

# 1. Corruption and collusion in construction: a view from the industry

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Investment in capital projects is essential for economic growth and development. Yet there is widespread dissatisfaction with the outcomes of construction investment. Major challenges in developing countries include inappropriate projects, high prices, poor quality, excessive time and cost overruns, inadequate maintenance and low returns. These problems impact negatively on development and poverty alleviation and have led to a search for ways to get better ‘value for money’ from the construction industry.

At least a part of the explanation for poor construction outcomes in low-income countries relates to mismanagement, but corruption is also an issue that has to be addressed. The construction sector is widely reported as one of the most corrupt globally. Public works and construction repeatedly top the charts of Transparency International’s Bribe Payer’s Index, perceived as the sector most likely to engage in bribery (Hardoon and Heinrich, 2011). Estimates of 20–30 per cent of project value lost through corruption are widespread. In the most comprehensive review of corruption in the construction industry to date, Stansbury (2005) outlines 13 features of construction projects that make them particularly prone to corruption. Most relevant are: size, uniqueness, complexity and the fact that projects are structured through various phases and contractual links that disperse accountability among numerous separate agents.

This chapter will explain the various processes involved in the delivery of a construction project, highlighting the project delivery stages from planning through to completion. A simplified version of the stages is presented in Table 1.1, showing the risks of corrupt behaviour at each stage and the participants involved. The focus of the discussion is on developing countries, particularly the countries in sub-Saharan Africa (SSA) and on the delivery of publicly owned construction projects.

Table 1.1 *Stages in the delivery of a construction project*

	Project identification	Project preparation	Tender and selection	Construction and quality control	Handover, operation and maintenance
Risks	Political influence or lobbying by private firms that biases selection to suit political or private (individual or company) interests Political influence to favour large projects and new construction over maintenance Low estimate of costs to get projects approved without economic justification	Poor planning and inadequate compensation for loss of land and livelihoods Costly designs which increase consultants' fees and contractors' profits Design to favour a specific contractor Incomplete designs leaving room for changes which can be manipulated High estimate of costs to provide a cushion for later diversion of funds	Bribery to obtain contracts, (which means costs have to be recovered at the next stage) Deliberate underestimation of costs to win tender Collusion among bidders to allocate contracts and/or raise price (may be with assistance from procurement officers) Interference by procurement officers to favour specific firms or individuals	Agreement between contractor and the supervising engineer (with or without knowledge of the client) to accept lower quality materials, overlook substandard work Agreement between contractors and supervising engineer to increase the contract sum or reduce the scope of work through variations, in order to make extra profit, cover potential losses or recover money spent on bribes	Agreement by the supervising engineer to accept poor quality work or work below the specification, leading to rapid deterioration of assets Problem exacerbated by lack of funds for maintenance as new construction takes precedence in project identification stage
Main participants	Government ministers, politicians and senior civil servants + private sector consultants	Client + consultants, (planners, designers, engineers, surveyors)	Client + procurement officers + consultants + contractors + supervising engineers	Client + Contractor + subcontractors + supervising engineers	Client + supervising engineer + contractor

## 1.1 DELIVERING A CONSTRUCTION PROJECT

Once a project has been identified and included in government budgets, responsibility for delivery is under the direction of the client or a separate procuring agency working on the client's behalf. While in the past much public construction work in developing countries was planned, designed, priced and constructed 'in house' by professional staff employed in a government ministry or local authority, it is increasingly the practice to engage private companies to provide these services. The majority of developing countries have copied from the higher-income nations a system based on the separation of key functions. Separate contracts are signed with participants based on historically defined roles for the architect, engineer, quantity surveyor and builder, with separate responsibilities for planning and designing the structure, constructing the asset and supervising the construction. Hence responsibility for delivery is divided among a large number of people who, while performing essentially complementary activities, belong to quite separate commercial units.

The participants have to comply with various control mechanisms the purpose of which is to ensure accountability. Where the control mechanisms are weak, or have broken down, an environment is created where any two parties can enter into an agreement to bend the rules. The question that arises is why the controls so frequently break down?

