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Decentralized Provision of Public Infrastructure and Corruption

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ABSTRACT

During the past three decades, a large number of countries have introduced reforms to decentralize public decision making. Such reforms have proved controversial. Critics of these reforms argue that decentralized provision of infrastructure enhances vulnerability to corruption. Proponents of these reforms counter that corruption arises from lack of people empowerment and decentralization by bringing decision making closer to people shines sunlight on government operations and empowers people to hold government to account and thereby offers potential for combating corruption in the long run. They further state that decentralized provision of infrastructure holds a great promise in upgrading infrastructure to underserved especially rural areas with local self-government. In theory such decentralization is also expected to improve integrity of such operations especially in the event of local financing. These debates, nevertheless, remain unsettled as empirical evidence on the impact of decentralization on infrastructure provision is scant or non-existent. Empirical work is hampered by a lack of reliable data on the incidence of corruption. This paper presents conceptual underpinnings of the impact of decentralized provision of infrastructure on the incidence of corruption and synthesizes scant available empirical evidence to make a case for further empirical research to document the real world experiences to update our current state of knowledge on this subject. Much work lies ahead to limit our wide zone of ignorance in this area.

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1. Introduction

During the past two decades a silent revolution has swept the globe and a large number of industrial and developing countries have pursued decentralization reforms that attempt to move public decision making closer to people. The reform agenda has been pursued through varying combinations of political, administrative and fiscal decentralization initiatives that aim to shift some traditional central government functions to intermediate or lower orders of government. These reforms have proven to be controversial. This is because decentralization is perceived as a solution to some problems such as a dysfunctional public sector with lack of voice and exit as well as a source of new problems such as capture by local elite, aggravation of macroeconomic management due to a lack of fiscal discipline, race to the bottom and potentially greater barriers to common economic and social union through beggar-thy-neighbor policies. The impact of decentralization on corruption (defined as the abuse of public office for private gain or exercise of official powers against public interest) is an area of growing interest inviting much controversy and debate. While this debate has largely centered on the overall impact of decentralization, the focus of current paper is to examine various arguments in this debate in the specific case of decentralized provision of infrastructure – a yet largely unexplored area of research.

What is special about decentralized provision of infrastructure?

Infrastructure projects are typically lumpy, have long gestational periods and are long lived. This implies that a local government must have assured financing of capital and maintenance costs and a plan for recovering capital costs and recurring costs over the life of the project. Infrastructure projects are typically costly and since in most countries local governments have constrained tax autonomy and even more constrained access to capital market finance, higher level financing and assistance for capital market access assumes critical importance for initiation of projects. Even if local governments may enjoy significant tax autonomy, poorer local jurisdictions would not have the revenue capacity to finance infrastructure provision from own revenue surpluses and would have typically no access to capital market finance due to a lack of credit worthiness even in the absence of prohibitions usually practiced against local bond finance. Higher level capital grant financing without local matching funds create incentives for softer budget constraints as local governments do not have to justify these expenses to electorate to have buy in for additional taxation. Infrastructure projects may entail inter-jurisdictional externalities as the optimal size to reap economies of scale may be larger than required by one jurisdiction such as water purification and waste disposal plants or in the absence of user fees free ridership may be possible by residents of other jurisdictions such as for roads, bridges, mass transit and

sports and recreation centers and libraries. Therefore inter-municipal partnerships for cost sharing or higher level transfers to compensate for benefit spill-outs may be required.

Why it is important to examine the implications of decentralized provision of infrastructure for the incidence of corruption?

Decentralized provision of infrastructure is advocated for better matching of infrastructure services with local preferences and needs and for enhancing efficiency and equity of public provision. But if decentralized provision is seen to lead to a higher incidence of corruption especially with higher order grant financing then these advantages may be undermined. Corrupt practices in infrastructure affect the whole project investment and operations cycle and result in projects with roads and bridges to nowhere and creation of white elephants while a median voter is denied access to basic services such as clean water and sanitation. Potential of such corrupt practices is enhanced when these projects are mostly financed by higher order governments which is often a necessity with decentralized provision of infrastructure or external donors. Since infrastructure projects are typically lumpy and have long gestational periods, corrupt strategic behavior of current regimes can tie hands of future regimes to the priorities set by the initiating regime. The times of fiscal stress offer even greater opportunities for corruption as projects must be approved, financed and implemented on an accelerated schedule. In view of the potential negative impact of corruption on good governance, it is important to analyze the implications of decentralized provision of infrastructure for good government both in theory and in practice with a view to examining options for limiting opportunities for corruption while enhancing possibilities of detection and punishment. This paper takes an important first step in this direction by providing a synthesis of conceptual and empirical literature on this subject and highlighting the limits of our knowledge in this area especially the void in the area of empirical underpinnings of lessons in combating corruption.

The paper is organized as follows. Section 2 provides an introductory review of fundamental concepts and concerns relating to corruption, its many facets and its drivers. Section 3 highlights corruption concerns with decentralized infrastructure provision. Section 4 presents counter arguments and discusses the promise of decentralized provision of infrastructure for improved service delivery and reduced corruption. Section 5 synthesizes available evidence on the relationship between decentralized infrastructure provision and corruption. Section 6 draws overall tentative conclusions on the susceptibility of decentralized provision to corruption. Section 7 draws lessons for a strategy to combat corruption when infrastructure provision is decentralized. A final section provides concluding remarks.

2. Corruption and Its Drivers: Fundamental Concepts and Concerns

Corruption is defined as exercise of official powers against public interest or the abuse of public office for private gains. Public sector corruption is a symptom of failed governance. Here, we define “governance” as the norms, traditions and institutions by which power and authority in a country is exercised—including the institutions of participation and accountability in governance and mechanisms of citizens’ voice and exit and norms and networks of civic engagement; the constitutional-legal framework and the nature of accountability relationships among citizens and governments; the process by which governments are selected, monitored, held accountable and renewed or replaced; and the legitimacy, credibility and efficacy of the institutions that govern political, economic, cultural and social interactions among citizens themselves and their governments.

Concern about corruption — the abuse of public office for private gain — is as old as the history of government. In the 4th Century BCE, Kautilya who served as an advisor responded to the Indian King’s concerns about corruption by arguing that corruption is inevitable. He wrote that “Just as it is not possible to not to taste honey placed on the surface of the tongue, even so it is not possible for one dealing with the money of the king not to taste the money in however a small quantity”. He further advised the king that corruption would be difficult to detect. He stated “Just as fish moving under water cannot possibly be found out either as drinking or not drinking water, so government servants employed in the government work cannot be found out (while) taking money (for themselves).” In 350 B.C.E., Aristotle suggested in *The Politics* that “. . . to protect the treasury from being defrauded, let all money be issued openly in front of the whole city, and let copies of the accounts be deposited in various wards.”

In recent years, concerns about corruption have mounted in tandem with growing evidence of its detrimental impact on growth and development (see World Bank, 2004). Figures 1 and 2 highlight the negative consequences of corruption for schooling and access to affordable housing in Indonesia. As a result of this growing concern, there has been universal condemnation of corrupt practices, leading to the removal of some country leaders. Moreover, many governments and development agencies have devoted substantial resources and energies to fighting corruption in recent years. Even so, it is not yet clear that the incidence of corruption has declined perceptibly, especially in highly corrupt countries. The lack of significant progress can be attributed to the fact that many programs are simply folk remedies or “one size fits all” approaches and offer little chance of success. For programs to work, they

must identify the type of corruption they are targeting and tackle the underlying, country-specific

Figure 1. Impact of corruption on access to education in Indonesia



Figure 2. The Impact of corruption on affordable housing in Indonesia



causes, or “drivers,” of dysfunctional governance. This calls for examination of structure of government among other factors.

