

**Political Corruption and Economic Growth:
Explaining the East Asian Growth Paradox**

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**Comprehensive Exercise
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Since the introduction of law, people have found ways to subvert the rules in the name of personal gain. It is no surprise then that political corruption is an age old problem. It affects nearly every country in the world and is particularly severe among developing nations. As these countries struggle to find a place in a rapidly changing global economy, concerns about political corruption's effect on economic welfare are especially salient. However, the exact relationship between these two factors is highly contested.

A comparison between Indonesia and Liberia provides an extreme example of two possible growth and corruption scenarios. In the first half of the 1990s, Indonesia reported annual growth rates of seven to nine percent. During the same period, Liberia experienced a decline in GDP, between 14-35% negative growth annually. Many sub-Saharan African countries are known for rampant corruption problems, as well as tremendous economic difficulties. Liberia fits this pattern, ranking as the 21st most politically corrupt country in the world, out of 158 ranked by Transparency International. What is surprising is that Indonesia is *also* ranked 21st most corrupt. How can it be possible for two nations both riddled with corruption to experience such different economic outcomes?

Indonesia is not alone; many East Asia nations exhibit signs of relatively high political corruption, yet still manage to maintain steady to large growth rates. For instance, China has been posting nearly double digit growth rates for the last twenty years (Lieberthal and Lieberthal, 2003: 71). Yet China scored 3.2 out of 10 (1 is most corrupt) on the most recent publication of TI's corruption perceptions index. South Korea, Thailand, and even Japan also suffer from relatively high political corruption, but—except for financial crisis in 1997—have maintained steady growth rates overall (Castle, 1999:14-15).

Some have dubbed this phenomenon the “East Asian Paradox” (Wedeman, 2002; Rock and Bonnett, 2004), while others doubt its existence altogether (see Mauro, 1995). Political and economic theories remain in conflict over the effect of political corruption. Likewise, empirical analyses have not produced a clear pattern of results across countries, though there is some evidence for a positive relationship in East Asian countries. Some of this difficulty may be attributed to the fact that many different factors can influence economic growth. However, it may also be that many different factors can influence not only the existence of political corruption, but the nature and quality of the corruption as well. More than anything, evidence of such a paradox affects how we understand political corruption, either as a simple or complex phenomenon.

In this paper I seek to account for the differences in East Asian growth and corruption patterns compared to other regions of the world. My study involves both qualitative and quantitative analysis. First, I will present a case study in order to illustrate some of the more complex aspects of corruption which are not easily analyzed quantitatively. I compare the decentralization experiences of Latin America and East Asia using China and Brazil as examples of how institutional organization can either exacerbate or mitigate the growth-reducing tendencies of political corruption. In the case of China, I find that fiscal decentralization in concert with political centralization has reduced the effects of bureaucratic corruption on the economy. However, in the case of Brazil, I find extreme fiscal decentralization coupled with political decentralization has magnified corruption problems.

Additionally, I employ a large n study to isolate corruption and decentralization as potential determinants of growth across countries and within East Asia. Political corruption tends to create rent-seeking and inefficiency and is usually rampant in countries with poor economic

track records. I therefore predict that in most nations, political corruption will be correlated with low growth. However, a number of theories provide evidence for a reverse trend in large East Asian countries (Wedeman, 2002; Rock and Bonnet, 2004). Therefore, in the case of large East Asian nations, I expect to see a positive correlation between corruption and growth.¹ Results of this study actually support the opposite. I do not find evidence for the persistence of an East Asian Paradox. Moreover, I find a positive relationship between political corruption and growth levels. I also find fiscal decentralization to be positively correlated with growth, and political decentralization to be negatively correlated.

Theories and Empirical Evidence

Two primary schools of thought pervade the academic debate between political corruption and economic growth: those who believe corruption is always detrimental to growth and those that believe corruption can be beneficial under certain conditions. Huntington and Leff point out that in the case of rigid bureaucracy, bribes provide the “grease money” to oil the wheels of business (Huntington, 1968; Leff, 1964). This is particularly true in the case of industries that must obtain permits or licenses from the government before they can do business. Nye elaborates on these outcomes, outlining three potential benefits in more detail. He argues that corruption can aid in capital formation when a state has a weak taxation system; it can cut red tape in developing countries whose institutions may be ideologically biased against free markets; and corruption can create entrepreneurship opportunities for oppressed minority groups to buy their way into the system (Nye, 1967:419-420). The authors all point to how corruption

¹ Using Rock and Bonnett’s study as a basis, I define large as countries with a population of over 20 million. This includes China, Indonesia, Japan, South Korea, and Thailand.

can help compensate for political conditions that would otherwise be hostile to economic innovation and growth.

However, most early literature on this topic has not been able to provide any empirical evidence, and more recent scholars might argue that the data proves otherwise. Using data from a survey of international businessmen for the period of 1980-1983, Mauro found significant evidence that corruption lowers investment and growth across all countries. Shleifer and Vishny also provide evidence of the detrimental effects of corruption on investment using static models of bribery. They argue that, when bribes are enforced by a cartel, it is possible to formulate efficient outcomes and punish deviators. However, if the group loses the monopoly on corruption, it removes barriers to entry in bribe collecting. Rather than one agency, multiple groups enforce bribes, creating inefficiencies that retard investment and growth (Shleifer and Vishny, 1993: 608-610).

