



Corruption and Technology in Public Procurement

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TABLE OF CONTENTS

INTRODUCTION	5
CORRUPTION IN PUBLIC PROCUREMENT	6
STRUCTURE OF PUBLIC PROCUREMENT AND CORRUPTION	8
SCOPING THE PROCUREMENT REFORM AGENDA.....	12
GOVERNANCE IN PUBLIC PROCUREMENT	13
<i>Regulation and Compliance</i>	14
<i>Management and Performance</i>	15
PUBLIC PROCUREMENT GOVERNANCE AND REFORM	15
<i>Reform Strategies</i>	16
<i>Transparency</i>	18
TECHNOLOGY: E-PROCUREMENT	19
IMPACT OF TECHNOLOGY	19
E-PROCUREMENT IMPLIES PROCUREMENT REFORM	20
RECONCILIATION OF PROCESS CONTROL WITH EFFICIENCY	21
COMPLEMENTARY FUNCTIONS	22
RE-DESIGNING TRANSPARENCY THROUGH E-PROCUREMENT	22
E-BIDDING	22
E-CONTRACT MANAGEMENT	23
E-PROCUREMENT INFORMATION SYSTEMS	24
SOURCES OF SUPPLY ON THE INTERNET	25
<i>Catalogues</i>	26
<i>Systems for establishing price</i>	26
<i>Open registration for eligible suppliers</i>	27
MDB E-PROCUREMENT STANDARDS	27
E-PROCUREMENT RISKS	28
EVALUATION	28
SUMMARY AND CONCLUSIONS	32
APPENDIX I – DEFINITIONS OF CORRUPTION	35
APPENDIX II – ANTI-CORRUPTION TOOLKIT	37
APPENDIX III – ADDITIONAL REFERENCES	40

Corruption and Technology in Public Procurement

INTRODUCTION

The scale of bribery and corruption worldwide is such that it would easily exceed the sum total of all aid and assistance programmes put together. Although exact assessments can never be made, one estimate is that bribery and corruption may surpass US\$1 trillion per annum (Daniel Kaufmann¹, World Bank Institute).

Intrinsic to the very meaning of corruption² are difficulties in its measurement or even its identification³. However, such difficulties do not equate to a futility of corruption control measures. Indeed as already discussed at the World Bank⁴:

- Corruption can and is being measured;
- Evidence of corruption can exist in many forms and is not simply reliant on documentation;
- The indicators of corruption may not be accurate measures but can be very suitable for policy development and corruption control.

The impact of corruption is such as to undermine the prospects of socio-economic stability of affected countries: “Although there is considerable variation in the degree of corruption from country to country, there is growing consensus among scholars, practitioners and donors that corruption constitutes a central challenge to democracy and social and economic development. Today corruption is seen not only as a consequence of weak governance, but also as a cause of poverty and under-development.”⁵

This paper focuses on corruption in public procurement which is subject to numerous reform efforts worldwide. It is argued that the objectives for procurement reform may not always be mutually compatible, that procurement reform is sometimes a secondary component of other financial reforms which can defeat the objectives of procurement reform in relation to corruption, and that considerable untapped potential remains in the wider application of technology.

In what follows there is a brief summary of the significance of corruption in public procurement followed by a description of the structure of procurement – an understanding of which is important in order to appreciate why simple and transparent rules in a vulnerable procurement environment can be difficult to construct. This is followed by an assessment of what a reform programme for public procurement should

¹ Interview, C:\Documents and Settings\Administrator\Desktop\Corruption\World Bank Discussion.htm 2004.

² See Appendix I for definitions

³ Tina Søreide, Grey Zones and Corruption in Public Procurement: Issues for Consideration, in OECD 2005, P51

⁴ Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi: Measuring Corruption: Myths and Realities;, World Bank, Draft, May 1st, 2006

⁵ Norma Parker, Gerardo Berthin, Roberto de Michele and Yemile Mizrahi: Corruption in Latin America: A Desk Assessment; (USAID) June 14, 2004, Washington, D.C.)

look like and the diversity of views about the conduct of procurement. This provides an analysis of the conflicts within traditional procurement that contribute to making results so elusive in this area and lays the foundation for establishing the design principles of a public procurement reform programme.

The potential for greater application of technology in this area is discussed in terms of addressing some of the conflicts and delivering the potential for meaningful and timely transparency in a complex environment. However even here there are misconceptions about the way in which technology can be brought to bear that tend to weaken the reform agenda.

CORRUPTION IN PUBLIC PROCUREMENT

The prime target for corruption is public procurement, where corruption is most pervasive and also has more negative consequences. Corruption forms a driver for efforts to reform public procurement in numerous countries.