A fundamental problem is that the separation of functions means that the control mechanisms at each stage (planning, design, construction, and so on) are independent. It is assumed that the functions are sequential and that one stage is completed before the next begins, but in practice the functions overlap and there is interdependence among the participants from different stages. Ground-breaking research into the British building industry in 1966 found that the non-continuous and sequential application of the control functions conflicts with the management requirements on the ground (Tavistock Institute, 1966: 45–46).<sup>1</sup> In practice the formal system cannot be closely followed and is replaced by informal procedures that produce more realistic phasing of decisions, more continuous application of controls and more flexibility in the face of the inevitable uncertainties. These procedures are never written down and yet they are universally understood and widely followed (*ibid.*).

Research by the author into the construction industry in Kenya at around the same time echoed these findings, revealing problems of inadequate capacity but also a formal system for delivering projects that was simply not working and in many instances not workable (Wells and

Rado, 1968). Informal practices developed as participants tried to get around the many obstacles inhibiting project delivery (inadequate planning, inflated expectations, incomplete design, delayed payment). Recent findings from the Construction Sector Transparency (CoST) initiative<sup>2</sup> have revealed that little has changed in many countries.

## 1.2 THE SYSTEM OF COMPETITIVE TENDER

Nowhere are problems with the formal control systems more apparent than in the practice of putting the contract for construction (the works contract) out to competitive tender after the design has (in principle) been developed. According to the multilateral development banks (MDBs) and most developing countries with reformed procurement procedures, the default option for the procurement of works contracts is open tendering (usually conducted through a sealed bid auction) with the contract awarded to the bidder offering to complete the project for the lowest price (open tender/lowest price).<sup>3</sup> Opening bidding to all and evaluating bids solely on the basis of price is preferred by international agencies as it is presumed to reduce the exercise of discretion, thereby avoiding favouritism and corruption in contract award.<sup>4</sup>

However, the award of construction contracts to the lowest bidder through sealed bid auctions is based on a number of key assumptions, which are summarized in Table 1.2. Most important is that all aspects of the project have been finalised before tender and specified in detail in the tender documents. In practice, designs are rarely complete before tender and it has been argued that the need for feedback from contractors means it is unlikely that designs can ever be complete before construction starts (Tavistock Institute, 1966). One-quarter (26 per cent) of problems found in the delivery of construction projects in the eight countries involved in the CoST pilot were at the pre-tender stage. These included poor quality and incomplete design with items missing, failure to survey sites, and so on (CoST, 2011). In this situation changes to the client's brief continue to be fed into the construction process as it evolves, requiring renegotiation of the contract between the supervising engineer and the contractor. The latter is in a powerful position post-contract to engage in opportunistic behaviour and this may be facilitated by a corrupt engineer. Late payment of contractors' invoices further weakens the bargaining power of the client and is a major reason why contracts are not enforced. The CoST project identified poor payment practices as a major problem in many countries and a factor limiting the effectiveness of the control mechanisms in the contract for managing time and cost (CoST, 2011).

*Table 1.2 Assumptions in the open tender/lowest price method of contract award and their implications*

<b>Assumption</b>	<b>Implication</b>
Design is complete before tender	Incomplete design means that changes are needed post contract, which opens the door to post-contract negotiation and opportunistic behaviour over variations and claims  It also means that costs cannot be estimated with any degree of accuracy
Bidders can accurately estimate costs at tender stage	Estimating errors may lead to the acceptance of unrealistically low tender prices, which means insufficient funds in the contract to deliver to the specification  A contract price below the estimated cost means that something has to give – either prices are inflated to cover real costs or work has to be accepted below specification  Inability to estimate costs accurately, and the danger of predatory pricing by others, drives contractors to bribe or collude in order to win contracts  Bribery and low contract prices both encourage cheating during construction
Government has budgeted well	Late payment weakens the bargaining power of clients and is a major reason why contracts are not enforced.