The many forms of corruption in infrastructure

Corruption is not manifested in one single form; indeed it typically takes at least four broad forms.

Petty, administrative or bureaucratic corruption. Many corrupt acts are isolated transactions by individual public officials who abuse their office, for example, by demanding bribes and kickbacks, diverting public funds, or awarding favors in return for personal considerations. Such acts are often referred to as petty corruption even though, in the aggregate, a substantial amount of public resources may be involved. For infrastructure provision, petty corruption is often observed for “greasing the wheels” in public-private interface in proposals, registration, procurement and access to public services.

Grand corruption. The theft or misuse of vast amounts of public resources by state officials—usually members of, or associated with, the political or administrative elite—constitutes grand corruption. For infrastructure provision, grand corruption occurs in the selection process for public procurement and in procurement itself and in public-private partnerships and interface. In developing countries, foreign private sector participation is considered a major source of such corruption.

State or regulatory capture and influence peddling. Collusion by private actors with public officials or politicians for their mutual, private benefit is referred to as state capture. That is, the private sector “captures” the state legislative, executive, and judicial apparatus for its own purposes. State capture coexists with the conventional (and opposite) view of corruption, in which public officials extort or otherwise exploit the private sector for private ends. This form of corruption is prevalent in both industrial and developing countries.

Patronage/paternalism and being a “team player”. Using official position to provide assistance to clients having the same geographic, ethnic and cultural origin so that they receive preferential treatment in their dealings with the public sector including public sector employment. Also providing the same assistance on a quid pro quo basis to colleagues belonging to an informal network of friends and allies. Geographic, ethnic and culture based patronage is commonplace in developing countries and “team player” form of corruption is fact of everyday life in industrial countries.

It is also known that corruption is country-specific; thus, approaches that apply common policies and tools (that is, one-size-fits-all approaches) to countries in which acts of corruption and the quality of governance vary widely are likely to fail. One needs to understand the local circumstances that

encourage or permit public and private actors to be corrupt. Finally, we know that if corruption is about governance and governance is about the exercise of state power, then efforts to combat corruption demand strong local leadership and ownership if they are to be successful and sustainable.

Many facets of corruption in the provision of infrastructure

An important distinguishing aspect of infrastructure corruption is that mostly it comes in the form of grand corruption which is commonplace in both industrial and developing countries. OECD estimates that in OECD countries bribe rate in procurement for construction projects ranges from 5 to 25% of contract value (Ehlermann-Cache, 2007). In developing countries guesstimates place these much higher. Industrial countries have largely been successful in eliminating petty corruption through higher wages which remains widespread and adversely affects billions of people in developing countries. Table 1 highlights the incidence of corruption in infrastructure provision at various decision points in the legislative-executive-private sector interface in provision of public infrastructure.

Table 1. Many facets of corruption in the provision of infrastructure – decentralized or not

Decision Point	Incidence of corruption	Type of corruption
AT APPRAISAL/PLANNING STAGE		
Legislative framework	Lobbying legislators for pet projects, log rolling, political campaign financing, perks and privileges in exchange for legislative favors, preparation of draft legislation by lobbyists	Grand corruption, State capture (universal phenomenon)
Policy making	Policy framework to suit special interest groups and bribe payers	Executive capture, grand corruption, most countries
Regulation	Zoning and Regulatory framework tailored to favor special interest groups. Extortion over licensing.	Executive capture, grand corruption, most countries
Planning and Budgeting	Rezoning and selection of projects based upon bribes	Executive capture, grand corruption, most countries

	received.	
AT PROJECT FINANCING STAGE		
External Financing	Higher costs of externally financed projects, Donors favor PPPs especially with foreign participation. Kickbacks in return for favorable terms.	Executive capture, grand corruption, most developing countries
Bond Financing	Higher costs for floating bonds	Grand corruption, some developing countries
Grant Financing	Pork barrel grants as quid pro quo for political finance	Grand corruption by financing pork projects such as “The Bridge to Nowhere in Alaska”, most countries
Tax Financing	Elite capture	Grand corruption through tax expenditures and financing of projects preferred by elites
AT IMPLEMENTATION STAGE		
Public-private partnerships	Collusion among public managers and private providers to give favorable terms to private participants in return for a bribe commonly practiced in energy and road projects, re-negotiation of contracts during and after execution	Grand corruption, most countries
Program and project management	Ghost projects, ghost employees, phantom expenditures	Mostly grand corruption, most developing countries
Public procurement	Kick backs, rigged bidding and tendering. Mechanisms:	Mostly grand corruption, most countries

	intermediary collusion, consulting fees, false services, overpayment, payment to a front company, Swiss and Cayman Island bank accounts, collusion among competitors. Procurement cycle: registration, manipulating specifications, insider info, quality reduction, clearance from inspectors, expediting payments.	
Construction	Use of low quality materials, theft of materials, false prices	Mostly grand corruption, most developing countries
AT OPERATIONS STAGE		
Operations and maintenance	False reporting, ghost workers	Mostly grand corruption, most developing countries
User Charges	Theft and free ridership	Petty corruption, most developing countries
Public access	Delay or denial of access	Petty corruption , most developing countries
AT EX-POST EVALUATION STAGE		
Evaluation	Project financing and selection of evaluators leads to lack of independence and biased evaluations	Patronage, most countries
Source: Author's perspectives		

Table 2. Vulnerability to corruption observed in decentralized or not provision of infrastructure in various sectors	
Water and Sanitation	Land acquisition, Selection of contractors, bid rigging, compromising quality, bribes for connections, meter tampering, conflict of interest with officials involved in private provision, collusion with companies offering bottled water or tanker provision.
Roads	Land acquisition at above market prices, rehabilitation, selection of contractors, false procurement and maintenance expenditures, certification of quality of construction
Electricity	Public utilities: Land acquisition, rights of way, rehabilitation, equipment purchase and repair mark ups, patronage appointments, defective meters, meter tampering, theft of electricity by tapping distribution lines with side payments, connections delays, false billing, response to non-payment of bills, false subsidy payments, public sector guarantees for assured demand for supply at above market rates Private utilities: Selection, regulatory regime, price hikes, regulators turning blind eye to capital deterioration
Hospitals	Ghost hospitals, bribes for admissions and drugs, false procurement and construction,
Schools	Ghost schools, bribes for admissions, ghost enrollments, false procurement and corruption
Fitness and Recreation centers	Padding up cost of construction and purchase of equipment

Source: Author's perspectives

Vulnerability to corruption is significant regardless of centralization or decentralization of provision as described in Table 2. With decentralization, however, the probability of detection of corruption is significantly enhanced.

What drives corruption?

Public sector corruption, as a symptom of failed governance, depends on multitude of factors such as the quality of public sector management, the nature of accountability relations between the government and citizens, the legal framework and the degree to which public sector processes are accompanied by transparency and dissemination of information. Efforts to address corruption that fail

to adequately account for these underlying “drivers” are unlikely to generate profound and sustainable results. To understand these drivers, a conceptual and empirical perspective is needed to understand why corruption persists and what can be a useful antidote. At the conceptual level, a number of interesting ideas have been put forward. These ideas can be broadly grouped together in three categories (a) Principal- agent or agency models; (b) new public management perspectives; and (c) neo-institutional economics frameworks.