Since Mauro's study, there has been a growing body of literature that theorizes political corruption should be understood differently. One argument is that studies like Mauro's treat corruption as a singular concept, when in reality corruption comes in many forms (Wedeman, 1997). Critics argue that different types of corruption matter (Johnston, 1986; Wedeman, 1997; Rock and Bonnett, 2004). Wedeman illustrates this in his case study of Zaire, South Korea, and the Philippines. He breaks corruption into three types—looting, rent-scraping, and dividend collecting—and outlines how certain conditions can create growth, while others are destabilizing (Wedeman, 1997). In a later study, Wedeman seeks to explain East Asia's phenomenal growth through developmental vs. degenerative corruption (Wedeman, 2002). Wedeman's work suggests that these different types of corruption might explain the variance in East Asia.

Rock and Bonnett attempt to verify Wedeman's hypotheses about East Asia using empirical analysis. The authors find that corruption tends to slow growth and/or reduce investment in most small developing countries, except in the case of large East Asian economies (China, Indonesia, Japan, South Korea, and Thailand) where corruption has the opposite effect (Rock and Bonnett, 2004:1000). Their results are not significant for other large developing countries. This is in line with Li, Xu, and Zou's study of corruption and income inequality. Building on data originally used by Mauro, Li et al. finds no significant relationship between growth and corruption.² Moreover, their strongest outliers are all East Asian nations (Li et al., 2000:163).

Wedeman's typologies are somewhat informative, but it is unclear what factors lead to degenerative corruption in one country, and developmental corruption in another. Khan solves this problem by presenting a new theory of rent-seeking. He argues that rent-seeking must be considered as a process: creating rents does incur costs, but the final outcome may be beneficial overall (Khan, 2000: 72). Except in the case of monopolies, Khan's models illustrate that all other types of rents have the potential to be efficient and/or growth enhancing, depending on the state of the market (Khan, 2000: 67). Of particular interest is Khan's finding that "the organization of state institutions and the distribution of political power" may significantly affect the input cost of rent-seeking, and perhaps explain why rent-seeking is less damaging to growth in some countries as opposed to others (Khan, 2000: 74).

Khan's findings support a large body of literature on decentralization and federalism. The effects of corruption may be related to a country's level of administrative, fiscal, or political decentralization. A number of studies have examined the effect of each of these factors on

² Mauro's data is on 37 countries over the period of 1980-83. Li et al. use corruption indices from the IRIS dataset which includes 47 countries with data for 1982-1994.

political corruption. Some of the earlier literature has already alluded to the possible effects of administrative corruption; Shleifer and Vishny suggest that additional layers of government create inefficient rent-seeking (Shleifer and Vishny, 1993). This is supported by Treisman's study of decentralization and governance. Treisman finds that more tiers of government are correlated with greater perceived corruption (Treisman, 2000).

Political decentralization may also affect corruption through the existence of local democracy. Local elections can make officials more accountable to their citizens; additionally, citizens may have better information about local government behavior (Bardhan and Mookherjee, 2005: 13). Seabright models this relationship between citizens and locally elected officials, finding that elections can be a tool for citizens to boot corrupt officials out of office (Seabright, 1996). However, local democracy may create different possibilities for corruption. Bardhan and Mookherjee and Sonin find that special interest groups can exercise a greater influence on local elections through campaign financing. However, this outcome is dependent on the socio-economic make up of voters, level of competition, and other factors affecting political participation (Bardhan and Mookherjee, 2005:16). Subnational corruption may be exacerbated by local elections if citizens that are lacking necessary information and education to properly evaluate candidates (Bardhan and Mookherjee, 2005:17).

The effects of fiscal decentralization on corruption and growth are also contested. In their study of "market preserving federalism," Qian, Weingast, and Montinola argue that fiscal decentralization can create interjurisdictional competition. This competition punishes inefficient behavior, including bureaucratic corruption, and hardens budget constraints for local governments, making them less likely to support inefficient state enterprises (Qian, Weingast,

and Montinola, 1996).³ In this scenario, fiscal decentralization has the potential to not only hinder corruption, but also increase economic growth through competition. Fisman and Gatti verify these hypotheses in an empirical study, finding that fiscal decentralization is correlated with lower perceived corruption (Fisman and Gatti, 2002). However, Treisman also performed an analysis similar to Fisman and Gatti but did not find fiscal decentralization to have a significant effect on corruption (Treisman, 2000). Cai and Treisman argue that this competition may also be harmful, as governments may choose to collude with businesses by offering special incentives for investing in the region (Cai and Treisman, 2004).