Public procurement may account for 45% of government expenditure and up to 20% of the Gross Domestic Product for any country. Setting aside government salaries and social service payments, public procurement accounts for the largest share of public expenditures for all levels of government. Worldwide, public procurement is also estimated to equate to 80% of world merchandise and commercial services exports for 1998⁶. The magnitude of public procurement makes it a target: “both the overall amounts and individual contract amounts are huge, and they offer correspondingly large opportunities for bribes, kickbacks, and other payoffs”.⁷

Transparency International has, based on a Bribe Payers Survey (Transparency International 1999), ranked sectors of the economy according to their vulnerability to corruption as follows

- (i) Public works contracts and construction;
- (ii) Arms and defence industry;
- (iii) Power (including petroleum and energy);
- (iv) Industry (including mining);
- (v) Healthcare/social work;
- (vi) Telecommunications, post (equipment and services);
- (vii) Civilian aerospace;
- (viii) Banking and finance;
- (ix) Agriculture.

The effects of corruption in public procurement go beyond the margin: “Corruption increases the number of capital projects undertaken and tends to enlarge their size and complexity. The result is that, paradoxically, some public investment can end up reducing a country’s growth because, even though the share of public investment in

⁶ Fighting Corruption and Promoting Integrity in Public Procurement OECD 2005.

⁷ Donald Strombom, Corruption in Procurement: Page 22, Economic Perspectives: Volume 3, Number 5, Nov 1998.

gross domestic product (the total of all goods and services produced in a country in a given year) may have risen, the average productivity of that investment has dropped.⁸

It has also been hypothesised⁹ that, other things being equal, high corruption is associated with:

- High public investment.
- Low government revenue.
- Low operation and maintenance expenditures.
- Poor quality of infrastructure.

It has been estimated that where corruption is systematic it can be expected to account for 20-30% of government procurement, and maybe more.

It follows that the reduction of malfeasance in public procurement of developing countries is as much an aid programme as any of the more traditional forms of assistance except that good governance in public procurement is not something that can be delivered from outside, but must instead be genuinely sought out from within the governing and legal institutions of a country.

The curtailing of procurement corruption may represent one of the most effective economic development programmes that a country can adopt¹⁰. However, the obstacles to realising these benefits have proven to be great indeed, and not all of these are in the nature of corruption: thus compounding the issues implied by the overtly political and business dimensions of procurement are “widespread misunderstandings and even gross ignorance within the executive structures of governments as to what procurement actually entails. There is often little understanding of what skills are required and what risks are implied as well as what opportunities may be available. Failure of awareness and expertise at this level commonly represents a real risk to good governance, even creating the anomaly whereby public procurement may sometimes be characterised as transparent while not accountable (e.g. see Isaac [1997] on the Cave Creek disaster).

These problems are by no means limited to developing countries. Even in those jurisdictions with stronger administrations the issues are poorly appreciated and susceptible to systemic failure of accountability -- often because the agents of accountability themselves have at best a weak appreciation of the issues. Cases have involved, for example, failures to understand when contractual relationships exist; or when the passing of information on the process constitutes breaches of confidentiality¹¹. These circumstances both facilitate and compound corruption and

⁸ Vito Tanzi, Hamid Davoodi, *Roads to Nowhere: How Corruption in Public Investment Hurts Growth* International Monetary Fund, 1998.

⁹ Ibid ⁸.

¹⁰ Hall, Robert E., and Charles Jones (1999). “Why Do Some Countries Produce So Much More Output per Worker than Others?” *Quarterly Journal of Economics*, 114(1):83-116.

¹¹ Schapper, P.R., Veiga Malta, J., Gilbert, D. An Analytical Framework for the Management and Reform of Procurement; *Journal of Public Procurement*, April 2006, P1.