A second assumption behind the award of construction contracts to the lowest bidder is that contractors can make accurate estimates at the time of tender of costs to complete the work. But this is also unrealistic, particularly when design is incomplete. Estimating errors are unavoidable. There is substantial evidence that competitive tendering through sealed bid auctions forces contractors to price work at unrealistically low levels (Brockman, 2011). In addition to normal estimating errors,<sup>5</sup> bid prices will reflect local market conditions at the time the tender is launched and when the market is slack contractors may bid low to keep their foremen employed and labour gangs together. In SSA, where there are often no significant barriers to entry to the industry, it is common for inexperienced contractors to win contracts through the submission of unrealistically low bids.

A bid that is too low to cover costs can land the winning contractor in serious trouble, which is why it is often referred to as the ‘winner’s curse’. It might lead to the contractor making a loss or even to default and collapse, but generally contractors will seek ways to cover potential losses, by squeezing their subcontractors, putting in claims and becoming

more aggressive in negotiations with the client. The more unscrupulous may cheat on the materials, compromise on quality and deliver below the specification, leading to poor quality assets and high maintenance costs. Both inflated claims and poor performance require collaboration between the contractor and the supervising engineer and hence further breakdown of the checks and balances embodied in the control system. Forty per cent of the concerns raised during the CoST pilot occurred during implementation (CoST, 2011).

### 1.3 WHY DO CONTRACTORS BRIBE OR COLLUDE TO WIN CONTRACTS?

Submitting a low bid to win a contract may also be adopted as a deliberate tactic. Brockman (2011) argues that competing in a sealed bid auction is the worst situation a seller can be in. Contractors must submit a bid without any knowledge of the other bidders' behaviour – and with open tender, no knowledge of their competitors. The chance of making a profit increases with a higher price, yet the chance of winning the competition decreases (Drew, 2011). The situation is further complicated by the fact that s/he does not know with any certainty what the costs are going to be. Submitting an unrealistically low bid and recovering potential losses through claims is one way in which contractors fight back against what they regard as an unfair pricing system. Alternative ways are paying a bribe or colluding with other bidders to agree who will win the contract and at what price.

#### 1.3.1 Bribery to Win Contracts

Bribery to win a contract is the most visible form of corrupt activity. The best evidence comes from talking to those involved in paying and receiving bribes. Discussions with local contractors in Ghana and Nigeria (Ladbury, 2003) revealed that they pay bribes first to get onto tender lists (when tender is by invitation only) and then to win a contract. There are similar findings from discussions with contractors in Tanzania (TACECA, 2007) and in the water sector in South Asia (Davis, 2004). A large majority (83 per cent) of respondents to the survey in Tanzania said that the major contributing factor is the high level of competition for small-value contracts due to ease of entry into the industry, the prevalence of open tender procedures and large firms moving down market to bid for smaller contracts. A contractor who wins one contract may not be

able to win another for many years yet a regular flow of contracts is essential if a firm is to survive.

Bribery to win a contract leads to further compromises during contract implementation similar to those resulting from unrealistically low prices. Evidence from Tanzania suggests a direct link between bribery at tender stage and lax supervision during construction. Contractors interviewed in the TACECA (2007) study said that they paid bribes of 10–15 per cent to win contracts in return for a ‘conducive environment’ for recovering the shortfall through delivery of substandard works. Similarly, contractors in Ghana and Nigeria report they pay between 10 and 20 per cent in bribes to win a tender after which supervising engineers and contractors agree to use fewer materials and split the savings (Ladbury, 2003). While, in South Asia, Davis (2004) found contractors paying additional bribes (kickbacks) during construction of between 5–11 per cent of contract value, in part to cover low-quality work.

Often overlooked is corruption in the award of contracts with professional consultants (architects, engineers, surveyors, and so on) appointed to design, manage or supervise the construction. This may be because the contract sums involved are smaller, but the value of the consultant’s contract is not significant as consultants may conspire with the contractor to facilitate the extraction of rents from the construction contract and share in the proceeds (Mawenya, 2007).