Conceptual Perspectives on Drivers of Corruption

Principal- Agent Models

This is the most widely used modeling strategy. A common thread in these models is that the government is led by a benevolent dictator, the principal, who aims to motivate government officials (agents) to act with integrity in the use of public resources (see Becker, 1968, Becker and Stigler, 1974, Banfield 1975, Rose Ackerman 1975, 1978, Klitgaard 1988, 1991, Becker 1983). One such view, the so-called crime and punishment model by Gary Becker (1968), states that self-interested public officials seek out or accept bribes so long as the expected gains from corruption exceed the expected costs (detection and punishment) associated with corrupt acts. Thus, according to this view, corruption could be mitigated by (a) reducing the number of transactions over which public officials have discretion; (b) reducing the scope of gains from each transaction; (c) increasing the probability for detection; and (d) increasing the penalty for corrupt activities. Moreover, since it is costly to increase detection, but not to increase penalties (at least assuming detection is accurate), the most efficient way to eliminate corruption is to impose very high penalties with a relatively low probability of detection. Klitgaard (1988) restates this model to emphasize the unrestrained monopoly power and discretionary authority of government officials. According to him, corruption equals monopoly plus discretion minus accountability. To curtail corruption under this framework, one has to have a rules-driven government with strong internal controls and with little discretion to public officials. This model gained wide acceptance in public policy circles and served as a foundation for empirical research and policy design to combat administrative, bureaucratic, or petty corruption. Experience in highly corrupt countries, however, contradicts the effectiveness of such an approach as the rules enforcers themselves add extra burden of corruption and lack of discretion is also thwarted by collusive behavior of corruptors. In fact lack of discretion is often cited as a defense by corrupt officials who partake in corruption as part of a vertically well-knit network enjoying immunity from prosecution.

Another variant of principal-agent models integrates the role of legislators and elected officials in the analysis. In this variant, high level government officials –represented by legislators or elected public officials– institute or manipulate existing policy and legislation in favor of particular interest groups – representing private sector interests and entities or individual units of public bureaucracy competing for higher budgets– in exchange of rents or side payments. In this framework, legislators weigh the personal monetary gains from corrupt practices and improved chances of re-election against the chance of being caught, punished and losing an election with a tarnished reputation. Factors affecting this decision include campaign financing mechanisms, information access by voters, the ability of citizens to vote out corrupt legislators, the degree of political contestability, electoral systems, democratic institutions and traditions and institutions of accountability in governance. Examples of such analyses include: Rose-Ackerman (1978), Andvig & Moene (1990), Grossman & Helpman (1994), Flatters & Macleod (1995), Chand & Moene (1997), Van Rijckeghem & Weder, (1998), Acconcia D’Amato & Martina (2003). This conceptual framework is useful in analyzing political corruption or state capture.

There is a fine line dividing theoretical models that focus on the effects of localization on corruption and those that analyze the decentralization of corruption within a multi-tier hierarchy from an “industrial organization of corruption” type of framework. In the latter group a distinction is made between “top-down corruption” –where corrupt high levels buy lower levels by sharing a portion of gains– and “bottom-up corruption” –where low level officials share their own collected bribes with superior levels to avoid detection or punishment. The former phenomenon is more likely to exist in a federal system of governance where powers may be shared among various orders of government and the alternate is more likely to prevail under unitary or centralized forms of governance or dictatorial regimes. The impact of governance on the corruption networks is an interesting yet unresearched topic. Tirole (1986) analyzed one aspect of this network by means of a three-tier principal-supervisor-agent model (see also Guriev 1999). This extension of a conventional principal-agent model assists in drawing inferences regarding the type of corrupt relations that could evolve under a three-tier unitary government structure. These inferences are highly sensitive to underlying assumptions regarding principal-agent relationships under a multi-tiered system of governance (four-tier hierarchies are modeled by Carillo 2000, Bac & Bag 1998). In Guriev’s three-tier hierarchy model the mid level bureaucrat supervises the agent and reports to the principal. In comparing the characteristics of equilibria with top-bottom-and all level corruption Guriev concludes that top-level corruption “is not efficient, as it redistribute rents in favor of agents, and therefore makes it more attractive for potential entrants” (p.2) and thereby leading to higher total corruption.

Shleifer and Vishny (1993) utilize conventional industrial organization theory model and conclude that decentralization is likely to increase corruption. In this model, government bureaucracies and agencies act as monopolists selling complimentary government-produced goods which are legally required for private sector activity. The main idea behind the model is that under centralized corruption bureaucracies act like a joint monopoly, whereas under decentralized corruption bureaucracies behave as independent monopolies. When bureaucracies act as independent monopolies, they ignore the effects of higher prices on the overall demand for a good and hence drive up the cumulative bribe burden.

Waller, Verdier and Gardner (2002) define decentralized corruption as a system in which higher level officials collect a fixed amount of bribe income from each of the bureaucrats that take bribes, without mandating on the bribe size that the bureaucrats charge. In a centralized system, on the contrary, bribe size is determined by the higher level of government which collects them from bureaucrats and redistributes it among them after keeping a share. Waller et al. posit that decentralized corruption leads to lower levels of total corruption in the economy (lower spread), higher levels of bribe per entrepreneur (higher depth), and a smaller formal sector *vis-a-vis* a centralized corruption equilibrium. Yet, these results vary widely for specific 'regimes' in the model –when given parameters satisfy key conditions– for instance, for high-enough wages and monitoring systems, centralized corruption may reduce total corruption and expand the formal economy.

While previously discussed studies centered on the organizational structure of corruption, Ahlin (2001) differs by concentrating on the effects of bureaucratic decentralization. Under the assumption of no interregional mobility, corruption increases with the degree of bureaucratic decentralization but is independent of the degree of regional decentralization, whereas for perfect interregional mobility corruption decreases with regional decentralization and is independent of bureaucratic decentralization. A key intuition of the model is that corrupt bureaucrats fail to internalize the costs of increases in bribe-charges imposed on other bureaucrats. Arikian (2004) uses a tax competition framework to examine localization-corruption links and finds that higher degree of decentralization is expected to lead to lower levels of corruption. Bardhan and Mookherjee (2000a) shed light upon the determinants of capture of the democratic process. Not surprisingly, they conclude that the extent of relative capture is ambiguous and context specific.

In conclusion, no definitive conclusions can be drawn regarding corruption and the centralization-decentralization nexus from the agency type conceptual models. These models simply reaffirm that the

incidence of corruption is context dependent and therefore cannot be uncovered by generalized models.

New Public Management Frameworks

The new public management (NPM) literature, on the other hand, points to a more fundamental discordance among the public sector mandate, its authorizing environment and the operational culture and capacity. According to NPM, this discordance contributes to government acting like a runaway train and government officials indulging in rent-seeking behaviors with little opportunity for citizens to constrain government behavior. This viewpoint calls for fundamental civil service and political reforms to create a government under contract and accountable for results. Public officials will no longer have permanent rotating appointments but instead they could keep their jobs as long as they fulfilled their contractual obligations (see Shah, 1999, 2005).

The new public management (NPM) paradigms have clear implications for the study of localization and corruption as it argues for contractual arrangements in provision of public services. Such a contractual framework may encourage competitive service delivery through outsourcing, purchaser-provider split under a decentralized structure of governance. The NPM goals are harmonious with decentralization as greater accountability for results reinforces government accountability to citizens through voice and exit mechanisms. Conceptually, therefore, the NPM is expected to reduce opportunities for corruption (see Shah 1999, 2005). Andrews and Shah (2005) integrate these two ideas in a common framework of citizen-centered governance. They argue that citizen empowerment holds the key to enhanced accountability and reduced opportunities for corruption.