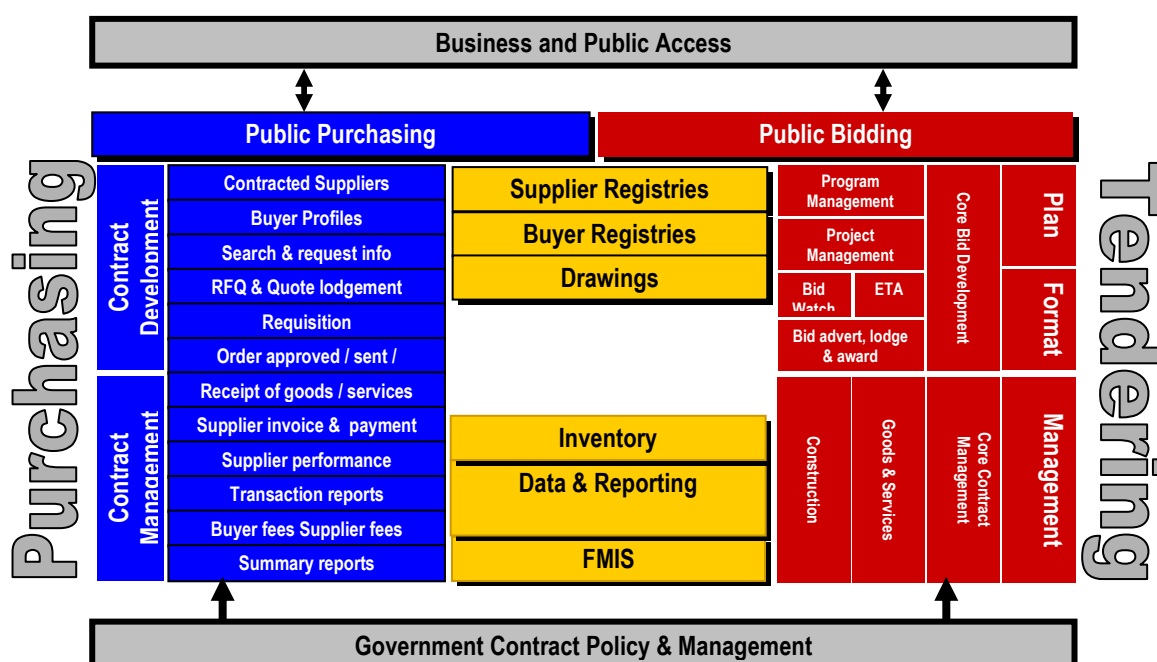
the avenues for procurement corruption are acknowledged to be broad. It is generally acknowledged also that solutions will be strictly conditional on a genuine and concerted effort at the domestic level for each jurisdiction.

In relation to projects funded by the World Bank and other multilateral development banks (MDBs) the methodology for funds disbursement and the monitoring and review of expenditures can form a benchmark for values in public procurement making it important that the assistance from these institutions be subject to good standards of governance without transgressing on the sovereign roles of target countries.

Structure of Public Procurement and Corruption

Public procurement in most countries is dichotomised between direct purchasing and open bidding or bidding. Direct purchasing applies to small value purchases often up to a value of US\$50,000 – US\$100,000 but mostly below US\$5,000 for which an open bidding (or tendering) process is avoided and sometimes replaced by a three quotes system or a direct order from a framework contract. Sometimes a restricted national bidding system is arranged. For larger contracts an open competitive bidding process, sometimes a two or even three stage process is used. Where the funds are sourced from an international development bank including the World Bank the requirements include that this bid process is internationally advertised.

Figure 1
Structure of Public Procurement

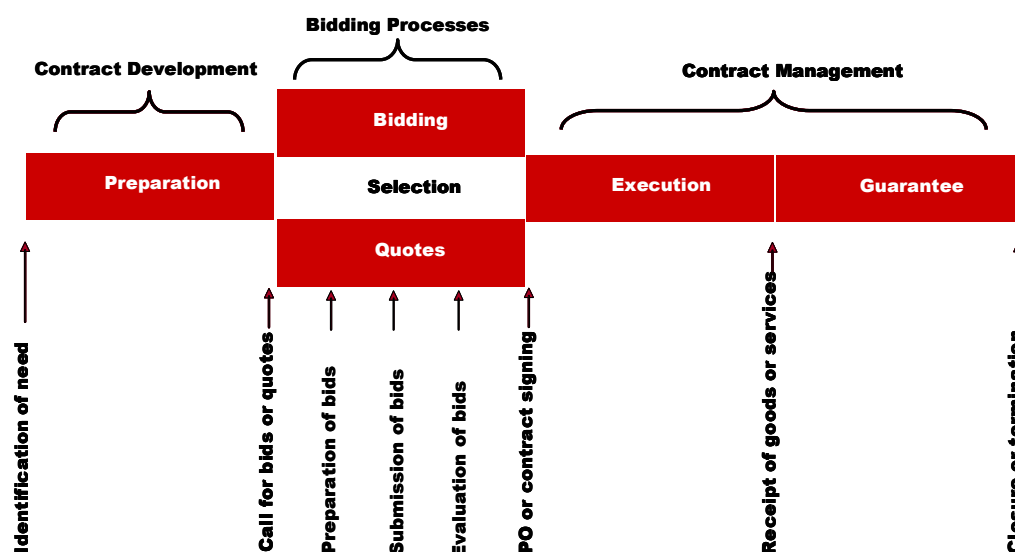


This summary disguises much of the interactions and complexities which often facilitate procurement corruption. Figure 1 shows some of the details and interactions with other stakeholders and systems such as the financial management system.