Methodology, Models, and Cases

In order to unpack the intricacies of corruption's impact on a developing nation's economy, I performed a case study of recent decentralization in China and Brazil. This provides insight into the political factors affecting corruption which may be difficult to measure quantitatively. China and Brazil are both ranked as relatively corrupt: in 2005, China was ranked 3.2 by Transparency International, while Brazil scored 3.7. However, China has fared significantly better in terms of economic growth, while Brazil has suffered from low or even negative GDP growth rates (see Appendix A). Both Brazil and China have recently undergone decentralization; China began reform in 1978, while Brazil began to redemocratize in 1985 and passed a new constitution in 1988.

I will trace the results of each country's decentralization and compare it against Qian, Weingast, and Montinola's model of market preserving federalism. Each condition of MPF illustrates how decentralization can mitigate corruption and aid economic development, but only

³ For more on hard budget constraints, see Qian and Roland's 1998 article, "Federalism and the Soft Budget Constraint" in the *American Economic Review* 88:5 and Qian and Weingast's 1997 article, "Federalism as a Commitment to Preserving Market Incentives" in the *Journal of Economic Perspectives* 11:4.

taken together can a country succeed economically in spite of corruption. China meets most conditions of MPF, while Brazil does not, helping to explain why relatively high corruption has been less of a handicap in China.

In addition to a small n case study, I also created a large n model to test the relationship between corruption and growth on a global scale. Using Rock and Bonnett's study as a basic framework, I have created a model to test this relationship across countries and within East Asia. Any model of this nature must be considered with caution for several reasons. Quantitative analysis is largely dependent on available data. By definition, corruption does not lend itself to analysis because it is difficult to detect, let alone measure accurately (Johnston, 1986:461). Furthermore, economic growth is a complex phenomenon and consequently is difficult to model; many relationships do not withstand rigorous testing, making it difficult to generalize (Levine and Renalt, 1992).⁴

I hypothesize that corruption will slow economic growth on a global scale, but will be associated with high growth in East Asian LINC's. For this study, I use political corruption as my independent variable. Following other empirical studies, I adopt Nye's definition of political corruption: "Behavior which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains" (Nye, 1967: 419).⁵ Data on political corruption is based on surveys of perceived corruption, usually completed by those working or living in the country, which may not account for the full range of corrupt activities actually in occurrence (Bardhan, 1997:1328). Survey respondents are usually asked to

⁴ A more in depth discussion is outlined in Levine and Renault's study, "A Sensitivity Analysis of Cross-Country Growth Regressions."

⁵ Nye, as well as Michael Johnston, point out that there is an element of cultural bias to this definition, since many cultures may carry a dual standard of behavior—one Western and one indigenous (Nye, 1967: 419). For a more extensive discussion of definitions, see Johnston, 1986, "The Political Consequences of Corruption: A Reassessment" in *Comparative Politics* 18:4 (July): 459-477.

rank corruption on a scale of 0-10; because this is a purely subjective measure, it is difficult to quantify what those rankings really mean across individuals and between values (Mauro, 1995:690). However, unless better data or methodology becomes available, this is an unavoidable weakness in any empirical study of corruption.⁶

My corruption data is from Transparency International, a nonprofit organization concerned with global corruption. TI publishes global political corruption perception indices, beginning annually in 1995; the indices are a composite score derived from multiple data sources, gathered primarily through surveys and correlated against other corruption indices.⁷ Despite the weakness of such data, it is still an accepted measure of political corruption (Baltes and Smelser 2001: 4: 2827).

I take economic growth as my dependent variable. I measure growth across countries using annual percent growth of per capita Gross Domestic Product. I obtain my GDP data from the World Bank Development Indicators dataset, which covers 226 countries and regions from 1960 to 2004. Because growth models are so fragile, I employ a number of other control variables which I expect should also show a significant correlation with GDP growth. Because I am looking at per capita growth, I include annual population growth, which I expect to be inversely related. Drawing from Rock and Bonnett's study, I also include fixed capital formation (a measure of investment), trade as a percentage of GDP, and gross secondary school enrollment rate (a measure of human capital) which I expect to be positively related to GDP, and government consumption expenditure (a measure of government spending) which I expect to be

⁶ See Baltes and Smelser, eds., *International Encyclopedia of Social and Behavioral Sciences* 2001, 4: 2824-2830 for a comprehensive discussion of measuring corruption.

⁷ For full documentation on TI's methodology, see <http://www.transparency.org/cpi/index.html#cpi>

negatively related to GDP. Except for secondary school enrollment, I obtained the rest of this data from the World Bank Development Indicators dataset. My secondary school enrollment data is also from the World Bank, through their EdStat database.

I also employ three measures of decentralization: administrative, political, and fiscal. Administrative decentralization measures subnational autonomy by looking at the percentage of local revenues generated from taxation. Fiscal decentralization is measured by dividing subnational expenditures over total government expenditures. The greater the amount of money being collected at the subnational level, the greater the percentage and therefore level of decentralization. Political decentralization measures the number of state and municipal elections. Studies have shown conflicting results as to whether decentralization mitigates or enhances rent-seeking; it is therefore conceivable that decentralization may be either positively or negatively correlated with GDP growth. These measures are taken from Schneider's 2003 study "Decentralization: Conceptualization and Measurement". Schneider derives these variables using data from the World Bank and the IMF. These indicators are available through the Global Indicators Shared Dataset from the Harvard Political Science Department.

