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# ***Corruption in construction projects***

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## **Abstract**

Recently there has been an increase in international concern about the extent of corruption in the construction industry. For example the American Society of Civil Engineers claim that corruption accounts for an estimated \$340,000,000,000 of worldwide construction costs each year. Corruption such as bribery, embezzlement, kickbacks and fraud in construction projects undermines the benefits of infrastructure. This paper documents how corruption affects construction projects and discusses the growing interest in accountability in the delivery of construction projects. This paper is based on the initial findings of an on-going research project on anti-corruption practices for infrastructure services in a number of countries in South Asia, Southern Africa, and Central Eastern Europe.

***Keywords: civil engineering, corruption, ethics, construction***

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## ***Introduction***

The global construction market is worth around US \$3,200 billion per year. This market represents 5–7 per cent of GDP in developed countries and around 2–3 per cent of GDP in lower-income developing countries (Rodriguez, Waite & Wolfe, 2005). However, the construction industry has an international reputation for corruption, asset misappropriation and bribery. Transparency International's Bribe Payers Index continually reveals corruption to be greater in construction than in any other sector of the economy. The American Society of Civil Engineers claim that corruption accounts for an estimated \$340,000,000,000 of worldwide construction costs each year.

Corrupt practices can be found at every phase in construction projects, for example in the planning stage, the awarding of construction contracts as well as the operation and maintenance of projects after construction is finished (Rodriguez, Waite & Wolfe, 2005; Uff, 2003; Kwan & Ofori, 2001; Stansbury, 2005). Certain characteristics make the construction sector prone to corruption: competition; a large number of small-scale subcontractors; numerous approvals and permits; the uniqueness of many projects making it difficult to compare pricing; the opportunities for delays and overruns; and the fact that it is possible to conceal the quality of work (Stansbury, 2005). The context in which construction takes place can also make projects more prone to corruption for example the risk of corruption in reconstruction in the countries affected by the Asian tsunami as well as in Iraq. Nevertheless there is a growing desire to eradicate corruption from the industry: for example the corruption-free execution of massive set of investment projects associated with The Airport Core Programme in Hong Kong including an International Airport, formation of new land and the construction of highways and bridges and a new town (total capital cost exceeded HK\$160 billion) (Rooke & Wiehen, 1999) together with the aim of the Beijing Olympic Organising Committee to make the US\$16 billion construction project the most corruption-free Olympic construction project ever.

The paper begins by describing and defining corruption. It then moves on to examine how corruption affects the project cycle in the construction industry. The ways that accountability can be operationalized in the context of the construction sector is then discussed. It is the purpose of this paper to argue that with improved accountability and reduced corruption, it is possible to construct adequate quality and quantity of infrastructure on a sustainable basis.

## **Corruption**

A general definition of corruption is the misuse of public office for personal gain either at one's own instigation (e.g. extortion) or in response to inducements (e.g. bribes). According to Klitgaard (1988; 24), corruption occurs when an agent betrays the principal's interest in pursuit of one's own. Ley (1965) refers to corruption as behaviour that breaks some rule, written or unwritten about the proper purpose to which a public office/institution has been put. However, Williams (1987) states corruption resists simple labelling; how corruption is defined depends on the context in which it is located, the perspectives of the definers and their purpose in defining it.

Specific forms of corruption include:

- **Bribe** - payments made in order to gain an advantage or to avoid a disadvantage e.g. 'speed money' to overcome delay in the administrative process to obtain a service or to subvert proper decision-making,
- **Fraud** - theft through misrepresentation,
- **Embezzlement** - misappropriation of corporate or public funds,
- **Kickbacks** - sweeteners or rewards for favourable decisions.

Corruption can differ in its scale: it can be 'grand' (involving large amounts of money) or more commonly 'petty' involving small amounts of money and which citizens may experience in their encounters with junior public officials such as policemen and other 'street level bureaucrats' (Lipsky, 1980). Commentators have also analyzed corruption in terms of supply and demand. For example, according to Davis (2004), corruption can be 'collusive' (the willing and planned cooperation of the giver and taker), 'extortionary' (forced extraction of bribes or favours from vulnerable people by those in authority), or 'anticipatory' (paying a bribe in anticipation of favourable actions or decisions from an authority). Most commentators focus on the demand side of the equation i.e. those who abuse their office for private gain; whereas, the supply side, those who offer bribes, are given less attention and sometimes, erroneously, depicted as innocent parties forced to pay bribes.

The literature describes the main causes of corruption as greed, the low salaries of public officials, peer pressure, institutional cultures of corruption, the lack of accountability of public officials, a lack of morals, poor law enforcement or lack of punishment of corrupt officials, and a lack of information and transparency in bureaucratic systems with complex processes and regulations.