Others disagree with such conclusions and argue that the NPM could lead to higher corruption as opposed to greater accountability. This may happen because the tendering for service delivery and separation of purchasers from providers may lead to increased rent seeking behavior and enhanced possibilities for corruption (Batley 1999, Von Maravic, 2003). Further some argue that decentralized management leads to weaker vertical supervision from higher levels and the inadequacy of mechanisms to exert controls over decentralized agencies (Scharpf, 1997). This loss in vertical accountability is seen as a source of enhanced opportunities for corruption. Of course, this viewpoint simply neglects potential gains from higher horizontal accountability.

Neo-Institutional Economics (NIE) Frameworks

Finally, Shah (2006) has utilized the transactions costs approach of the neo-institutional economics (NIE) to present a newer perspective on the causes and cures of corruption. Shah argues that corruption results from opportunistic behavior of public officials (agents) given that citizens (as governors and principals) are either not empowered or face high transaction costs to hold public officials accountable for their corrupt acts. The principals have bounded rationality – they act rationally based upon the incomplete information they have. In order to have a more informed perspective on public sector operations, they face high transaction costs in acquiring and processing the information. On the other hand, agents (public officials) are better informed. This asymmetry of information allows agents to indulge in opportunistic behavior which goes unchecked due to high *transactions costs* faced by the principals and a lack of or inadequacy of countervailing institutions to enforce accountable governance. Thus corrupt countries have inadequate mechanisms for contract enforcement, weak judicial systems and inadequate provision for public safety. This raises the transactions costs in the economy further raising the cost of private capital as well as the cost of public service provision. The problem is further compounded by path dependency (i.e. a major break with the past is difficult to achieve as any major reforms are likely to be blocked by influential interest groups), cultural and historical factors and mental models where those who are victimized by corruption feel that attempts to deal with corruption will lead to further victimization, with little hope of corrupt actors being brought to justice. These considerations lead principals to the conclusion that any attempt on their part to constrain corrupt behaviors will invite strong retaliation from powerful interests. Therefore, citizen empowerment (e.g. through decentralization, citizens' charter, bill of rights, elections and other forms of civic engagement) assumes critical importance in combating corruption because it may have a significant impact on the incentives faced by public officials to be responsive to public interest.

3. The Perils of Decentralized Provision of Infrastructure in Breeding Corruption

A number of arguments have been advanced to support the notion that corruption increases with localization. A few of these are summarized below.

a) Personalism. Vito Tanzi (1995) argued that localization brings officials in close contact with citizens. This promotes personalism and reduces professionalism and arms length relationships.

Personalism in his view breeds corruption as officials pay greater attention to individual citizen needs and disregard public interest. Further, a higher degree of discretion at the local level and long tenure of local officials make it easier to establish unethical relationships (Prud'homme 1995).

b) Weak monitoring and vertical controls. Impediments to corrupt practices also decrease as local politicians and bureaucrats collude to advance narrow self-interests while the effectiveness of auditing agencies and monitoring from the central level wanes (Prud'homme 1995). Localization may increase the motivation for corruption among public officials by creating an impression that they are subject to lower monitoring, control and supervision.

c) Fiscal decentralization and overgrazing. Treisman argues that decentralized federal systems tend to have higher corruption ratings due to (a) their larger size; (b) more likely to have separate police forces at both central and sub-national levels (which increases corruption due to overgrazing) and their greater propensity to have a regionally elected upper house of parliament with veto power (which also may increase corruption as regional governments may buy off these veto-players or have greater leverage to protect their ill-gotten gains). Using cross country regression analysis Treisman (1999, 2000, 2002) presents empirical evidence that support the existence of this negative relationship. Treisman's empirical results, however, are sensitive to the inclusion of other variables in the equation and may have omitted variables bias in view of a lack of underlying framework for corruption.

A recent study by Fan, Lin and Treisman (2007) provides a more nuanced view of the impact of fiscal decentralization. Combining cross-sectional secondary data for 80 countries with a survey of 9000 business owners, it finds that "in countries with large number of government or administrative tiers and (given local revenues) a larger number of local public employees, reported bribery was more frequent. When local or central governments received a larger share of GDP in revenue, bribery was less frequent" (p.1). These results suggest that while decentralization in general opens up possibilities for rent seeking by a larger number of individuals, tax decentralization limits such opportunities by bringing greater citizen oversight of local government operations.

d) Political decentralization and lack of discipline. Political decentralization is seen as a cascading system of bribes by Shleifer and Vishny (1993). They note that "to invest in a Russian company, a foreigner must bribe every agency involved in foreign investment including the foreign investment office, the relevant industrial ministry, the finance ministry, the executive branch of the local

government, the legislative branch, the central bank, the state property bureau, and so on.” (p. 615). In the same vein, Bardhan (1997) and Blanchard and Shleifer (2000) [B&S] have argued that political centralization leads to lower levels of corruption. B&S sustain that political decentralization is seen as a source of corruption in Russia but not China. This conclusion emerges from the contrasting role of local governments in their relations with local enterprises observed in China and Russia. In China, local governments have provided a supporting role whereas in Russia, local governments have stymied the growth of new firms through taxation, regulation and corruption. The authors note that behavior of Russian local governments can be explained by (a) state capture by old firms, leading local governments to protect them from competition and (b) rent seeking behavior of local officials discouraging new firms to enter. The authors attribute this contrasting experience to presence of political decentralization in Russia and its absence in China. They argue that political centralization in China contributes to party discipline which in turn reduces the risk of local capture and corruption. However, B&S analysis does not pay sufficient attention to local-enterprise relations in the two countries. Local enterprises in China are owned and run by local governments and even deliver local services such as education, health and transportation in addition to their economic functions. Thus local enterprises are part and parcel of the local government. In Russia, on the other hand, a mixed pattern of these relationships has begun to emerge. Therefore, the contrasting experience of the local governments may better be explained by agency problems rather than by political decentralization. In fact the weakening of party discipline through the emergence of powerful local leaders may be contributing to growth of local industry as the strong arm of central planning is held at bay by these leaders.

e) Interest group capture. Opportunities for corruption increase due to a greater influence of interest groups at the local level (Prud'homme 1995). In this regard, Bardhan and Mookherjee (2000a) argue that the probability of capture by local interest groups could be greater at the local level if, for example, interest group cohesiveness (fraction of the richest class that contribute to lobby) is higher, or the proportion of informed voters is lower at the local level. Lower levels of political awareness at the local level and less coverage of local elections by media may also impair local democracy and lead to higher capture. The notion of capture at the local levels due to weaknesses of the democratic system has also been raised by Shah (1998). Concerns about risks of local capture are also expressed in a recent World Bank Study (World Bank, 2004). The study argues that decentralization may increase opportunities for corruption in some developing countries where interference in public administration is the norm, merit culture and management systems in the civil service are weak and institutions of participation and accountability are ineffective. The issue is significant, for example, in Pakistan and

Philippines and also relevant to Guatemala and Tanzania where more limited decentralization has been carried out. Pakistan has recently carried out a strong program of devolution to the provinces (Shah, 2012). Given systemic politicization of public services in Pakistan, decentralization to the provinces may intensify rather than reduce pressures for political/bureaucratic collusion, although this may be further mitigated by further administrative decentralization, giving elected local officials the power to, hire, fire and set terms of employment of civil servants in their jurisdiction. Note that administration decentralization in areas under feudal influence is likely to exacerbate the corruption concerns. Identical concerns are pertinent in Philippines, where legislation in 1991 devolved to regions and localities powers to provide services and raise revenues. In Philippines, there is a long tradition of elected local public offices rotating among family members. The World Bank study is concerned with the effect of decentralization on corruption when there is a local capture by political and bureaucratic elites. There is little disagreement in the literature that in such a situation, localization without fundamental electoral and land reforms, is likely to increase corruption. On the contrary, the perception of localization as a breeding ground for corruption in the presence of democratic participation and accountability, is neither grounded in theory nor in evidence.

f) **Lack of competition fosters collusive practices.** It has been argued that in environments with weak or less developed private sector, as found in many developing countries, lack of competition at the local level fosters corruption in public-private sector interface as third party oversight is missing in such an environment. A national database on benchmarking could limit such opportunities for corruption as local residents would be better informed about costs of comparable operations in other jurisdictions.