In order to control for endogeneity, I employ an index of ethnolinguistic fractionalization, a measure of ethnic division among societies. It is an exogenous variable which has also been shown to be inversely correlated with growth (Easterly and Levine, 1997). I use the most recent index published by Alesina, Devleeschauwer, Easterly, Kurlat and Wacziarg in 2003, also available in the Global Indicators Shared Dataset.

Using the aforementioned variables and datasets, I performed a large n-study covering 1996-2004. I ran a linear regression using the model variables in the case of all countries and in the case of just East Asian LNICs in order to understand if these outliers differ in a global

context. I performed several transformations on the data, mostly to ease comparisons across variables. TI indices are originally scaled from 0-10, with 10 being no corruption. I rescaled this index on a scale of 0 to 1, with 1 representing highest corruption. I also converted some variables from raw numbers to percentages so as to control for initial differences across countries. I also created a dummy variable for large East Asian newly industrializing countries. Per Rock and Bonnet's study, this includes countries with a population of 20 million or greater: China, Indonesia, Japan, South Korea, and Thailand.

Case Study: "Market Preserving Federalism" in China and Brazil

While results are not conclusive, decentralization literature does have some explanatory power, especially in the case of China. Qian, Weingast, and Montinola argue that China's tremendous growth, even in the face of corruption, can be explained by "market preserving federalism". However, not all decentralized or federalist countries have met with such success. In the case of developing countries, much of Latin American has recently democratized but still faces pervasive political corruption and economic crises. For the purpose of this study, I will use Qian et al's framework to contrast the recent decentralization experiences of China and Brazil and illustrate more precisely why rent-seeking is more harmful in some countries as compared to others.

Condition One: Hierarchical Government with Delineated Authority

Qian et al outline five conditions necessary for market preserving federalism, the first of which is a government with multiple levels, each with their own delineated powers (Qian et al, 1996: 55). While it is not uncommon for many different regimes to have more than one level of government, the key is whether there is clear and tangible authority assigned to subnational units.

China is an authoritarian state, ruled by the Communist Party. However, partly because of its large size, authority has been decentralized for many years. Chinese decentralization is primarily fiscal, while political power remains centered in Beijing. Under Chairman Mao, authority was placed in the hands of local government beginning with state-controlled public enterprises. However, decentralization truly began in earnest with reforms ushered in by Deng Xiaoping in 1978 (Qian et al, 1996: 62). Today, authority is delineated among five levels of government, including national, provincial, municipal, county, and township (Jin and Zou, 2001:1). Much of Chinese decentralization has focused on fiscal decentralization. In the 1980s, control of many state-owned businesses was transferred from the central government to local units. However, perhaps most important was the establishment of special economic zones. Governments of these provinces or cities have greater economic responsibility and receive special tax incentives.

Brazil's process of decentralization began with redemocratization in 1985 after years of authoritarian military rule. These efforts culminated in the passage of the 1988 constitution, which significantly strengthened the role of subnational governments. Today, Brazil is recognized as one of the most decentralized developing countries in the world (Rodden 2001: 1). The new constitution recognized not only states, but also municipalities, which were granted their own constitutional law. Subnational governments are now responsible for far more taxes, as well as healthcare, education, and other social services (Souza, 2002). States also have separate jurisdiction over their own military policy force (Stepan, 2000:163). Perhaps most important for the case of economic development is that many very specific rules about what and how much local and national governments may spend have been constitutionally embedded (Stepan, 2000).

Condition Two: Subnational Governments have Primary Control over their Economies

Condition Two is very important because it has implications for both corruption and growth. Specifically, the key to Condition Two is that it creates competition between regions. While subnational governments can engage in behavior that detrimental to the market, it is now in their best interest to create a business-friendly environment in order to attract mobile capital and labor. This interjurisdictional competition therefore discourages anti-market behavior, such as government monopolies or bureaucratic rent-seeking, and gives governments the incentive to foster economic growth (Qian et al, 1996: 58).

A number of reforms in the 1980s have given local Chinese governments greater influence over their economies. The establishment of “Special Economic Zones” has been a key part of Chinese economic growth in the last twenty years. Beginning in 1980, five zones were established in the cities of Shenzhen, Shantou and Zhuhai, all located in Guangdong province; Xiamen in Fujian province; and the entire province of Hainan. SEZs have greater economic authority, particularly with regard to foreign investment, and also have special tax incentives to encourage development (Qian et al, 1996:62). The establishment of SEZs was followed by opening up 14 coastal cities to foreign investment in 1984 (Jin and Zou, 2001: 30-31). Provinces also began to manage an increasingly larger share of this investment, from 35% in 1988 to 68% in 1992 (Qian et al, 1996:62).

