamic", NBER Working Paper 12110 (March): 1-41.