## **Defining corruption in construction sector**

The construction sector is estimated globally to be worth some US\$3,200 billion per year. Some US \$250 billion is spent annually on infrastructure in the developing world alone (the World Bank planned to spend US \$7 billion on infrastructure projects in 2005). However, worldwide, the construction sector is known for its association with corruption (Rodriguez, Waite & Wolfe, 2005; DFID, 2002; Wong et al 2000; Zarkada-Fraser and Skitmore, 2000; Kwan and Ofor, 2001). PricewaterhouseCoopers' (2003) Global Economic Crime Survey examined data from 184 construction companies in 44 countries around the world and found that corruption and bribery are a substantial threat, with one-third of those surveyed have experienced some form of economic crime. The 2005 edition of Transparency International's Global Corruption Report (Rodriguez, Waite & Wolfe, 2005) highlights the devastating impact of corruption in construction (such as asset misappropriation, financial misrepresentation, corruption and bribery, money laundering, industrial espionage and information, product piracy and counterfeiting). Large-scale infrastructure projects that have been plagued by allegations of corruption include international bribes paid to secure contracts for the Lesotho Dam, allegations of the improper diversion of money with respect to the Yacyretá dam in Argentina, the Bataan nuclear power plant in the Philippines and the Bujagali dam in Uganda and the implication of politicians in corruption concerning the purchase of a waste incinerator in Cologne, Germany. The need for greater transparency in construction projects has been highlighted recently as donors pledge massive sums for reconstruction in the countries affected by the Asian tsunami as well as the reconstruction process in Iraq i.e. the secrecy surrounding the allocation of contracts by the US government to Halliburton and Bechtel.

Strombom (2001) argues that corruption generates immense opportunities for payoffs with comparatively low risk of detection and punishment. This is a key problem in the construction industry, which is typically adversely affected by delays, disruption and changes leading to increased construction costs, thus incidences of corruption can be obscured by other cost overruns meaning that corruption goes undetected by the company. PricewaterhouseCoopers (2003) found that the problem of corruption often comes to light as the result of either a tip-off or accidental discovery and suggest that construction companies tend towards the view that the value of the defrauded assets is often less than the costs of implementing a robust fraud risk management system. It seems, therefore, that the construction industry, on the whole, is willfully ignoring the problem.

## **Why the lack of interest?**

Why then if corruption in the construction sector is so widespread and the majority of commentators view corruption as criminal and morally bad behaviour is corruption such an unnoticed and understudied phenomenon?

Undoubtedly then there must be instances of fraud and corruption in the sector that have passed 'unnoticed'. Either because there are those who are not directly and personally involved in such activities that turn a blind eye to instances of fraud, irregularity and corruption, who fail to investigate allegations of corruption or fail to curb fraud and waste by an outside contractor. Alternatively, managers might plead ignorance when asked why they did not act sooner to stop corruption because of mismanagement or lax control over the projects for which they are responsible, which represents a serious admission of failure in another respect. Such scenarios make it difficult to ascertain who bears personal, direct responsibility for instances of fraud, irregularities or mismanagement in the sector.

However, it would be a mistake to attribute sole blame for corruption in the construction sector to greedy or ill trained contractors and shoddy or illegal practices. In addition to industry, the other key players in the sector are government, professional groups. Corruption in the sector is facilitated by the failure of government in pursuit of public goals, political corruption, state-corporate crime, lack of regulation and building code enforcement as well as the lack of a professional culture with the industry to ensure safe practice. Without tackling the corrupt practices of these other key players, the corrupt practices that sustain dangerous and illegal services are less likely to be challenged. Furthermore, the research community has failed to highlight corruption in the sector. For example a database search revealed that only 2 papers were published on corruption in the construction sector in 2005 (Green, 2005; ENR, 2005) as compared to 61 articles on concrete (<http://how.lboro.ac.uk>)!

## **Why we should take this issue seriously?**

Infrastructure service provision is a sector known for its association with corruption (DFID, 2002). Corruption in the construction industry often results from a combination of the highly competitive nature of the construction tendering process, a lack of transparent selection criteria for many projects, tight margins, close relationships between contractors, subcontractors and (sometimes) project owners, and cronyism in the industry, poorly trained, under supervised and unregulated work as well as the inadequate training of engineers and builders. Corruption in construction projects can reduce the efficiency, effectiveness and equity of infrastructure services. Corrupt practices can occur at every phase of a construction project: during planning, inspection, design, bid and contract signing, construction, service delivery and operation and maintenance (see table 1).