Additionally, decentralization has led to a new system of revenue sharing which puts more money in the hands of subnational governments. From 1980 to 1994, various configurations of revenue sharing between tiers of government emerged. While the combinations are too numerous to list in detail, most involved remitting a limited amount to the central government in the form of a fixed proportion or quota (Jin and Zou, 2001). Any

additional extra-budgetary revenues are kept by the local government; there are no restrictions on how that money is to be spent. This system has provided a strong incentive for local officials to pursue policies that encourage economic prosperity in their city or province (Qian et al, 1996: 63). While this has been a boon for subnational governments, it has caused revenues to the center to decline. Since 1994, the central government has been trying to implement a different system of revenue sharing but faces resistance from local governments (Jin and Zou, 2001: 12-14).

Brazil has also devolved a considerable amount of fiscal authority to its subnational governments. The most significant changes have been transferring several federal taxes to state or municipal jurisdiction. The 1988 constitution also gave states greater authority over the value-added tax, Brazil's highest yielding non-social security tax (Haggard and Webb, 2004). Subnational governments collect approximately one third of all taxes, which accounts for over forty percent of total tax revenue (Souza, 2002: 33). However, the 1988 constitution has also subjected local economies to redistributive intergovernmental transfers. Due to severe economic inequalities between regions, the VAT is not a significant source of revenue for all states (Haggard and Webb, 2004: 247-48). Because smaller states were overrepresented during the drafting of the constitution, the large, wealthy southern states receive virtually no intergovernmental transfers, while 85% go to the less populated, poorer areas (Haggard and Webb, 2004: 248). This is problematic because many states are largely dependent on federal transfers from other states, rather than their own tax base. Local officials therefore do not have an incentive to pursue policies that foster development, nor does regional competition raise the costs of bureaucratic rent-seeking. In fact, states often seek ways of subverting the system because it is considered burdensome and unfair (Haggard and Webb, 2004: 249).

Condition Three: National Government Can Police the Common Market

Condition Three is an important check on the fiscal power assigned to subnational governments under the previous condition. While subnational economies must compete with each other, the central government needs to maintain control over the national monetary system. If this condition fails, local governments are liable to engage in uncompetitive behavior. Not only does this create opportunities for corruption, it can also cause other serious problems, such as inflation (Qian et al, 1996:60).

The reforms of the last thirty years have increasingly moved China away from the Communist model of a centrally-planned economy to that of a free market. However, this has also created the problem of “zhuhou jingji” or “fiefdom economies”: provincial governments insulate themselves by enacting trade barriers outside of central government authority (Yang and Wei, 1996: 3). However, lower levels of government, including townships and villages, do not have such authority and must operate under more competitive conditions (Qian et al., 1996:66-67). More serious is the problem of the banking system, which has become increasingly controlled by subnational governments under post-Mao fiscal reforms. Local governments can influence who banks lend to, as well as the nature of repayment. This power is easily abused in order to favor inefficient state-owned enterprises (Jin and Zou, 2001:19).

In the case of Brazil, subnational autonomy has made it difficult for the federal government to enforce stable macroeconomic policies. Consequently, the central government has taken measures in recent years to recentralize (Souza, 2002: 39-43). Following the success of the *Real Plan*, President Cardoso raised interest rates in order to control inflation. Moreover, the federal government has continued to increase or create new taxes to make up for revenues lost to the states. The center has been able to enact stabilization policies largely through

Cardoso's use of decree powers, though some measures have also been passed by Congress (Stepen, 2000: 159).

Condition Four: Hard Budget Constraints

Condition Four requires that both central and subnational governments be subjected to hard budgets. It is then in each government's best interest to make efficient economic choices because it cannot afford to do otherwise. The competition generated by Condition Two also makes the consequences of fiscal mismanagement or bankruptcy more serious, as these outcomes would hurt a region's ability to compete in the marketplace. In the absence of such limitations, local government may rely on the federal government for bail outs. This encourages rent-seeking and inefficiency among lower-level government officials because irresponsible spending is absorbed by the federal government (Qian et al, 1996:55).

In China, decentralization has resulted in declining federal tax revenues, creating a hard budget constraint at the national level. However, budget cuts have not kept pace with declining revenues; consequently, a new revenue sharing system was introduced in 1994 that place stricter limitations on local budgets (Jin and Zou, 2001:12). This new measure was very unpopular among subnational governments, so a compromised "dual-track" system (combining both old and new systems at the same time) has been adopted instead. This has kept local government budgets softer than the central government had hoped (Jin and Zou, 2001:14). However, the biggest obstacle to local hard budgets is the banking system. Since reforms, subnational governments have been able to influence the lending and loan repayment practices. This means that provincial governments can easily obtain loans for SOEs at low rates, or even cancel repayments altogether (Jin and Zou, 2001: 38). This has led to a proliferation of nonperforming

loans in state banks. When borrowers default, the central—not subnational—government foots the bill (Jin and Zou, 2001:21).