Both procurement methods – purchasing and bidding - are vulnerable to corruption. Not all procurement and contracting scandals involve large scale construction or capital goods projects. The first type (purchasing) relating to relatively smaller (but

much more voluminous) values of procurement is afflicted in the same way as other transactions in government where bribes are paid simply to penetrate the layers of obfuscation and red tape: “excessive bureaucratic procedures and regulations to obtain permits, licenses, registration. Complex and excessive bureaucratic procedures and regulations encourage petty corruption, and adversely affect on potential business development, particularly small and medium enterprises. “The very complexity, overregulation, and lack of predictability in the legal systems in numerous transitional and developing countries where governments lack accountability and transparency serve as windows of opportunity for corruption.”¹²

Figure 2
General Stages of Procurement



In traditional forms of public procurement direct purchasing or shopping is very difficult to monitor or to audit because it is widely dispersed and fragmented with paper trails that are spread across thousands of filing cabinets. This level of corruption is however not petty. For example goods that are used up in consumption are “prime candidates for payoffs” because post-delivery inspection of quantities and qualities are difficult: Rose-Ackermann¹³ reported a case in Malawi where auditors found that millions of dollars of non-existent stationary had been ‘purchased’ by the Government Press Fund.

Corruption of higher valued procurement operates differently. “Common to all competitive methods of procurement are a number of basic steps: the purchaser’s notification to prospective suppliers of requirements and contract specifications; preparation of price and technical proposals by bidders; and evaluation of bids by the purchaser and selection of the bid with the best conditions. Competitive bidding commonly forms the basis and is the most recommended method of public procurement.” General stages of procurement are illustrated in Figure 2. Vulnerabilities of these various stages, as listed in Table 1, include lack of information

¹² Stuart E. Eizenstat, Corruption: an Impediment to Development – Promoting the Rule of Law and Anti- Corruption in an Global Economy; Economic Perspectives Volume 3, No 5, November 1998, P7.

¹³ Rose-Ackermann, Susan, Corruption and Government. Causes, Consequences and Reform. Cambridge University Press, Cambridge, 1999

and expertise, contacts and collusion; conflicts of interest with public officials; lack of accountability and political influence.

Table 1
Contracting Risks

Stage A: Decision to contract (identification of need)	
Description	Main risks (examples)
The government decides to purchase or sell goods or services, or to outsource the management of a unit.	The decision does not follow a policy rational or an existing need but rather the desire to channel benefits to an individual or an organisation. For example, demand is created for a good no one buys simply to benefit the company's owner.
Stage B: Identification/definition of contract characteristics (technical requirements, etc.)	
Description	Main risks (examples)
The government determines what it needs to buy or sell or privatise (technical requirements, specific characteristics) and how it will go about it (contracting method, agency responsible, etc)	Characteristics (technical or not) are made to favour a special supplier or contractor and not to properly address the need identified; Exceptions to an open bidding process are abused, leading to single source processes); Participation of relevant stakeholders is limited , making it difficult to assess the need and relevance of the characteristics as they are being defined; Evaluation criteria are not set from the start or are not objective, thereby making them prone to abuse
Stage C: Contracting process	
Description	Main risks (examples)
A contracting process opens. It should take place according to what method the law determines be used to receive proposals (e.g. open bidding system) or evaluate contractors (e.g. single source)	Invitation to bid (an open bid) is not publicised, thereby restricting the number of bidders that participate; When short-lists are used, companies bribe to be included or to gain access to them; Invitation to bid is publicised but very little time is given to present offers, making it difficult for bidders without prior knowledge of the contract to present bids; Abuse of confidentiality or lack of publicity creates unequal playing field for bidders; In single-source processes, lack of publicity or transparency leads to unjustifiable decisions; Bidders or contractors collude to influence prices or to share the market by artificially losing bids, or not presenting offers.
Stage D: Contract award	
Description	Main risks (examples)
Contract process ends and a decision is made in order to select the winning bidder (in open bids) or the contractor (in single-source processes).	Evaluation criteria are not clearly stated in bid documents, leaving no grounds to justify the decision; Evaluation of bids is subjective or leaves room for manipulation and biased assessments; Contract awards are not publicised (nor the grounds for the decision); Subcontractors and partners are chosen in a non-transparent way, are unaccountable or are used to channel bribes.
Stage E: Contract implementation and supervision	
Description	Main risks (examples)
The contract is signed with the selected bidder or contractor	Contract changes and renegotiations after the award are of a nature that changes the substance of the contract itself; Supervising agencies/individuals are unduly influenced to alter the contents of their reports so changes in quality, performance, equipment and characteristics go unnoticed; Contractor's claims are false or inaccurate and are protected by those in charge of revising them. Clearances, permits, importations, etc. that a contractor or supplier must pay bribes to obtain. Quarrying simple construction materials, for example, often requires environmental clearances, mayors permits, and on and on, and contractors typically pay at every stage.

