



The Construction Sector Transparency Initiative (CoST) seeks to improve transparency and accountability in publicly financed construction projects by disclosing material project information (MPI)ⁱ into the public domain in an accessible and understandable way. CoST has been piloted in seven countries. In each, the procuring entities that participated in the pilot were required to disclose MPI on a selection of projects, and the multi-stakeholder group that managed the pilot appointed an assurance team to analyse and verify the MPI and interpret it for the public (see Briefing Note 1, *Overview of CoST*, and Briefing Note 7, *The Assurance Process*).

CoST identified 31 items of MPI generated from individual projects as relevant and necessary to achieve greater accountability and better project outcomes. During the two and half year pilot, this information was collated from 87 projects in the seven countriesⁱⁱ and used to assess the performance and probity of the construction projects in terms of time to completion, cost, and quality.

This note uses the findings from the CoST pilot to illustrate the complexities of achieving higher levels of transparency and accountability in the construction sector.

The case for transparency

Public sector infrastructure projects make a major contribution to economic growth and poverty reductionⁱⁱⁱ, but mismanagement and corruption during the planning and implementation of these projects can greatly undermine the expected social and economic benefits.

Between 2003 and 2006, studies by Transparency International, OECD, and the American Society of Civil Engineers highlighted construction as one of the sectors most prone to corruption. They estimated that 10 - 30 percent of the investment in a publicly funded construction project is lost through mismanagement and corruption.



Such waste in public funds can result from investing in non-viable projects or in projects that are later rendered



non-viable by mismanagement or corruption during their delivery. Corruption takes many forms with differing effects. For example, where procurement officers demand bribes, or contractors offer bribes to win contracts, prices may be inflated and competition is impaired. Once the contract is signed money can be siphoned off into private pockets by failing to deliver the project according to the specification. In Eritrea, the problem was so large that the Government minimised its investment in construction to avoid the corruption it caused^{iv}.

However, high prices and poor quality, as well as time delays, can also arise from mismanagement, such as a poorly prepared specification and inadequate supervision during the implementation of the project. Transparency helps to expose both corruption and mismanagement, but a detailed investigation by experts is often required to distinguish between the two.

Corruption and mismanagement can lead to unsuitable, defective, and dangerous infrastructure— buildings that collapse and roads that break up— which not only raises the costs of maintenance, repair, and replacement but can also result in civil and criminal liability for damages (Box 1). The effects of mismanagement and corruption are especially hard on the poor, who are most reliant on public goods or the services derived from the built assets.

Box 1: Corruption kills

The 2001 Bhuj earthquake in India led to widespread damage, including the collapse of 461,593 rural houses of rubble masonry construction. Good seismic codes of practice exist in India, but their non-enforcement, combined with poor inspection procedures, led to the failure and heavy damage of 179 high-rise reinforced concrete buildings in Ahmedabad, 230 kilometres away from the epicentre. Damage to port operations and industry resulted in approximately US\$ 5 billion of direct and indirect losses. Recent statistical evidence published in *Nature* shows that about 83 percent of all deaths from earthquakes in the past three decades have occurred in corrupt societies usually with poor construction standards. The earthquakes in Haiti in 2010 and Iran in 2005 are extreme examples of excessive fatalities in nations where perceived levels of corruption are above average.

Sources: ProVention Consortium (2007), 'Construction Design, Building Standards and Site Selection: Tools for mainstreaming disaster risk reduction Guidance Note 12. International Federation of Red Cross and Red Crescent Societies and Ambraseys and Bilham, 'Corruption Kills' in *Nature* Vol 469, January 2011 Macmillian Publishing pg 153-155.

Although the impact of corruption and mismanagement is greater in low-income countries, this is not just a developing country problem (Box 2).

Box 2: Corruption in the UK Construction Sector

In 2008, 103 UK construction companies were found guilty of cover pricing, a form of bid rigging in which contractors collude to place high bid prices at the tender stage; they were fined a total of £129m. In 2006, 51 percent of construction industry respondents to a survey by the UK Chartered Institute of Building (CIOB) thought that corruption in the UK construction sector was either extremely or fairly common. In 2010, 45 percent of construction industry respondents to a second CIOB survey stated that cover pricing was still common.