Table 3 attempts to capture the impact of the multitude of negative influences of decentralization on the incidence of corruption at various decision points. These negative influences dominate in the absence of representative democracy and competitive market pressures typically found in rural feudal dominated local governments. They are typically found also in urban areas when a few dominant developers build special patronage relationships with local council members.

Table 3. Perils of decentralized provision of infrastructure at various decision points

Decision Point	Impact of decentralization on the incidence of corruption	Impact by type of corruption
AT APPRAISAL/PLANNING STAGE		
Legislative framework	In rural areas where feudal or industrial elites may dominate local councils local government may serve the interests of elite to the neglect of its services to rural residents at large.	Enhanced opportunities for grand corruption through state capture
Policy making	Rural councils dominated by elites can impose policy framework to suit special interest groups and bribe payers	Enhanced executive capture, grand corruption
Regulation	Greater possibility of having zoning to favor developer interests in exchange for political finance and bribes and regulatory framework tailored to favor special interest groups	Enhanced executive capture, grand corruption
Planning and Budgeting	Greater opportunities for rezoning and selection of projects based upon bribes and other benefits received.	Enhanced executive capture, grand corruption
AT PROJECT FINANCING STAGE		
External Financing	Higher costs of externally financed projects, Donors favor PPPs especially with foreign participation. Kickbacks in return for favorable terms.	Enhanced executive capture, grand corruption, most developing countries

Bond Financing	No impact	Negligible incidence of corruption
Grant Financing	Some pork barrel grants as quid pro quo for political finance still possible	Some grand corruption by financing pork projects as bridge to nowhere in Alaska, most countries
Tax Financing	Little impact	
AT IMPLEMENTATION STAGE		
Public-private partnerships	Collusion among public managers and private providers to give favorable terms to private participants in return for a bribe commonly practiced in energy and road projects, re-negotiation of contracts during and after execution	Grand corruption persists when transparency and competitive pressures are lacking
Program and project management	Little perverse impact	
Public procurement	Kick backs, rigged bidding and tendering still possible. Mechanisms: intermediary collusion, consulting fees, false services, overpayment, payment to a front company, collusion among competitors. Procurement cycle: registration, manipulating specifications, insider info, quality reduction, clearance from inspectors, expediting payments.	Grand corruption could be enhanced in the short run
Construction	Use of low quality materials,	Mostly grand corruption, most

	theft of materials, false prices	developing countries
AT OPERATION STAGE		
Operations and maintenance	False reporting still possible	Mostly grand corruption, most developing countries
User Charges	Theft and free ridership feasible	Petty corruption could go up in the short run
Public access	Isolated incidences of delays or denial of access still possible	Some petty corruption
AT EX-POST EVALUATION STAGE		
Evaluation	Biased favorable evaluation	Patronage – most countries

Source: Author's perspectives

Table 4 attempts to draw the implications of these negative influences for corruption in individual sectors. Patron-client relationships immune from public scrutiny are the major sources of various forms of corruption.

Table 4. Enhanced Vulnerability to corruption introduced by decentralized provision of infrastructure in various sectors

Water and Sanitation	Favoritism in selection of contractors, bid rigging, bribes for connections, meter tampering, conflict of interest with officials involved in private provision, collusion with companies offering bottled water or tanker provision.
Roads, bridges and mass transit	Favoritism in selection of contractors, some false procurement and maintenance expenditures, and false certification of quality of construction still possible
Electricity	<i>Public utilities:</i> equipment purchase and repair mark ups, patronage appointments, defective meters, meter tampering, theft of electricity by tapping distribution lines with side payments, connections delays, false billing, response to non-payment of bills, false subsidy payments, public sector guarantees for assured demand for supply at above market rates <i>Private utilities:</i> Selection, regulatory regime, price hikes, regulators

	turning blind eye to capital deterioration
Hospitals	false procurement and padding up of construction costs, bribes for admissions and drugs
Schools	false procurement and padding up of construction costs, false enrollments, bribes for admissions
Fitness, sports and recreation centers	Padding up cost of construction and purchase of equipment

Source: Author's perspectives

4. The Promise of Decentralized Provision of Infrastructure in Limiting Opportunities for Corruption

Decentralization's ability to curtail corruption opportunities has been commonly based on the potential for greater accountability when the decision making is closer to the people. This line of thought is supported from the following perspectives:

a) Competition among local governments for mobile factors of production re-inforces the accountability culture. Such enhanced accountability has the potential to reduce corruption (Weingast, 1995, Arikan 2000).

b) Exit and voice mechanisms at the local level. There is a general agreement in the literature that localization can open up greater opportunities for voice and choice thereby making the public sector more responsive and accountable to citizens-voters. Furthermore, due to regional heterogeneity of political preferences localization may reduce the range of potential capture by a unique nationally dominant party.

c) Higher levels of information. Seabright (1996) argues that accountability is always better at the local level, since local citizens who are better informed about government performance can vote these governments out of office. Under centralization people vote for parties or candidates partly on the basis of performance in other regions and partly on issues of national interest. As a result accountability is defused and potential for corruption increases. Bardhan and Mookherjee (2000b) also argue that decentralization in developing countries promotes cost-effectiveness and reduces corruption, owing to the superior access of local governments to information on local costs and needs.

d) Lower expected gains from corruption but greater probability of detection and punishment.

Administrative decentralization causes a loss in control to higher levels, thus curbing their incentives to monitor and detect corrupt activities. However, it also lowers the expected gains from corruption as, following decentralization, the number of individuals who are in charge of a single decision is reduced. It is then more likely that corrupt agents are called to bear the consequences of their actions. This line of thought complements those put forward by Carbonara (1999); who concludes that decentralization although creating agency problems inside an organization can help in controlling corruption; and Wildasin (1995), who argues that local officials with limited powers have little scope to engage in grand corruption.

e) Reduced corruption due to reduction in information asymmetry between politicians and bureaucrats. Ahlin (2000) has argued that deconcentration has the potential to increase corruption, whereas political decentralization has the potential to contain it due to interjurisdictional competition. This may result from a reduction in the information asymmetry between bureaucrats and the politicians that appoint them vis a vis a politically centralized systems. Crook and Manor (2000) examined the process of political decentralization in India (Karnataka state), Bangladesh, Cote d'Ivoire and Ghana and find that such decentralization leads to enhanced transparency. With this enhanced transparency, ordinary citizen become better aware of government's successes and failures and they may perceive the government institutions more corrupt than the perception they had before. They observed that in Karnataka, India, political decentralization substantially reduced the amount of public funds diverted by powerful individuals. However, since citizens were not aware of these diversions, they concluded that corruption had increased. Crook and Manor based upon evidence from Karnataka conclude that political decentralization reduces grand theft but increases petty corruption in the short run but in the long run both may go down. Olowu (1993) also finds political centralization as a root cause of endemic corruption in Africa. Fiszbein (1997) based upon a review of political decentralization in Colombia concludes that competition for political office opened the door for responsible and innovative leadership that in turn became the driving force behind capacity building, improved service delivery and reduced corruption at the local level.