Brazil also has difficulty imposing hard budget restraints on lower tiers of government. Brazilian states have undergone four debt crises since decentralization in 1988, 1993, 1994-95, and 1998-99 (Haggard and Webb, 2004: 261). Each time, the federal government has bailed states out, creating little incentive for subnational governments to adhere to a hard budget. The problem of soft state budgets is exacerbated by Brazilian party politics. Politicians are accountable to subnational interests; therefore they are unlikely to turn down a state's request for a bail out. The persistence of regional coalitions only strengthens this tendency (Rodden, 2001: 35). The Fiscal Responsibility Law, passed in 2000, has helped harden budgets by letting the federal government deduct debt service from a state's share of government transfers, but it is still too early to tell whether this law will be enough (Haggard and Webb, 2004: 263).

Condition Five: Institutional Durability of Decentralized Authority

China, while increasingly decentralized, is still ruled by the Communist Party as the central authority. It is possible for the Party to seek recentralization; however this is unlikely in light of China's enormous economic boom. This success has given much greater power to local officials in prospering cities. The most compelling example is the reaction to recentralization attempts enacted in the wake of the Tiananmen massacre in 1989. The governor of Guangdong—one of the most prosperous coastal provinces and home to three of the five Special Economic Zones—refused to comply with new reforms and other governors followed his lead (Qian et al, 1996: 69). As Party rhetoric shifts away from that of Marx and Lenin to a “socialist market economy”, the central government's legitimacy now rests on continued economic performance, rather than strict adherence to Communist ideologies (Qian et al, 1996:52). It is therefore

unlikely that the federal government would take the economic and political risks associated with recentralization.

As discussed in earlier sections, Brazil is constitutionally decentralized and any changes to the 1988 constitution would have to pass through a majority vote in Congress. While the central government has had some success at strengthening their authority, this has been in part because of rulings by president decree. However, these decree powers do not include constitutional amendments (Stepen, 2000: 160). Condition Four outlined the problems of Brazilian party politics; regional coalitions, fragmentation, and the poor discipline of parties makes it unlikely that recentralizing measures would pass.

These five conditions for market preserving federalism are “ideal types”. This case study indicates that neither Brazil nor China perfectly meet these conditions. The results are summarized in the table below.

Condition	Brazil	China
1. Hierarchical government with delineated authority	Yes	Yes
2. Subnational governments have primary control of local economies	No	Yes
3. National government can police common market	Yes	At certain levels of government
4. Hard budget constraints at all levels of government	No	Yes, except in banking industry
5. Durability of decentralization	Yes	Yes

Brazil fails conditions two and four, which are key to the success of market preserving federalism. Failure of these conditions compromises the development of interjurisdictional competition, a mechanism which should foster economic development and hinder bureaucratic rent-seeking. China also does not quite meet conditions three and four. China is only able to prevent local protectionism at certain levels of government, so competition is compromised

among provinces. China also cannot enforce hard budgets on subnational governments in the realm of banking. Local governments are able to control the lending practices of state banks, while the center pays the cost of nonperforming loans. However, on balance, Chinese governments have been subject to greater fiscal autonomy and responsibility. Differences in Chinese and Brazilian economic development in the face of political corruption can be explained in part by using these five conditions of market preserving federalism.

Empirical Study

In addition to a case study, I also report results from a large n-study of perceived corruption and growth across countries as well as in East Asia.

Table 1. OLS Regression Estimates of GDP Growth per capita

Variable	World Model	No China Model	East Asia Model
(Constant)	-.934 (.886)	-.855 (.901)	7.929 (14.623)
Trade (% of GDP)	.028 (.004)***	.027 (.004)***	-.093 (.030)**
Corruption Score (rescaled 0-1)	4.369 (.749)***	4.214 (.792)***	
Ethnolinguistic fractionalization	-.884 (.164)***	-.806 (.173)***	-12.871 (15.202)
Fiscal decentralization	4.903 (.742)***	4.624 (.832)***	
Political decentralization	-1.361 (.609)**	-1.291 (.620)**	
Gross Secondary School Enrollment			.218 (.098)**
Decentralization Index			-1.507 (4.241)
N	442	433	15
R ²	.191	.162	.662

Notes: Dependent variable is GDP growth per capita (annual % growth); standard errors in parentheses; t-test results for coefficients ** p< .05, *** p< .01

Variance

Table 1 shows the variance explained by each model. The World model explains only 19% of the variance in economic growth. However, this is not surprising in light of the fragility of growth models (Levine and Renalt, 1992). Economic growth is extremely complex, and there are a myriad of factors that may affect growth levels within each country; only a handful of potential variables are included in this study. Additionally, a cross-country comparison will not

be able to take into account country-specific conditions. The small r squared value can also be attributed to under specification. Many of the originally hypothesized independent variables are not longer in the model, as they were either highly multicollinear with perceived corruption and/or were insignificant predictors.

Table 1 also indicates that about 66% of the economic growth in large, newly industrializing East Asian countries can be explained by the model. Many variables were also removed from the original model and I created an index of all three decentralization scores instead of testing each measure separately. This was done in order to combat over specification on such a small case size, as well as multicollinearity on perceived corruption score. However, the condition indices still indicate that multicollinearity is a serious problem in the East Asian model. This, in conjunction with small case size, helps explain why the r squared variable is much higher; it is not attributable to the model alone.