Source: Chartered Institute of Building (2010), 'A report exploring procurement in the construction industry' p13 and 26

Unique challenges

The experience of the CoST pilot has shown that the construction sector presents a unique set of challenges for achieving transparency and accountability:

- Sector fragmentation, with multiple procuring entities and multiple contracts
- A complex and long project cycle
- A diverse set of actors
- Complex information.

Thus the CoST model had to be designed to reflect these challenges. With many stakeholders familiar with the Extractive Industry Transparency Initiative (EITI), table 1 illustrates the different challenges the two initiatives face with data for Tanzania.

Sector Fragmentation

Procuring entities (PEs) are the bodies in government ministries and agencies that enter into contracts with private companies to plan, design, supervise, and build structures. In each CoST pilot country the multi-stakeholder group (MSG) that managed CoST had to engage with individual PEs to persuade them to participate. This task was complicated by the sheer numbers of PEs: for example, more than 40,000 in the UK, and thousands in both Vietnam and the Philippines. In the extractive sector, by contrast, typically just one or two government ministries or agencies have a commercial relationship with a handful of major companies.

The 29 PEs that participated in the CoST pilot ranged from government ministries commissioning multi-million dollar

road and power projects to local authorities commissioning small housing schemes. They were often scattered across the country. For example, the three participating PEs in Malawi were based in Blantyre in the South, Lilongwe in Central Malawi, and in the North of the country.

The construction market in most countries consists of a huge number of low value civil works and building contracts that may take a few months to complete and a smaller number of high value contracts that may take a number of years. As a consequence the construction sector is dominated by small and medium sized domestic firms with a small number of large international firms. In contrast, the extractive sector is characterised by a handful of long-term high value concession contracts and is dominated by huge multinational companies, which often commission the largest construction companies as sub-contractors.

The CoST pilot was able to cover only a small proportion of the large number of contracts let in the construction sector in the seven countries.

Complex and lengthy project cycle

A construction project entails multiple transactions between the PE and the various contractors throughout the project cycle, and no single payment is more important than any other. The original design for the CoST pilot focused on the disclosure of project information during the implementation phase of the project cycle (Figure 1), namely on changes to the project that affect its time and cost.

The CoST pilot countries decided that the focus should be widened to include the project planning and design phases. This was because mismanagement and corruption in the early phases of the project cycle will influence the later phases and negatively affect the project's overall time, cost, and quality. This decision seems to have been wise: the pilot's assurance teams subsequently identified 'causes for concern' throughout the project cycle, including the feasibility, design, and funding phases (which together accounted for 26 percent of the total number of concerns). The assurance teams expressed particular concerns about the administration and pricing of consultant contracts for design and supervision.

Table 1. Comparing the construction and extractive sectors in Tanzania

	Construction	Extractive
Procuring entities	233	1
Private sector companies	4630 registered contractors ^v	18 companies operating ^{vi}
Number of contracts between public and private sectors	Thousands of contracts, often many for each project	Small number of long-term concession contracts
Size of contracts	Many low value contracts with a smaller number of high value contracts	Small number of high value contracts
Payment	Multiple payments from PEs to private companies based on unit rates (encompassing estimates of quantities of materials, equipment and labour required) set out in the bills of quantities	Single payment from private company to government ministry, based on the quantity and market rate of the mineral extracted
Focus of CoST / EITI	Transactions along the full project cycle	Single transaction from private company to government

The decision to require information on transactions over a large part of the project cycle made the MPI more difficult to collate, because the PEs often kept the information relating to the tender process and contract award separately from the information relating to contract implementation.