### **1.3.2 Collusion to Allocate Contracts**

An alternative to bribery to gain access to contracts is colluding with other bidders to ‘fix’ the competition.<sup>6</sup> Evidence of collusion among contractors during the tender process – whereby it is agreed to let one contractor win in return for a percentage payment or similar support on another contract – is overwhelming. Hard evidence from investigations into cartels comes mostly from developed countries. But the integrity department (INT) of the World Bank reports that collusion is rife in the roads sector in a large number of developing countries, including Kenya, Tanzania, Uganda, Cambodia, Philippines, Indonesia, Nepal, Pakistan, some states in India, as well as in Columbia and Peru (World Bank, 2011). In some of these countries, cartels are well established and have operated for many years. The effect on tender prices is believed to be significant (up to 30 per cent) and higher than when cartels operate in developed countries.

But collusion does not necessarily result in higher prices. Suppliers collude to decide two issues: who should win the contract and at what price. There is a rationale to allocating contracts among a group of

bidders. Contractors involved in collusion in the Dutch construction industry maintained that it made their businesses less vulnerable to predatory pricing and helped to reduce uncertainty about future workload fluctuations (Dorée, 2004). It reduced rivalry and created a more stable and predictable market environment. Collusion in bidding also means considerable savings on estimating costs that are inevitably passed on to clients in the longer term. When a fair price is bid the client may also benefit by avoiding the negative consequences that flow from a price below the real costs of construction.

#### 1.4 CHECKS AND BALANCES, COMPROMISES AND INFORMAL SYSTEMS

I have argued that the formal systems of control that have been established in the construction industry involve a number of contradictions, chief of which is the pretence that design and construction are separate and sequential tasks and that a cost and time for completion of the works can be set with certainty at tender stage. The contract agreement is a legally binding agreement between client and contractor, yet all know that it is impossible to predict the time it will take to complete a project and the cost involved. Because the formal system cannot work as intended informal procedures have developed which are not necessarily corrupt, but pretending to still adhere to the formal system when everybody knows that it cannot work involves *collusion in acceptance of unreality by all parties* (Tavistock Institute, 1996: 49).

On the basis of discussions with contractors and project managers in Ghana, Nigeria and the UK, Ladbury (2003) found informal systems that involve practices that are common to all three countries' construction industries. These include: bribery to get onto tender lists or to win contracts, submitting false information in documents, forming a cartel, submitting several bids from the same contractor under different names, front-loading the tender, putting in a low bid and then making claims or skimping on materials, not making good defects and foregoing retention. Many of the informants in Ghana and Nigeria did not see these practices as corrupt, while in the UK a recent survey by the UK Chartered Institute of Building (CIOB, 2006) found that: *collusion between bidders for market sharing purposes* and *leaking of information to a preferential bidder* was considered only moderately corrupt or not at all corrupt by 60 per cent of respondents and *production of fraudulent timesheets and invoices* was considered only moderately or not at all corrupt by around



50 per cent of respondents<sup>7</sup>. Ladbury (2003) concluded that the opportunities for manipulation and the standards used to classify activities as 'corrupt' appear to be more specific to the construction industry than to what most citizens associate with the term. Actions regarded elsewhere as corrupt are seen by the industry as simply the way of doing business.

## 1.5 POLICY IMPLICATIONS

The current approach to address the issue of corruption in the construction sector suggests that the practices described above could be prevented by tighter regulation, perhaps also with more transparency and civil society oversight such as envisaged in the CoST programme.<sup>8</sup> But a question that is raised by Ladbury (2003) is whether current anti-corruption strategies take account of the nature of the relationships in the informal system. She argues that many of the above practices:

do not involve procedures that can be 'tightened up' because they are based on institutionalized systems of social – as well as financial – relations which are not always visible to the outside eye ... Any organisation intending to move a system from the informal end of the continuum towards the formal end will need to take account of the enmeshed nature of these relationships and their lack of visibility. (Ladbury, 2003: 30)

Regulation could be tightened, given the political will, despite the difficulties in this sector. But tackling the problem of corruption in the construction industry will also require a move to a formal system that can actually work. If corruption is to be reduced there is need for a more rational system for awarding contracts and a more transparent way of paying contractors for the work done. It must recognize interdependence between the various participants and the uncertainty that underlies all construction processes.