f) Improved local accountability with administrative decentralization reduces corruption. A few studies show that administrative decentralization reduces corruption. Wade (1997) finds that over-centralized top down management accompanied by weak communication and monitoring systems contributes to corruption and poor delivery performance for canal irrigation in India. Kuncoro (2000) finds that with administrative decentralization in Indonesia, firms relocated to areas with lower bribes.

g) Local fiscal autonomy improves economic management and reduces corruption. Huther and Shah (1998) using international cross-section and time series data find that fiscal decentralization is associated with enhanced quality of governance as measured by citizen participation, political and bureaucratic accountability, social justice, improved economic management and reduced corruption. Arian (2004) reconfirms the same result. De Mello and Barenstein (2001) based upon cross-country data conclude that tax decentralization is positively associated with improved quality of governance. Fisman and Gatti (2002) find a negative relation between fiscal decentralization and corruption. Gurgur and Shah (2002) is the only study providing a comprehensive theoretical and empirical framework on the root causes of corruption. They identify major drivers of corruption in order to isolate the effect of decentralization. In a sample of industrial and non-industrial countries, lack of service orientation in the public sector, weak democratic institutions, economic isolation (closed economy), colonial past, internal bureaucratic controls and centralized decision making are identified as the major causes of corruption. For a non-industrial countries sample, drivers for corruption are lack of service orientation in the public sector, weak democratic institutions and closed economy. Decentralization reduces corruption but has a greater negative impact on corruption in unitary countries than in federal countries. They conclude that decentralization is confirmed to support greater accountability in the public sector and reduced corruption.

h) Lower transactions costs for citizens to hold the government to account. Decentralization brings greater clarity in division of responsibilities and services that are delivered locally, citizens' transactions costs to hold the government to account are significantly reduced as they have better information on service delivery performance and costs as well as redress opportunities and mechanisms.

i) Greater Transparency. Local government operations are by their nature more transparent due to greater local knowledge. In the USA, this transparency is further enhanced by output based budgeting and reporting adopted by most local governments voluntarily to build citizens' trust. In such an environment collusive practices are well recognized by citizens thereby curtailing corrupt practices.

Table 5 captures the combined impact of the confluence of factors mentioned above to limit opportunities for corruption while enhancing potential for detection and prosecution at various points in public decision making. The table shows that decentralization will have some positive influence on curtailing corruption at almost all decision points. However, decentralization offers some promising entry points for having a major impact on reducing corruption. First major entry point is public hearings

on zoning. This process offers residents an opportunity to learn reasons behind rezoning and interest groups involved. The second and probably the most important entry point in curtailing corruption is the public procurement process. The transparency and integrity of this process will significantly curtail the incidence of corruption. The incidence of corruption also depends upon the nature and source of infrastructure finance available to local governments. If financing is no concern as in oil rich countries, incidence of corruption may be higher as the local governments no longer have to seek approval of additional financing or justify such expenses to local electorate. The incidence of corruption is accentuated by having non-elected local governments as in the Middle East. Local governments that finance infrastructure projects from own sources are likely to have a greater integrity of the entire project cycle due to active involvement of electorate in ensuring that their tax dollars to put to best use. Thus citizen activism and openness of the democratic processes plays a critical role in curtailing the impact of corruption.

Table 5. Potential of Decentralization in curtailing corruption at various decision points

Decision Point	Impact of Decentralization on the Incidence of corruption	Impact by the type of corruption
AT APPRAISAL/PLANNING STAGE		
Legislative framework	In urban areas with greater citizens engagement, lobbying influences and perks and privileges in exchange for legislative favors are constrained.	Opportunities for grand corruption are curtailed due to smaller projects and greater transparency. State capture rare in urban areas.
Policy making	Policy framework to suit special interest groups and bribe payers stunted due to adversarial citizen watch groups	Executive capture and grand corruption is reduced in most countries
Regulation	Extortion over licensing is eliminated.	Executive capture and grand corruption is reduced in most countries
Planning and Budgeting	Competitive providers limit	Executive capture, grand

	rezoning and selection of projects based upon bribes received.	corruption is reduced in most countries
AT PROJECT FINANCING STAGE		
External Financing	No positive impact	Executive capture, grand corruption, most developing countries
Bond Financing	Little opportunity for corruption in bond financing as it is only done for major metropolitan areas with central oversight	Incidence of corruption is minimal.
Grant Financing	Competitive inter-jurisdictional pressures typically result in transparent formula driven grant financing limiting funds for pork barrel grants as quid pro quo for political finance	Grand corruption opportunities are constrained.
Tax Financing	Greater transparency in local tax policy and administration limits elite capture	Grand corruption though tax expenditures and financing of projects preferred by elites is curtailed
AT IMPLEMENTATION STAGE		
Public-private partnerships	Little impact on public official and private managers collusive practices due to complex contractual relationship not easily understood by residents/voters.	Little impact on opportunities for grand corruption in most countries
Program and project management	Greater transparency in decentralized provision largely eliminates potential for ghost	Opportunities for grand corruption are greatly constrained.

	projects, ghost employees, phantom expenditures	
Public procurement	Potential for kick backs, rigged bidding and tendering is greatly reduced.	Opportunities for grand corruption reduced in most countries
Construction	Benchmarking limits opportunities for padding costs.	Grand corruption is curtailed.
AT OPERATION STAGE		
Operations and maintenance	False reporting, ghost workers constrained due to citizen feedback loops	Opportunities for grand corruption curtailed in most developing countries
User Charges	Little impact	Little impact on petty corruption
Public access	Some positive impact on delay or denial of access due to timely recourse and lower transactions costs for citizens to hold corrupt officials to account.	Petty corruption reduced
AT EX-POST EVALUATION STAGE		
Evaluation	Independent evaluations and citizen-based monitoring and evaluation lead to fair evaluations.	Patronage curtailed

Source: Author's perspectives

Table 6 embodies the influence of decentralized institutions on combating corruption to develop an aggregate view of these influences at the sector level. The table highlights potential positive influences of government closeness to the people on the integrity of provision of infrastructure at the local level. The table shows that while decentralization limits opportunities for corruption especially grand corruption, overall positive impact may be less observable for fitness, sports and recreation centers due to the non-standard nature of these projects benchmarking of costs may be more difficult as compared to standard infrastructure projects such as roads and bridges.

Table 6 . Promise of Decentralization in Reducing Vulnerability to corruption observed in provision of infrastructure in various sectors	
Water and Sanitation	Diminished potential for land acquisition at above market rate due to wider local knowledge of land values, lower potential for compromising quality due to improved citizen feedback loops.
Roads, bridges and mass transit	Diminished potential for land acquisition at above market prices, diminished opportunities for false procurement and maintenance expenditures, constrained opportunities for false certification of quality of construction
Electricity	<i>Public utilities:</i> Diminished potential land acquisition at above market rates and acquiring the rights of way, and false subsidy payments and public sector guarantees for assured demand for supply at above market rates. <i>Private utilities:</i> Reduced potential for corruption in the regulatory regime due to greater citizen oversight
Hospitals	Eliminates opportunity for ghost hospitals
Schools	Eliminates opportunities for ghost schools
Fitness, sports and Recreation centers	Little impact on padding up costs

Source: Author's perspectives

In all, a small yet growing body of theoretical and empirical literature confirms that localization offers significant potential in bringing greater accountability and responsiveness to the public sector at the local level and reducing the incidence of grand corruption. While most of this literature is focused on decentralized provision of all services yet their conclusion apply in equal force to infrastructure as infrastructure provision dominates local government expenditures.