East Asian Paradox?

Results from this study do not provide strong empirical evidence for the persistence of an East Asian growth paradox. The table indicates that perceived corruption is negatively correlated with GDP growth; however, it is insignificant. Decentralization is also insignificant. VIF and tolerance tests indicate that there is strong multicollinearity between decentralization and perceived corruption, which may be affecting the significance. I found perceived corruption levels to be highly correlated with all other independent variables selected in the original model. While the most collinear indicators were dropped out, it is impossible to completely eradicate multicollinearity without removing the corruption variable itself. Without a better measure of political corruption, there is little evidence for a relationship using this model.

Corruption in the World

More striking than the absence of an East Asian paradox is the results from the World Model, listed in column two. In the World Model, perceived level of corruption is *significant* and *positive*. The corruption coefficient is one of the largest in the model as well, suggesting it has a larger effect on growth than more commonly accepted indicators such as trade. This is the opposite relationship originally hypothesized in this study. While some literature has suggested that corruption can have an overall positive or at least more benign effect on growth, it is surprising to find this relationship in the cross-country regression. These results may be affected by the measure of corruption itself; perceived levels of corruption can be considered a proxy but are not an actual measure of bureaucratic corruption in a country. This also helps explain some of the multicollinearity problems encountered with the model. For instance, population growth was one of the original indicators in the model. While population growth will affect GDP growth per capita, more populous countries also have more citizens to observe and report instances of corruption. The issue of perception of vs. actual corruption is most likely confounding the relationship between the Transparency International score and the other control variables.

Implications for Decentralization

The World Model also has interesting results for the three indicators of decentralization. The final model does not include administrative decentralization, as it was not robustly significant. However, both political and fiscal decentralization were significant. Fiscal decentralization is highly significant and robust in the positive direction. Higher GDP per capita growth rates are associated with greater fiscal decentralization; additionally, coefficients indicate that fiscal decentralization is biggest factor affecting growth in this model. This supports Qian et

al's argument that fiscal decentralization creates interjurisdictional competition that encourages growth. Political decentralization is also significant at the .05 level but is negatively correlated with growth. This also provides some support for Qian et al.'s market preserving federalism model, which argues for the importance of fiscal decentralization tempered by enough central authority to maintain competition. However, this measure of political decentralization does not address differences between vertical and horizontal layers of government, which are theorized to affect corruption differently.⁸

Qian et al's theory is based on the Chinese experience in the 1980s and 1990s. To ensure that China was not skewing these results, I ran the World Model excluding Chinese cases. Column three shows that the r square does decrease somewhat without the inclusion of China. However, political decentralization is still significant at the .05 level. All other indicators remain significant at the .01 level.

Correlation matrices indicate that both measures of decentralization are also significantly and negatively correlated with perceived corruption at the .01 level (see Appendix B). This supports Qian et al. and Fisman and Gatti's finding that fiscal decentralization is correlated with lower corruption, and Bardhan and Mookherjee and Seabright's literature that local democracy is associated with lower corruption. In light of those correlations, it is surprising corruption remains highly positive significant even with the inclusion of the decentralization variables. It is difficult to conceive of corruption causing GDP growth; again the problem of using perceived vs. actual data may be conflating the relationship.

⁸ See Treisman's 2000 study, "Decentralization and the Quality of Government."

Conclusion

Is East Asia a special case in the relationship between political corruption and economic growth? Scholars remain in debate about the benign or detrimental effects of bureaucratic rent-seeking on development in East Asia and in general. Decentralization theories offer one possible avenue of explanation for regional differences in economic performance and corruption. A comparison between recent decentralization experiences in China and Brazil suggests that market preserving federalism accounts for part of China's economic success and part of Brazil's continual struggle with corruption. China's fiscal decentralization but lack of political and administrative decentralization has allowed for the creation of interjurisdictional competition that discourages corruption and encourages economic development. However, Brazilian political decentralization has left the central government powerless when it comes to enforcing economic policies that ensure stability and competition.

Despite evidence from the case study, cross country empirical analysis does not provide support for an exception of high growth and high corruption in East Asia. Cross-country analysis does indicate that GDP growth is positively correlated with perceived corruption and fiscal decentralization, and negatively associated with political decentralization. This finding is robust even when China (as a possible outlier) is excluded. A positive relationship between corruption and growth is unexpected in light of earlier empirical studies, though some scholars have argued for the positive effects of corruption on growth. Correlations reveal that perceived corruption is inversely related to both decentralization indicators, making the positive relationship even more puzzling. It is likely that the measurement of perceived (rather than actual) corruption levels is affecting these results, particularly as a cause of severe

multicollinearity. The precise relationship between these variables thus remains unclear without employing a different measurement of political corruption.

Areas of Further Study

The results of this study indicate that further study is clearly needed in this area. There are a number of directions future research could explore. The greatest problem facing any study of corruption is finding a reliable measure. Corruption is inherently designed to defy detection, let alone measurement. Levels of perceived corruption have the unintended effect of being correlated with other measurements. There are other indirect measures of political corruption available, including indicators from the World Bank's Governance Indicators dataset, and in the IRIS dataset published by the Political Risk Service.⁹ IRIS data covers the period of 1982 to 1997; World Bank data covers 1996-2004. These measurements might provide less bias than the Transparency International index. This data would also allow for a more comprehensive analysis, particularly if the long term effects of rent-seeking are different than in the short run, as earlier studies seem to indicate.