Source: Adapted from Utstein Anti-Corruption Resource Centre

Some of the experiences reported¹⁴ by the government of Andhra Pradesh in India have included:

- **Discrimination and delay in issue of tender schedules to suppliers:** Government departments control the development and distribution of bidding documents to the bidders, after verifying their applications. There existed elements of subjectivity and discrimination in this process, in addition to delays in the preparation of bid schedules.
- **Cartel formation to suppress competition:** Through dubious means, the participating bidders would gather the list of prospective bidders for a procurement request. They would use this information to lobby for formation of syndicates or cartels and bid at higher quotations.
- **Physical threats to bidders:** In regions plagued by factions and/or Mafia groups, genuine bidders were physically threatened and prevented from submitting their bids. The bidder or his agent had to risk their physical safety to submit bids in the tender box placed in the office of the tender inviting authority. This phenomenon has been observed in a number of other countries in the region and in South America.
- **Tender Boxes at Multiple locations:** To counter the menace of contractors' cartels and physical threats to bidders, some Government Departments started keeping the tender boxes at multiple locations. This practice was putting departmental officials who had to collect the tender boxes after closure of tender submission time at risk. Physical transportation of tender boxes from multiple locations to a central point also posed a risk in such an environment.
- **Tampering of tender files:** For the purposes of evaluation, the bid documents were transported across the administrative hierarchy, which introduces the risk of tampering or loss along the way. The transportation of bid documents, manually and through surface mail, is also a time consuming activity.
- **Delays in finalization of tenders:** Red tape, lack of transparency, and manual movement of files across the administrative hierarchy was resulting in inordinate delays in the finalization of tenders. These delays were contributing to cost and time overruns for the projects.
- **Human interface at every stage:** The manual system exposed the departmental personnel to the bidders at every stage of the process. Such repeated contact between bidders and departmental staff could lead to subjectivity, favouritism and other undesirable practices.
- **Lack of Transparency:** With procurement information tightly controlled and closely guarded by government departments, the result has been a severe lack of transparency, leading to misinformation and a lack of trust in the system by the bidders, media and the citizens.

The value of each step in the process can be worth millions of dollars to the winner and each potentially represents a point of attack for corruption involving, for example, a strategically placed official or market collusion. It is in relation to high-value

¹⁴ Bikshapathi, K, P. RamaRaju, Govt of Andhra Pradesh and Prof. Subhash Bhatnagar, IIM, Ahmedabad, India. 2006.

contracts that most anti-corruption efforts have focussed. Thus for example, directed mainly towards high value works projects the World Bank's Department of Institutional Integrity has developed a methodology or a 'Detailed Implementation Review (DIR)' to identify indicators of fraud, corruption, collusion and coercion throughout the entire project cycle. Completed DIRs have identified the following issues, amongst others:

- Bidders with same address, same phone number;
- Bid securities with sequential number, same date/bank;
- Forged documentation;
- Lack of documentation;
- Clustering of bids, often around client estimate;
- Colluding companies rotating contract award;
- Multiple invoicing;
- Overpayment for goods; and
- Pricing irregularities.
- Bribes/kickbacks paid to government officials
- Etcetera

These problems, and the management of the relationships of Figure 1, are mostly not matters for procurement law but for procurement management. Thus while the steps of Figure 2 may simply be prescribed in procurement law, the management tasks around this operate at another level entirely. A comprehensive rule set that addresses all of the possible contingencies and relationships of Figure 1 becomes necessarily voluminous (in some countries this runs to hundreds of pages), suggesting that a set of 'simple' rules that can manage most contingencies may be difficult to develop.

SCOPING THE PROCUREMENT REFORM AGENDA

The complexities of the procurement management environment outlined above are just part of the challenge. Public procurement has, overtly, political and business dimensions in addition to its managerial and legal structures and these may not necessarily be compatible: failures to recognise these dimensions weaken the prospects of reform.

Often also there are misunderstandings within governments as to what constitutes procurement. Even amongst the reformers there are different agendas and, more significantly, a lack of consensus about the nature of procurement activity with, for example, many defining it as a regulatory function and others as mainstream management.

Such differences can serve to split responsibilities, where, within the management environment, control, risk mitigation and transparency objectives are often the focus of a centrally mandated regulatory compliance framework while management performance in terms of value outcomes is more often pursued through devolved decision-making and deregulation. While such differences need not directly contribute to higher levels of corruption they can weaken the reform agendas that seek to address the problem.