Corruption typically results in construction projects that are:

- Unnecessary (Bo and Rossi, 2004),
- Unsuitable (Kaufmann, Leautier and Mastruzzi, 2004),
- Defective or dangerous (Estache and Kouassi, 2002; Shadrach & Ekeanyanwu, 2003; Davis, 2004).

And results in:

- lower quality of public infrastructure which in turn reduces productivity (Tanzi & Davoodi, 1997; Isham et al, 1995; DFID, 2002; Esfahani & Ramirez, 2003; Fox, 1994; Henisz, 2002; Bo Dal & Rossi, 2004).
- reduced effectiveness in the provision of public goods for all (particularly in developing countries) (Gupta et al, 1998; Hellman, Jones & Kaufmann, 2000; Anderson et al, 2003; Andvig, 1991; Deininger, 2003; Del Monte & Papagni, 2001; Ye & Canagarajah, 2002).

Tanzi and Davoodi (1997) argue that corruption in procurement seems to reduce the productivity of public investment, reduce the quality of existing infrastructure, reduce the capital spending productivity and as a consequence lower the growth rate of the country. A study of corruption in South Asia's water and sanitation sector found that despite the use of competitive bidding, cartels were operating, subverting the competitive process by deciding among themselves who would win the bid, and organising the bids accordingly (Davis 2004).

Corruption also represents a threat to construction and engineering companies, as well as those institutions companies which are financing, guaranteeing or insuring construction projects, by resulting in wasted tender expenses, tendering uncertainty, increased project costs, economic damage, blackmail, criminal prosecutions, fines, blacklisting, and reputational risk (Stansbury, 2005).

In developing countries corruption in construction is of particular importance for poverty reduction strategies for two main reasons. Firstly because it diverts resources from poverty-focused infrastructure projects as well as health and education programmes towards large capital-intensive infrastructure projects and secondly because the poor lack the necessary resources for benefiting from corruption - finance, information, literacy, ability to access the legal system and connections to those with power (Narayan et al, 2000).

Table 1: Examples of corruption in the project cycle

Stage of service delivery	Examples
Planning stages	<ul style="list-style-type: none"> <li>• Project used as vote winners/opportunities for personal gain not on basis of priority/availability of financial resources.</li> <li>• Planning in favour of high value infrastructure (white elephant projects) and against the interest of the poor.</li> </ul>
Inspection stages	<ul style="list-style-type: none"> <li>• Bribing inspectors.</li> </ul>
Design	<ul style="list-style-type: none"> <li>• Corrupt selection of consultants for feasibility studies, preparation of specifications/bid documents.</li> <li>• Over designed and overpriced projects.</li> <li>• Bribe for favourable environmental impact assessment/planning proposal/approval.</li> </ul>
Bid and contract signing stage	<ul style="list-style-type: none"> <li>• Kickbacks for construction and supply contracts.</li> <li>• Lack of competitive/inequitable contract practices.</li> <li>• 'Entertainment'.</li> </ul>



	<ul style="list-style-type: none"> <li>• Corrupt civil servants selling recommendations for contracts.</li> <li>• Politicians influence choice of contractors or nature of contract.</li> </ul>
Construction	<ul style="list-style-type: none"> <li>• Changing subcontract party after receiving bribes.</li> <li>• Misuse of vehicles and funds.</li> <li>• Cutting corners, ignoring rules, by passing procedures</li> <li>• Payment for equipment, materials or services which were not supplied.</li> <li>• Concealing substandard work.</li> <li>• Bribe the relevant official to certify that the work was done according to specification.</li> <li>• Non-implementation.</li> </ul>
Service delivery	<ul style="list-style-type: none"> <li>• Ghost/absent workers.</li> <li>• Siphoning off supplies to market.</li> <li>• Favouritism in hiring/promotions</li> <li>• Use of contacts/money to get better/faster service.</li> <li>• Elite capture of infrastructure services.</li> </ul>
Maintenance and management stages	<ul style="list-style-type: none"> <li>• Corruption in procurement of equipment and spare parts.</li> <li>• Withholding needed approval/signatures of gifts/favours.</li> <li>• Corruption increases costs meaning lack of resources for O&amp;M.</li> <li>• Bribes to win O&amp;M contracts/ personnel appointments.</li> <li>• Lower standard of construction creates need for expensive repair and maintenance.</li> </ul>
Subscription process	<ul style="list-style-type: none"> <li>• Consumers pay money in order to speed up the process.</li> <li>• Extra-legal payments for new connections.</li> <li>• Officials are paid to turn a blind eye to unauthorized connections.</li> </ul>
Billing system	<ul style="list-style-type: none"> <li>• Opaque system of billing.</li> <li>• Irregularities in ledger of paid bills.</li> </ul>
Disconnection	<ul style="list-style-type: none"> <li>• Disconnecting customers in good standing.</li> <li>• Extorting money to reconnect.</li> <li>• Extorting money to prevent disconnection.</li> </ul>
Fault redress	<ul style="list-style-type: none"> <li>• Extorting money for repairs that are meant to be free.</li> <li>• Gift giving in return for favours in fault redress.</li> </ul>