A diverse set of actors

Each phase of a construction project (as illustrated in figure 1) generally involves different management teams, and requires those in charge of each completed phase to hand over to the team undertaking the next phase. This creates an environment with a diverse set of actors. The interrelationships between the actors on a construction site are based on historically defined roles for the architect, engineer, quantity surveyor and or builder, with separate responsibilities for planning and designing the structure, estimating the price and constructing the asset. The actors have to comply with various control mechanisms during the project cycle such as budget review, feasibility analysis and design approval at the initial stages of the project through to acting in accordance with the contract at the implementation stage. The purpose of the control mechanisms is to ensure the actors are accountable and to keep the procuring entity accountable to the Government, and ultimately the public. Where the control mechanisms are weak, ambiguous or have broken down it can create mistrust and confrontation between the actors and an environment where poor management practices and corruption can thrive. Disclosure of MPI can help to reveal when this has occurred, but to ensure full accountability a more detailed investigation will be needed to determine due cause.

The disclosure of MPI in the CoST pilot particularly highlighted the poor management of time and cost (Box 4). The baseline studies showed that, of the 145 projects sampled in the eight countries, at least 55 percent ran over budget, with 8 percent being more than 100 percent over budget (see Briefing Note 5: *Baseline Studies*). They also showed that the average contract lasted 9 -130 percent longer than the original contract period. The assurance teams, analysing a sample of 67 projects in six countries pointed to time overruns on 40 percent of projects.

An interesting finding of the pilot was that in many countries the PE, consultants, and contractors pay little attention to the control mechanisms in the contract, particularly managing time and cost. This may be because there is blame on both sides. For example, the assurance teams observed poor payment practices, particularly in Zambia where this was a problem on 11 of 17 projects. New forms of contract were highlighted by the UK

Assurance Team (Box 3) which uses a cost management system with strong control mechanisms that gives the PE and the contractor access to the same information at the same time, with no hidden transactions.

Box 3. Transparent and accountable cost management

The UK Assurance Team praised the Highways Agency for its exemplary management of costs using this transparent and accountable open-book approach under NEC3 contracts with control mechanisms that manage cost changes as they arise. Under this approach the contractor is required to keep detailed cost records and provide regular forecasts of costs to the project manager. During a site visit to St Pancras station in London and the High Speed 1 project, Britain's first 300 km/h railway, the CoST International Advisory Group learnt how a transparent approach helps to reduce the opportunities for corruption and mismanagement. High Speed 1 opened on time and to the £5.8bn budget on 14 November 2007. Formerly known as the Channel Tunnel Rail Link, the 109 km NEC-procured route links London to Europe's 3,750 km high-speed rail network via the Channel Tunnel and cuts the London-Paris trip to two hours and 15 minutes.

Complex information

While the EITI requires its experts to reconcile just one transaction, CoST requires its assurance teams to verify, analyse, and interpret the information on numerous projects involving an even greater number of contracts. And though some of the project information that was required to be disclosed in the CoST pilot—such as contract award price, engineers' estimate, or the number of tenderers—can be presented clearly and requires no further interpretation for the public, information relating to changes to cost, time, and quality requires expert interpretation.

For example, during contract execution, claims may be artificially inflated, and variation orders and extensions of times may be unjustified, but detecting whether this is so is not easy. In such cases of fraud the consultant in charge of supervising construction plays a critical role: it would be very difficult for a contractor to benefit from these actions without his collusion. The consultant may also fraudulently overcharge for services rendered, or deliberately overdesign the project in order to attract higher fees or to favour suppliers from whom he can extract bribes. Client officials may deliberately embezzle project funds through the same processes and via fraudulent payments in respect of defective work, equipment, or services not actually supplied.^{vii} Such actions will not be detected from disclosure of MPI alone. Hence disclosure of information could result in the public being misled into believing all is in order when this may not be the case.

Figure 1. The project cycle



Public involvement and accountability

The four features of the public construction sector outlined above tend to make a transparency initiative relatively difficult to implement in this sector. Set against this is the potential to elicit grass-roots support and voluntarism for transparency and accountability in construction as public infrastructure projects are highly visible at the local level and they tend to affect communities directly. Construction of a road or a school building partly paid for from local resources clearly affects local people's lives and potentially arouses a strong demand for information and for transparency and accountability in decision making and the use of project resources. For CoST this potential for community mobilisation in favour of transparency and accountability is a plus. However, targeted communication with affected communities and training in the interpretation of the data may be needed to stimulate interest and involvement.