Governance in Public Procurement

The public procurement system should be able to support the trust of the business sector and the broader community and be characterised¹⁵ by:

- Transparency,
- Non-discrimination,
- Equality of access,
- Open competition,
- Accountability,
- Value-for-money evaluation, and
- Related policy compliance.

Many jurisdictions worldwide have expressed similar management values as the above for public procurement. For example, a Government Procurement Experts Group of the forum for Asia-Pacific Economic Cooperation¹⁶ (APEC) countries developed a set of non-binding principles that included transparency, value for money, open and effective competition, fair dealing, accountability and due process.

In targeting these procurement values the discretionary power of officials is perceived as representing high risk. For example:

- *“The discretionary power of public officials, and the corresponding opportunities for abuse of power, can be reduced...eliminating, for example, “gatekeepers” who are in a position to collect illegal tolls from users, or streamlining the steps required to gain government approvals, serves to reduce the opportunities for delay and discretion - the breeding ground of corrupt practice.”*¹⁷
- *“The higher the degree of regulatory discretion, the higher the incidence of bribery of officials”*¹⁸
- *“Whenever regulatory officials have discretion, an incentive for bribery exists”*¹⁹

To minimize discretion the procurement framework is codified into comprehensive rule sets that prescribe processes in as many circumstances as possible. Thus procurement is largely defined in terms of the regulations around it and compliance to these regulations.

Therefore integrity in procurement can be characterised by values such as transparency, accountability, open competition and value-for-money within an environment regulated by simple rules and minimal discretion on the part of public officials.

¹⁵ See similar: Improving Integrity in Public Procurement: The Role of Transparency and Accountability by Robert A. Burton (Chapter 2 OECD 2005)

¹⁶ Apec 1999

¹⁷ TI Sourcebook 2000 Pope

¹⁸ Daniel Kaufmann: Revisiting Anti-Corruption Strategies – Tilt Towards Incentive-Driven Approaches?

¹⁹ Rose-Ackerman (1999:18)

Although these attributes for good governance in procurement seem clear, experience has been that translating them into operational reality involves issues and policies that are frequently in conflict, if not mutually incompatible. The following analysis identifies these conflicts by reviewing procurement in terms of the sometimes competing frameworks of regulation and compliance and management and performance. The tension between these two frameworks goes to the heart of anti-corruption agenda: transparency requires, *inter alia*, simple rules for procurement while to minimise discretion requires more comprehensive and generally voluminous rule sets which obfuscates clarity and transparency. Reducing discretion may also be inconsistent with management and performance objectives.

Regulation and Compliance

The principles of transparency, equity and fair dealing, and ultimately public *confidence*, in public procurement are most often sought through provision of an extensive regulatory framework. Regulations minimise discretion and control the micro-management steps throughout the procurement process.

While a highly regulated procurement environment is designed to minimize discretion in circumstances considered to be, *inter alia*, at high risk from corruption, it may also seem appropriate in jurisdictions where officials have minimal procurement skills, and sometimes where, rightly or wrongly, junior officials can be held to account by reference to the rule book. Monitoring and assessment of procurement management performance is defined in terms of compliance with the set rules. The regulated approach is almost universal in, but not exclusive to, developing countries which have skill shortages as well as inefficient or ineffective judicial systems.

An attempt to facilitate and standardise procurement regulations is the *Model Law on Procurement of Goods, Construction and Services* developed by the United Nations Commission on International Trade Law (UNCITRAL, 1994) through its Working Group on the New International Economic Order. This Model Law was formalised as a guide for countries to follow for the evaluation and modernisation of their procurement laws and practices.

The cost of a highly prescribed regulated procurement framework is its lack of flexibility in managing agency needs, creating a tension with performance and efficiency. The detailed codification of process that is designed to eliminate discretion and scope for partiality and corruption in outcomes, also tends to eliminate all but the most mechanical aspects of this activity (Kelman, 1990; Pegnato, 2003). Regulated frameworks are procedurally costly and, while readily prescribed for simple procurement, are slow to adapt to changes that require the re-engineering of process, or the development of increasingly complex procurement. In some cases procurement officials frequently appeal to central authorities for exemptions to the rules – creating another avenue for corruption. Micro-regulation of the process also has the perverse and unintended consequence of eroding the skill requirements of procurement officials, thereby undermining professionalism in this activity – a further corruption risk. Procurement training in this context consists of learning the rules. This may also erode accountability except in terms of compliance.