Nevertheless, Rose-Ackerman (1978) presents the idea that corruption cannot be entirely eliminated, since the cost of doing so would be excessively high (reducing efficiency and perhaps effectiveness), e.g. decision making delay, over-centralisation, inadequate authority, defensive management, trained incapacity, goal displacement and poor morale. Klitgaard (1988) agrees that where the costs of eliminating corruption are too high, an optimal level of control is possible.

### ***How accountability has been used to combat corruption***

Accountability works by formalising expectations of action or behaviour, creating sanctions for failure, enabling trust, and providing the motivation and incentives to use resources efficiently and effectively (Cavill & Sohail, 2003; 2004; 2005). In the literature the main kinds of anti-corruption initiatives of relevance to the construction industry include:

1. Anti-bribery legislation
2. Blacklist of companies caught bribing;
3. Public disclosure

4. Monitoring by independent oversight agencies and civil society.
5. Internal anticorruption code of conduct
6. Integrity pact during both tender and project execution phases
7. Action taken on corrupt practices by trade or professional association

**Anti-bribery legislation:** There are a variety of anti-corruption conventions and treaties in place designed to lower levels of corruption. For example the OECD Anti-Bribery Convention Against Bribery of Foreign Public Officials in International Business Transactions (1997), The African Union Convention on Preventing and Combating Corruption (2003), The UN International Code of Conduct for Public Officials (1996) and the proposed UN Convention Against Corruption. Construction firms are among 62 companies at the World Economic Forum 2005 who signed up to a zero tolerance campaign against bribery and corruption called Partnering Against Corruption: Principles for Countering Bribery (<http://www.weforum.org.paci>). In the UK criminal law such as the Foreign Corrupt Practices Act and the UK Corruption Bill also apply to domestic construction companies.

**Integrity pact:** TI has launched an international initiative aimed at preventing corruption on construction projects and produced a series of risk assessments, action plans and anti-corruption tools for the sector. TI advocates the use of an Integrity Pact, which commits the authority and bidding companies to refrain from bribery. The Integrity Pact is a tool that has already been successful in reducing corruption and cutting the costs of dozens of procurement procedures around the world. A recent Integrity Pact in the Karachi Greater Water Supply Scheme is anticipated to save \$3.1million and has led to transparency in public procurement procedures to be implemented in the workings of KWSB. Most recently Integrity Pacts are to be used in the EUR 2 billion development of the Berlin-Brandenburg International Airport in Germany.

**Public disclosure:** Transparency is thought key to better public service provision. In the case of education, Reinikka (2001) found that greater transparency can make a significant contribution to reducing corruption and embezzlement. In this case, the practice of publicizing the amounts of school grants greatly increased parents' and others' ability to monitor local officials handling of the funds and led to massive improvements in the share of the funds reaching the schools. Transparency International Serbia developed the programme "Towards More Transparent Budgeting and Public Procurement in Municipalities in Serbia" in order to increase the efficiency and quality of municipal services, to improve communication and relations between the municipal administration and citizens and to establish a more efficient and transparent budgeting and public procurement system (Steets, 2001a). Similarly TI Argentina (Poder Ciudadano) has developed a mechanism for rendering public procurement more transparent based on a programme with two main components: Public Hearings and Integrity Pacts (Steets, 2001b).

**Monitoring by independent oversight agencies and civil society:** Other contemporary innovations accountability rely on the voice and participation of service users in policymaking, planning, operating, regulating and financing infrastructure delivery. Putnam (1993) argues, “Engaged citizens are a source of discipline and information for public agencies”. In her study of Ceara, Brazil, Tandler (1997) examines how health workers were made accountable and self-regulating outside their agency through monitoring by the communities. Lam (1996) also highlights the ‘social embeddedness’ of irrigation officials in the local community and the importance of daily informal social interaction between farmers and officials. Social embeddedness creates a social pressure to do a good job, so that any wrongdoing on their part that causes harm to the local community could lead to social ostracism. Davis (2004) highlights the need to bring engineers in water and sanitation service delivery in South Asia face to face with the daily hardships of customers in order to increase the moral cost of misconduct and to develop a sense of duty.