5. The Evidence

While a growing number of empirical studies have examined the relationship between decentralization and corruption, only a handful of these studies have examined the specific impact of decentralized provision of infrastructure. Santos (1968) discovered that sectoral allocation of spending improved with participatory budgeting in Porto Alegre, Brazil. Isham and Kahkonen (1999) observed improvements in water services in Central Java, Indonesia with local community management. A World Bank study (2004) found improvement in a few local government areas in decentralized provision of water and sanitation services. A study of local government procurement in the Philippines revealed that (see Tapales, 2001, p.21): *“contractors admit to paying mayors of the towns where they have projects, because, they say, the officials can delay the work by withholding necessary permits or harassing the workers. Municipal mayors get seven percent while the barangay (village) captain is given three percent. The heads of implementing agencies – usually the district, municipal or city engineer – get about 10 percent.”* A study of canal irrigation in India attributed corruption to centralization of management (Wade, 1997).

A World Bank study (World Development Report, 1994) compared results under centralized vs decentralized maintenance of roads and found that countries with decentralized maintenance had better roads. This finding indirectly implies that with centralized provision there were greater leakage of public funds through mismanagement, inefficiency, waste and corruption.

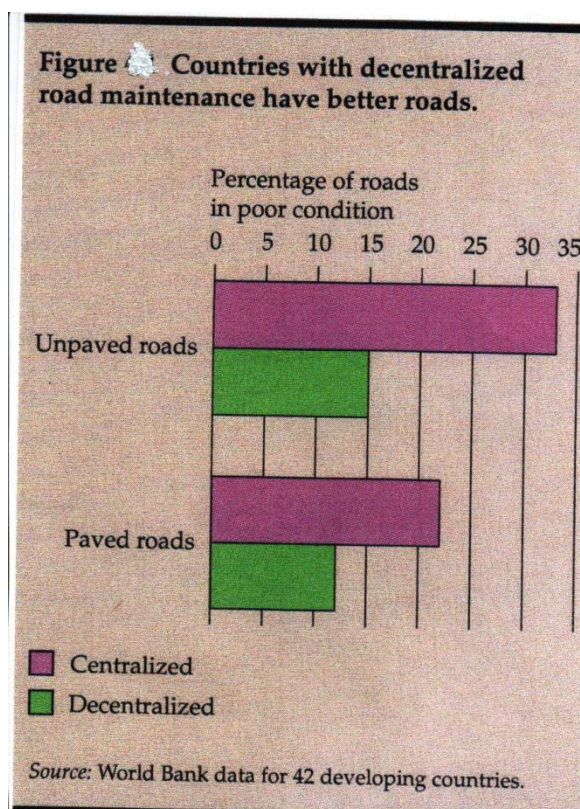


Figure 3. Countries with decentralized road maintenance have better roads

Source: World Development Report, 1994, p.75

Empirical work on the impact of decentralization on the incidence of corruption is seriously hampered by a lack of reliable data especially on the incidence of corruption. The two most widely used sources are the Transparency International's Corruption Perception Indexes (CPIs) and Worldwide Governance Indicators (WGIs) published by the World Bank. Both measures are seriously flawed and indefensible as they make false comparisons across countries for any year and over time and for tracking any country overtime¹. Underlying data bases they use simply do not permit such rankings and comparisons as different sources of survey data and questions with weights that vary overtime for each country and across countries are used (see Arndt, 2008a,b and Ivanyna and Shah, 2011 for a critique and illustration

¹ The editors of this volume take strong exception to the author's view and state, "While the first statement is correct - we have a gap of data on governance at the sub-national level, the second statement would need to be reconsidered since it seems to suggest that the authors of the indicators are suggesting to use the data to evaluate governance over time at the sub-national level. The authors of the WGI have over and over warned researchers and practitioners about the limit of their data, meaning of a cross country/cross-year comparison and the objective of their data: to simply highlight that there is a governance issue in a country. The WGI also seem to be the only indicators that provide the margin of errors and the sources of the data. The authors also emphasize that the WGI are not actionable and cannot help to design a policy reform. They are simply a starting point to mobilize public opinion around this issue (as the CPI)." (May 13, 2013 e-mail to the author, p.3). See also Galtung (2006).

of this point using data sources and weights used by both CPI and WGI indicators and Ivanyna and Shah, 2011 for an illustration of an alternate methodology). Professor Joel Slemrod, University of Michigan, has aptly remarked in another context but his saying applies equally well here, “Whatever we have learned is false and whatever we know is half truth. We really do not know what we do know or do not know.” Moreover, these measures are simply not available at subnational levels. What is needed is a worldwide survey using uniform questionnaire and employing a stratified random sampling approach in each country to seek an aggregate view of local perceptions on the incidence of corruption. Ivanyna and Shah (2011, 2012, 2013) take a first small step in this direction as well as developing subnational indicators. There is also need for rigorous case study work in this area. In recent years, the University of Gotenburg and the World Bank has taken small steps to improve our knowledge on quality of governance at subnational levels.²

6. Overall Impact of Decentralized Provision of Infrastructure on Corruption – by sector and by type of corruption: Some Tentative Conclusions

Earlier section demonstrated that empirical work on the impact of decentralized provision of infrastructure is scant. A handful of studies available indicate overall positive influence of decentralization on the integrity of public infrastructure provision. Given the paucity of evidence, one cannot, however, reach any conclusive view on this issue. Conceptual literature on the subject, is however, vast and yet equally inconclusive. While the dominant theme in this literature again is the positive influence of decentralization in curtailing corruption, yet it cannot serve as the basis for reaching any definitive conclusions. In fact there is some wisdom in not reaching any conclusive view as the incidence is case dependent. Much depends upon the history, culture, organization and public and private sector environment of each case study. Recognizing this important proviso, table 7 presents a stylized conjectural view of the overall impact of decentralized provision of infrastructure on the sector and type of corruption. Short run (SR) impact of decentralization of decentralization on petty corruption is conjectured to be positive in curtailing corruption for water and sanitation, transportation and electricity and sports and recreation centers but petty bribes for hospital and school admissions and drugs may continue and could be perceived to have increased in view of greater access to information and transparency with decentralization. In the long run, greater local accountability and oversight kicks in to reduce petty corruption in all sectors. Decentralization is also expected to reduce grant corruption in all sectors except sports and recreation centers in the short run. For sports and recreation centers in the short run, it may be difficult to hold local government to account due to a lack of adequate information in view of the non-standard nature of these infrastructures but in the long run grand corruption is expected to be reduced in all sectors due to better information and greater local accountability. State or regulatory captures or clientelism where it persists may not be overcome by

² See University of Goteburg, <http://www.qog.pol.gu.se/> and the 2012 Business Environment and Enterprise Performance Survey (BEEPS) focus on quality of governance at the sub national level. The BEEPS is a joint initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank Group. <http://beeps.prognoz.com/beeps/Home.ashx> and World Bank Governance Diagnostic Surveys (<http://go.worldbank.org/Q7ZUV9AG>)

decentralization either in the short run or in the long run as these phenomenon are related to the nature of political and cultural institutions and may be hard to overcome without fundamental political finance and land reforms. And the latter reforms may be blocked by powerful local elites.