Significantly, the transparency goal of this regulatory model can also be self-defeating: the daunting volume of regulations acts to obfuscate transparency by making the processes difficult for stakeholders such as business to comprehend²⁰. Similarly it has been observed that: “The impact of new rules on the challenge of corruption has regularly been overestimated. Judicial tools are insufficient unless the risk for those involved in corruption is increased.”²¹

Finally, the success of the regulatory approach, like any other, needs to be assessed in terms of the degree to which it delivers against its objectives and if possible compared to the relative performance of alternative approaches: the immediate objective being transparency, with corruption control representing the ultimate goal. The degree of procurement corruption in developing countries and the prevalence of the regulatory approach in these jurisdictions may seem to represent a challenge to this approach.

Management and Performance

Social and economic pressures at both domestic and global levels have required governments to seek better performance from their public sectors. In addition to the anti-corruption agenda, many of these reform initiatives have featured a greater focus on management and a general shift towards devolution and decentralisation²². The management of public procurement has been subjected to the same reform pressures and apply both in developed and developing countries.

Within a performance model for public procurement, the role of regulation is primarily to establish management principles and objectives rather than to micro-manage the processes. In contrast to the UNCITRAL model law approach, the performance management approach advocated by the OECD/DAC Development Assistance Committee (2003) describes procurement and its governance in terms of strategic mainstream management.

The lesser reliance on procurement regulation seems to place the management and performance objectives in conflict with the minimisation of discretion for public officials and therefore seems to cut across the anti-corruption agenda. For developing countries with a shortage of skills in this area the conflict may seem less relevant. On the other hand it also seems clear that the detailed codification of procurement rules in those countries has not yielded the intended results in relation to corruption.

Public Procurement Governance and Reform

In recognition of the depth and impact of these issues many countries are seeking to reform their governance structures for public procurement. These reform initiatives are being strongly supported by all the major aid agencies including the World Bank.

²⁰ MacManus 1991.

²¹ Chapter 6 OECD 2005 Grey Zones and Corruption in Public Procurement: Issues for Consideration by Tina Søreide

²² Thai, 2001; McCue & Gianakis, 2001)

A common factor to all anti-corruption efforts, whether these involve reforming public programmes, reorganising government, or strengthening enforcement, is that they must enjoy public support. Anti-corruption campaigns cannot succeed unless the public is behind them. This means that the broad public requires ready access to relevant and timely information about procurement and its management. Also if ordinary people and businesses at all levels of society are used to dealing with the state through a system of “payoffs”, it will be difficult to change attitudes.

Procurement reform typically begins with a reform of procurement law despite the evidence that countries with an abundance of such law seem to experience the very same problems as those where these laws are subsumed into mainstream administrative processes.

What seems not always understood is the nature of governance of public procurement that can make these goals mutually incompatible. The complexity of procurement rules is frequently recognised as a problem and accompanied by calls for clear and simple rules and procedures. However the complexity of the rules reflects the complexity of the problems being managed by procurement officials, which can be addressed by assigning these officials with greater discretion or by formulating rules to address every contingency.

Reform Strategies

The foregoing discussion has centred on public procurement management firstly for compliance and then for effectiveness in terms of best value-for-money and fit-for-purpose outcomes. These objectives traditionally have each led jurisdictions down quite different paths, the first defining procurement as a legal process, the second in terms of management. Other operational and efficiency issues involved in decisions as to the degree of centralisation-decentralisation also affect the ways in which different jurisdictions perceive and organise public procurement.

Operational failures of procurement governance have been attributed by pro-regulators to weaknesses in the professionalism of practitioners rather than to any inherent weaknesses in the regulations as such; while pro-management advocates have also attributed failure to professional weaknesses but have identified the causes with the regulatory regime itself which tends to reduce the role of management of everything other than mechanical compliance.

Regardless of whether the conduct of public procurement is regarded as a regulatory or a management challenge the anti-corruption strategies are predominately management protocols and whether these are backed by procurement policy or by procurement law may be irrelevant. A partial list of anti-corruption initiatives that could form such strategies is shown in Table 2.