There is a better way of doing business and it involves a lot more trust and cooperation among the parties within the construction team. Writing in the aftermath of a major corruption scandal in the Netherlands in 2002, Nijhof et al. (2009) argue that trust can be built within the tender requirements with more transparency about the performance that is to be delivered and about past performance. If the award of a contract was based on the company's record on past contracts (and not just on the price, which is currently the case) there would be an incentive to perform well in order to obtain more work in the future. There should be particular scrutiny of the past performance of engineering consultants

appointed to supervise the construction work as it is they who control most of the avenues through which corruption can occur.

Recognition of interdependence will require more integrated forms of contract. This could be through a 'design-build' approach where there is a single point of responsibility, or where the relationship is based on a common financial interest as the parties share in any cost savings or losses. In many developed countries it is now common practice to engage a contractor during the design stage and to make payments on the basis of the actual costs of construction, through a 'cost-plus' contract. The danger of escalating costs can be addressed by 'open book' accounting and the client and contractor agreeing a target cost once the design is substantially complete. Any difference between the final cost and the target cost is then split according to a 'pain/gain' formula set out in the contract. Such arrangements are now routinely adopted on major UK public construction projects using the New Engineering Contract (NEC) developed by the UK Institution of Civil Engineers. NEC contracts are increasingly used in the Gulf States, South Africa, Botswana, Australia, New Zealand and Hong Kong. There is growing interest in other countries in SSA.

The current insistence on awarding construction (works) contracts solely on the basis of price is clearly ineffectual in dealing with corruption in the construction industry. The argument made here is that it may even be encouraging it. The components of a more rational system are already available and tested and developing countries need to be allowed a little more room to experiment. While there will always be greedy people and corruption will still exist, at least some of the major causes will have been eliminated with a change to a more rational procurement system.

## NOTES

1. These findings have been confirmed by a number of subsequent studies commissioned by or on behalf of the UK government, see for example Latham (1994) and Egan (1998).
2. The Construction Sector Transparency (CoST) initiative aims to improve value for money in infrastructure programmes by increasing transparency in the delivery of construction projects. It was piloted between 2008 and 2011 in eight countries (Ethiopia, Guatemala, Malawi, the Philippines, Tanzania, the UK, Vietnam and Zambia) with support from the UK Department for International Development (DFID) and the World Bank. A new expanded programme was launched in late October 2012. The author has been involved in the initiative from the start.

3. In principle the 'lowest evaluated bid' but in practice the lowest responsive bid as consideration of issues other than price is not allowed by the MDBs in the evaluation of tenders for works contracts.
4. Contracts are awarded either on the basis of a lump sum (estimated on close scrutiny of the drawings and specification) or in the form of an agreed 'schedule of rates' or priced 'bill of quantities', whereby provision is made for re-measurement of each item of work as construction proceeds. There may be conditions in the contract to increase the sums paid to the contractor due to price escalation. But essentially these are fixed price contracts, as opposed to cost-plus arrangements.
5. Brockman (2011) has shown that, while the distribution of errors among the bidders may be unbiased overall, this is not so for the lowest bid which will inevitably lie below the mean. Hence the contractor who wins the contract is the one with the largest estimating error.
6. Collusion among bidders is not always regarded as corruption, although it is often linked to corrupt officials in the procurement agency (Lambert-Mogiliansky, 2011).
7. A second survey by the CIOB into corruption in the construction industry will be published shortly (see [www.ciob.org](http://www.ciob.org)). The key finding is that 49 per cent of respondents believe that corruption is common in the UK construction industry, a 2 per cent decrease from the first survey published in 2006.
8. The CoST programme has interpreted transparency as the disclosure of detailed construction project information into the public domain. While this may provide useful information on failures in the delivery of construction projects it seems unlikely (in the author's opinion) to reveal much about the reasons for the failure or about how the informal system actually works.

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