Sector	Type of Corruption							
	Petty		Grand		State or regulatory capture		Clientelism	
	SR	LR	SR	LR	SR	LR	SR	LR
Water and sanitation	+	+	+	+	-	-	-	-
Roads, bridges, mass transit	+	+	+	+	-	-	-	-
Electricity - Public	+	+	+	+	-	-	-	-
Electricity- Private	+	+	+	+	-	-	-	-
Hospitals	-	+	+	+	--	-	-	-
Schools	-	+	+	+	-	-	-	-
Fitness, sports and recreation centers	+	+	-	+	-	-	-	-
OVERALL	?	+	+	+	-	-	-	-

Source: Author's perspectives

7. Ensuring Integrity of Decentralized Provision of Public Infrastructure : The Way Forward

The decentralized provision of infrastructure holds the promise of curtailing corruption provided there is no elite capture, strong institutions of accountability in governance, results based governance culture and an educated and empowered citizenry. These ideal conditions are absent to varying degrees in most countries. In view of this, one has to tailor institutional design for integrity to individual country and locality conditions. In the following, we provide a stylized view of such policies based on the initial state of public governance in the country.

As a starting point, one has to consider unbundling infrastructure services for market competition. By isolating first the natural monopoly segments of the sector, one can examine range of market alternatives for unbundling rest of infrastructure provision. This includes regulatory framework that encourages: (a) competition for substitutes; (b) competition for infrastructure markets; (c) competition for the right to supply the entire market through leases and concessions; (d) privatization of some

monopolies to reap efficiency gains; and (e) having national and regional data bases to provide benchmark on similar operations.

Beyond that one has to apply a “corruption opportunity test” (Khan, 2008) to each case of government intervention by asking,

1. Is the culture of government organization and environment conducive to corruption?
2. What is the probability that applicable laws, rules, regulations, procedures, instructions or practices, could be misused or bypassed by corrupt intentions?
3. Are there controls in place that would forestall a corrupt person from indulging in corruption by abuse of authority or misuse of discretion or misinterpretation or disregard of rules?

Answers to above questions will help in developing location specific safeguards in ensuring integrity of public financing or provision of infrastructure. In dealing with various forms of corruption in infrastructure provision, policy and institutional response will vary according to local circumstances. Table 8 provides a stylized view of such responses in two polar cases of countries and localities with good and poor governance. The table stresses the importance of more fundamental policy and institutional reforms in the case of poor governance and mostly direct focus on detection and punishment of corruption in case of good governance.

Table 9 presents options for improving governance of individual sectors to ensure incorruptible governance. The table emphasizes creating an incentive cum accountability regime to ensure that all stakeholders advance public interest. This is best done by introducing a bottom-line for government where no bottom-line exists, introducing competition to improve voice and exit options for citizens and strengthening citizens’ oversight of all providers and sunshine provisions to ensure that government and private providers are subjected to continuous scrutiny. These practices are expected to improve management of infrastructure provisions and its responsiveness to citizens’ needs and preferences as well accountability of providers to residents. Such incentives and accountability regime is expected to improve efficiency, equity and integrity of public provision of infrastructure.

Having a broader local public finance management framework that is focused on incorruptible, responsible and accountable governance at the local level can also help in safeguarding against malfeasance and corruption. This framework emphasizes, fiscal transparency, a framework for fiscal discipline, output-based central-local financing, output based budgeting and activity based costing, people empowerment, competitive financing and provision with voice and exit options, contractual rather than life-long local service appointments, output based performance contracts and external audits (see Shah and Shah, 2006 for details on the institutional framework for FAIR (fair, accountable, incorruptible and responsive) governance).

In short the success of decentralized provision of infrastructure with integrity strongly rests on having an open local government with citizen based accountability framework that is reinforced by results based higher level financing. Once there is at least a fair level of institutional framework that supports such local governance, then there are some promising entry points such as open process of zoning or a

framework for integrity in procurement and results based management that have the significant potential to curtail corruption at the local level.

Table 8. Ensuring Integrity of Decentralized Provision of Public Infrastructure: Options		
<i>Type of corruption</i>	<i>Existing state of governance in national and local jurisdictions</i>	
	<i>Good</i>	<i>Poor</i>
Legislative Capture	Political finance reforms	Establish rule of law, strengthen institutions of accountability in governance, land reforms, citizen empowerment, media independence
Executive capture	Separation of legislative and executive powers, citizen empowerment	Transparency in governance, anti-monopoly and pro-competition legal framework, results based accountability
Grand corruption at various decision points	Transparency requirements. Investigations and Prosecution	Managing for results human resource framework. Transparency rules. Police, justice reforms. Output based budgeting and activity based accounting, benchmarking, Results based and competitive financing of all providers. Text messaging to a complaints bureau, prosecution, punitive sanctions on conviction.
Grand corruption in public procurement	Investigations and Prosecution	PFM reforms, corruption opportunity test framework for procurement, transparency, competitive open bidding, independent tender evaluation, simplification of tender document, smaller size contracts, benchmarking requirements, severe sanctions for non-compliance
Grand corruption in public-private partnerships	Transparency provisions for contracts. Managerial accountability for safeguarding public interest. Prohibition on renegotiating contracts during or post implementation. Investigations and Prosecution.	Facilitating private sector development and enhancement of competition to provide public services. Transparent and open contracts subject to legislative ratification, public scrutiny and examination, benchmarking requirements, Investigations and Prosecution
Administrative corruption and theft in public distribution	Investigations and Prosecution	Rights based approach to public services. Greater voice and exit options. Transparency, open management information system, mopping operations
Conflict of interest by employees	Oversight and sanctions by peers	Citizen complaints bureaus, peer based sanctions.

Source: Author's perspectives

Table 9. Ensuring Integrity of Decentralized Provision of Public Infrastructure: Options for Sectoral Reforms in developing countries

<i>Sector</i>	<i>Policies for incorruptible management</i>
Water and Sanitation	Commercialized public authority, concessions and lease, local community, user group oversight, transparency requirements
Roads, bridges and mass transit	Commercialized public authority, concession or lease with tolls, rural roads by community self-help or user groups, user group oversight, transparency of financial and service delivery reports
Electricity – Public Utilities	Commercialization of public utilities with explicit contractual mandates, and citizen oversight boards, transparency requirements
Electricity – private utilities	Regulatory oversight on capital and maintenance, price regulation, Citizens oversight board, transparency requirements
Hospitals	Competitive financing of public and private hospitals to foster competition Commercialization of public hospitals with autonomous citizen management and oversight boards, transparency requirements
Schools	Competitive financing of public and private schools to foster competition, Parents' committees oversight on all aspects of school operations, transparency requirements
Fitness, Sports and Recreation Centers	Citizens' oversight boards, referenda provisions for approving new projects, transparency requirements

Source: Author's perspectives

8. Concluding Remarks

During the past three decades, a large number of countries have introduced reforms to decentralize public decision making. Such reforms have proved controversial. Critics of these reforms argue that decentralized provision of infrastructure enhances vulnerability to corruption. Proponents of these reforms counter that corruption arises from lack of people empowerment and decentralization by bringing decision making closer to people shines sunlight on government operations and empowers people to hold government to account and thereby offers potential for combating corruption in the long run. They further state that decentralized provision of infrastructure holds a great promise in upgrading infrastructure to underserved especially rural areas with local self-government. In theory such

decentralization is also expected to improve integrity of such operations especially in the event of local financing. These debates, nevertheless, remain unsettled as empirical evidence on the impact of decentralization on infrastructure provision is scant or non-existent. Empirical work is hampered by a lack of reliable data on the incidence of corruption. This paper has presented conceptual underpinnings of the impact of decentralized provision of infrastructure on the incidence of corruption and synthesized scant available empirical evidence to make a case for further empirical research to document the real world experiences to update our current state of knowledge on this subject. Much work lies ahead to limit our wide zone of ignorance in this area.

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