Community groups can also be trained to monitor the construction process and expose irregularities. A citizens' organization in the Philippines provides one example, pre-dating CoST by nearly two decades (Box4). Such activities are an effective way to check on the quality of construction work which is generally not revealed by project documentation. As such they are seen as complementary to CoST.

Box 4. Civil society observing the construction process

In the Philippines the Concerned Citizens of Abra for Good Governance (CCAGG) has been monitoring and evaluating the progress and quality of construction projects for more than 20 years. The CCAGG volunteers are trained to understand the nuances of the construction process and undertake basic quality checks such as whether the material for the road is as stated in the specification. Their activities have exposed irregularities such as projects that were certified as completed but had not yet been started or had barely begun.

More information can be found on CCAGG and other transparency initiatives in the Philippines on the CoST website.

Professional groups such as engineering institutions with a membership of individual people are important components of civil society.

Typically the professional groups' constitution is for the benefit of society thus a strong voice from professionals can play a powerful role in interpreting the disclosed data for the wider public and in holding decision makers to account. Private sector groups representing consultants and contractors with membership from individual firms may be pursuing business interests but those interests include an equal opportunity for their members to win contracts. They are interested in the information disclosed by CoST as it allows them (among other things) to see who is winning contracts. This then enables them to raise challenges and hold the PE and the government to account.

The formal authorities also have key role in firstly responding to the demand of civil society to formally investigate where questions are being asked about the disclosed MPI and secondly to potentially provide an oversight and audit function that interprets the disclosed MPI for the public and allow civil society to hold the PE and the Government to account. Where the formal authorities are absent CoST will have to consider mechanisms that fulfil this role.

Conclusion

Despite the unique challenges of the construction sector, the CoST pilot has provided insights into the project management performance and probity of the PEs and their suppliers and brought issues of concern to the attention of the public. As CoST moves forward it will need to consider the following issues.

1. How the disclosed MPI is packaged and communicated to the public to ensure it is relevant, understandable and accessible.
2. The potential to include local level monitoring of activities on construction sites.
3. The strengthening of oversight and audit authorities to ensure civil society can use the information disclosed by CoST to demand stronger accountability.
4. How CoST can supplement the role of the formal authorities where they are absent or weak.

By addressing these issues there is the potential to increase the value of CoST and as consequence, transparency and accountability on publicly financed construction projects.

ⁱ MPI is defined as information that is sufficient to enable stakeholders to make informed judgements about the cost, time, and quality of the infrastructure concerned.

ⁱⁱ Guatemala joined CoST after the start of the Pilot as an Associate Country and is currently disclosing information from a number of projects.

ⁱⁱⁱ See Calderón, CS, and Servén, L. (2010). 'Infrastructure and Economic Development in Sub-Saharan Africa.' *Journal of African Economies* 19 (AERC Supplement 1), pp13-87 and Foster V. and Briceño-Garmendia C (2010), *Africa Infrastructure: A Time for Transformation*, Agence Française de Développement and World Bank p47.

^{iv} Collier P. 'The Bottom Billion: Why the poorest countries are failing and what can be done about it.' Oxford University Press (2008) p138

^v Tanzanian Contractors Registration Board (2008), 'Corporate Governance: A Key to Successful Contracting Business', Proceedings from the Annual Consultative Meeting p2.

^{vi} See <http://eiti.org/Tanzania> last accessed 16 February 2011

^{vii} Mawenya, Prof A.S. 'Challenges of Delivering value for money consulting engineering services in corruption prone sub-Saharan African Countries' 14th Gama Conference, Botswana 14-17 May 2007

For more information and to contact us:

<http://www.constructiontransparency.org>

Email: costsecretariat@uk.pwc.com

Telephone: +44 (0) 20 7804 8000