Citizens have been directly involved in fighting corruption by monitoring their infrastructure delivery. For example, community-based audits where corruption is suspected in the delivery of public works have been organised in slum areas of Delhi by an NGO called Parivartan. Paul (1991) has demonstrated how organised public feedback in the form of report cards can be used to challenge service providers to be more efficient and responsive to consumers. Exposing public administrations to pressures and demands from citizens has a major impact on improving service delivery and public administration effectiveness. In the Philippines, NGOs have sent monitors with cameras and photocopies of contracts to uncover corruption by comparing infrastructure plans on paper to what was actually built.

**Codes of Conduct:** Individual, company or industry-specific codes of business conduct and professional standards are also key in corruption prevention. These codes often reflect the Committee on Standards in Public life (the Nolan Committee) principles of ethical behaviour such as: fair reward, integrity, honesty, objectivity, accountability, reliability, fairness. In the UK Transparency International (UK) has developed a code of conduct for individuals in the construction business and the Society of Construction Law’s Ethics Group issued a statement on ethical issues and has provided guidance on the application of ethical principles to promote discussion and debate on corruption issues. The Institute of Civil Engineers is to join with the Association of Consulting Engineers, the British Consultants & Construction Bureau, and Transparency International (UK) to form an Anti-Corruption Forum in order to develop industry-led solutions to the problem of bribery and fraud in the domestic and international infrastructure, construction and engineering.

**Blacklisting:** Tough sanctions are needed against companies caught bribing, including forfeiture of the contract and blacklisting from future bidding. In particular, progress has been made in recognising the problem of corruption by both multilateral development banks (MDBs) and export credit agencies (ECAs). Companies that bribe to win international business risk punishment and blacklisting, irrespective of where

they commit the crime. Recent examples include Lesotho challenging large Western companies (including Canadian engineering firm Acres International, the German company Lahmeyer, Spie Batignolles of France and Impregilo of Italy) for paying bribes for contracts to build a US \$8 billion hydroelectricity plant.

## **Key Areas for Research**

The fundamental concern for the industry is that project owners and contractors stop paying bribes at home and abroad. Assisting individuals, governments, businesses and professionals, to uphold ethics and high standards of conduct necessitates research on a number of issues, for example:

- The enforcement of anti-corruption policies by governments, banks, export credit agencies.
- The existence of clear sector specific rules e.g. for the selection/procurement of construction services and monitoring of the implementation of all contracts as well as dispute resolution.
- Awareness within the sector on good business practices, transparency, and accountability for those training and working in the construction industry.
- Training of professionals in the construction industry in codes of conduct and ethics program development and implementation to enable them to deal with petty bribery and corruption.
- The extent to which trade or professional associations/institutions take action on the corrupt practices of their members.
- The existence of cases where professionals have had their membership of professional bodies cancelled on charges of corruption.
- The viability of statutory registration of all trades in construction field in order to regulate their work.
- The kind of working environment that would make corruption a high-risk activity i.e. appropriate salary levels, a high degree of professionalism and pride in one's work.

This paper is based on the initial findings of a DfID funded research project in a number of countries in South Asia, Southern Africa, Central Eastern Europe and Latin America, conducted by Water, Engineering, Development Center (WEDC) at Loughborough University. The project is entitled 'Accountability Arrangements to Combat Corruption'. The purpose of the project is to improve governance through the use of accountability arrangements to combat corruption in the delivery of such infrastructure services as water supply, sanitation, drainage, access roads and paving, solid waste management, street lighting and community buildings in urban and rural contexts. The research is intended to provide evidence of how anti-corruption initiatives in infrastructure delivery can contribute to pro-poor outcomes.

## **Conclusion**

Corruption is the violation of established rules for personal profit and gain. Corrupt practices, such as bribery, embezzlement, kickbacks and fraud, can occur at every phase of a construction project. The ways in which accountability can reduce corruption in the delivery of public services and improve the outputs and sustainability of infrastructure services were described. Examples of how corruption in infrastructure delivery can be addressed include:

1. Anti-bribery legislation
2. Blacklist of companies caught bribing;
3. Public disclosure
4. Monitoring by independent oversight agencies and civil society.
5. Internal anticorruption code of conduct
6. Integrity pact during both tender and project execution phases
7. Action taken on corrupt practices by trade or professional association

However, it was observed that research on corruption in the construction sector have gone relatively unnoticed and understudied. Fundamentally, if incidences of corruption and bribery are to decline it requires breaking the taboo of talking about corruption in the construction industry. Thus, new areas for research are suggested so that the research community can play its part.

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