Case size and r square robustness would also benefit from enlarged decentralization data. The index crafted by Schneider covers 68 countries. Results using this smaller sample have shown promise, as they are significantly correlated with GDP growth. Also, more nuanced decentralization data may provide different or more robust results. For instance, Treisman uses a variable for number of tiers of government in his 2000 analysis of decentralization and quality of governance. Given the variety of outcomes from empirical studies of decentralization, it is clear that the type and definition of decentralization matters.

⁹ The IRIS dataset was originally compiled by Knack and Keefer. It is available for purchase at <http://www.countrydata.com/datasets/>.

Employment data may also provide some explanatory power. Collusion between business and government is particularly prominent in new technology industries (Khan and Jomo, 2000), industries that stand to benefit from government contracts, or industries that are dependent on government permits. Also, governments may subsidize poorly-run public enterprises; data on public sector employment or public enterprises may also be useful. Many state-owned businesses may increase opportunities for rent-seeking. Alternatively, governments may continue to employ workers even in economic downturns. Currently there is public sector data available through the ILO LABORSTA database, but global coverage remains spotty. While it is beyond the scope of this study, employment data could be collected on a country-by-country basis as well.

Appendix A: GDP per capita growth (annual %)

Year	Brazil	China
1978	1	10
1979	4	6
1980	7	6
1981	-7	4
1982	-2	8
1983	-5	9
1984	3	14
1985	6	12
1986	6	7
1987	2	10
1988	-2	10
1989	1	3
1990	-6	2
1991	0	8
1992	-2	13
1993	3	12
1994	4	11
1995	3	9
1996	1	8
1997	2	8
1998	-1	7
1999	0	6
2000	3	7
2001	0	7
2002	1	8
2003	-1	9
2004	4	9

Source: *World Development Indicators* database

Appendix B: Correlations for Perceived Corruption

Other Variables in Model		Corruption Score
GDP growth per capita (annual percentage)	Pearson Correlation	.024
	Sig. (2-tailed)	.499
	N	811
General Govt Final Consumption Expenditure (% GDP)	Pearson Correlation	-.419
	Sig. (2-tailed)	.000
	N	752
Trade (% of GDP)	Pearson Correlation	-.223
	Sig. (2-tailed)	.000
	N	728
Population Growth (annual %)	Pearson Correlation	.201
	Sig. (2-tailed)	.000
	N	811
Gross Secondary School Enrollment	Pearson Correlation	-.718
	Sig. (2-tailed)	.000
	N	473
Ethnolinguistic Fractionalization	Pearson Correlation	.441
	Sig. (2-tailed)	.000
	N	799
Fiscal decentralization	Pearson Correlation	-.289
	Sig. (2-tailed)	.000
	N	486
Political decentralization	Pearson Correlation	-.271
	Sig. (2-tailed)	.000
	N	486

Appendix C: Variables

Variable Name	Description	Source
ID	3 letter World Bank country code and 4 digit year	
YEAR	4 digit year in which observation occurred	
COUNTRY	3 letter World Bank country code	
COUNTRY_NAME	Full country name	
TI_INDEX	Perceived level of political corruption. Scores are between 0-10, ten being least corrupt.	Transparency International
TI_INVERSE	Perceived level of political corruption, rescaled 0-10, 0 being least corrupt.	
TI_RESCALE	Perceived level of political corruption, rescaled 0-1, 0 being least corrupt.	
GDP_GROWTH	Annual percentage growth rate of GDP per capita based on constant local currency.	World Bank Governance Indicators Dataset
GOV_EXP_PERCENT	Annual percentage growth of general government final consumption expenditure based on constant local currency.	World Bank Governance Indicators Dataset
FIXED_CAP_FORM	Gross fixed capital formation (formerly gross domestic fixed investment).	World Bank Governance Indicators Dataset
TRADE	The sum of exports and imports of goods and services measured as a share of gross domestic product.	World Bank Governance Indicators Dataset
POP_GROW	Annual population growth rate.	World Bank Governance Indicators Dataset
SS_ENROLL	Gross secondary school enrollment.	World Bank EdStats Database
Ethcat4	Ethnolinguistic fractionalization, 4 categories: Most homogeneous (0-.20), Fairly homogenous (.21-.44), Fairly heterogeneous (.45-.65), Most heterogeneous (.66-1)	Global Indicators Shared Dataset
Fiscal	Fiscal decentralization, measured by subnational government expenditures as a percentage of total government expenditure.	Global Indicators Shared Dataset
Admin	Administrative decentralization, measured as the percentage of local revenues that comes from taxes.	Global Indicators Shared Dataset
Political	Political decentralization, measured by the number of state and/or municipal elections.	Global Indicators Shared Dataset

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