Table 2
Anti-Corruption Procurement Initiatives

INITIATIVE
• An independent procurement unit with professional officials should be established.
• Rotation of procurement officials within a certain area should be considered.
• Performance rating should be a part of the procedure in large procurement projects.
• The number of decision-making centres should be reduced. Separating the evaluation of bids into a technical and a finance team should be carefully considered.
• The procurement rules should be made clear and simple.
• Time limits by which a given request must be rejected or accepted must be strictly respected and allowing reasonable time for suppliers to prepare and submit the bids.
• The state administration should specify requirements in terms of off-the-shelf items.
• International prices should be applied as benchmarks as far as possible.
• Supplementary work should be defined and specified in the contract as far as possible.
• The procurement procedures should include rules for exceptional cases, including a precise definition of the terms “emergency”, “exceptional” and “immediacy”.
• When rules for exceptional cases are applied, the procurement should be subsequently followed up by an evaluation team.
• Insurance coverage and payments of deposits should be requested to reduce the threat of various forms of problems that may arise after contract assignment.
• Access to information should be a number one rule in the procurement procedures, while information still confidential should be treated according to the given routines.
• Rules and routines for communication during the bid should be carefully respected.
• The request should be announced as early as possible and invitation for bid published in due time in major newspapers.
• Unsuccessful bidders should be provided with an explanation of the rejection and relevant information about the bid.
• A board of contract appeals should be appointed.
• The objectives of each procurement project should be specified as precisely as possible.
• Addressing significant problems should be by a committee, not just one official.
• Record keeping is essential to enable inspection.
• Codes of conduct should be central in all forms of bureaucratic activity.
• Rules of disqualification concerning public officials responsible for the acquisition should be included in the procurement procedures.
• Routines to reduce new opportunities for corruption by using the Internet should be created and included in the procurement rules.
• The use of the Internet for procurement should depend on technical qualities.
• Identification of the persons involved in a bid should follow the bid documentation. Registration should be requested for middlemen and agents.
• Middlemen that have bribed, or tried to bribe, public officials should be excluded from future bids.
• Companies should be encouraged to certify that they comply with all anti-bribery laws. The companies selected for contract awards should be met with direct requirements of anti-corruption commitments.
• The bid contracts should include provisions making it possible for the state to hold back payments to be forfeited if bribery is detected.
• Monitoring routines should be implemented in the procurement rules. There should be more concentration on product controls (concerning the attainment of the aims) than process controls (concerning the formal regularity of the acts).
• A way to report about detected corruption should be established and made known.
• Sanctions of corrupt acts, either internal or imposed by judges, should be proportional to the price of the public contract.

Source: Corruption in public procurement: Causes, consequences and cures Tina Søreide Report R 2002: 1 Chr. Michelsen Institute Development Studies and Human Rights

Almost all initiatives listed in Table 2 require substantial and frequently unavailable data and information to be effective. This issue of information access forms the cornerstone of transparency and corruption control, and as

discussed below, the e-procurement agenda. Public support is also a common factor to all anti-corruption efforts. Clearly governments are less likely to prioritise anti-corruption if the public and the media are ambivalent about the issue. Only where corruption is politically sensitive can it be expected that governments are likely to take this seriously. A principal focus for the World Bank Group is to strengthen partnerships with NGOs at the country and global levels as a powerful force for holding governments accountable. This includes forging stronger alliances with global civil society organizations such as Transparency International (particularly their country-based chapters), Global Witness, and also with national and local civil society organizations and media on country-level.

Transparency

While transparency is the foundation for anti-corruption agenda and is a pre-condition for accountability, transparency essentially represents information access. The *OECD Global Forum (2004) on Governance: Fighting corruption and promoting integrity in public procurement*²³ agreed that transparency is among the most effective deterrents to corruption in public procurement. “Transparent procedures allow a wide variety of stakeholders to scrutinise public officials’ and contractors’ decisions and performance. This scrutiny, in addition to other mechanisms, helps keep officials and contractors accountable. Conversely, the lack of transparency creates a haven for corruption” and represents one of the major threats to the integrity of the procurement process.

“The belief that increased transparency can achieve not only more meaningful levels of accountability, but can do so in a highly cost-effective fashion, is now expressed universally.”²⁴

Transparency has been recognised as a pre-condition to allow stakeholders to exercise scrutiny over the decisions and performance of public officials and contractors, thereby minimising their capacity to abuse their discretionary power. This is a matter of relevant and timely information access to all stakeholders.

Public information should be²⁵:

- Accessible, *i.e.* understandable (*e.g.* clear specifications), timely (*e.g.* defining reasonable deadlines for submitting the bid; ensuring that the procedure for contesting the decision is reactive) and provided in a structured manner (*e.g.* establishing a single entry point for procurement);

²³ Page 11

²⁴ Peter Eigen in TI Source Book 2000: Confronting Corruption: the Elements of a National Integrity System.

²⁵ Main Findings of the Forum Workshop on “Improving Transparency in Public Procurement” by Élodie Beth page 48 Ch5 in OECD 2005

- Consistent, *i.e.* the same rules apply for all bidders (*e.g.* a single set of regulations through a centralised database) at the different stages of the public procurement process (*e.g.* making sure that contract terms cannot be altered after adjudication, publicising information related to the bidding opportunity, the bid and the ensuing contract);
- Objective, *i.e.* a competitive environment for bidders is fostered by allowing the largest number of participants in the bidding process (*e.g.* reasonable conditions to participate) and by ensuring that the public procurement process is based on objectively measured factors (*e.g.* through the involvement of stakeholders in the definition of specifications) and is not influenced by specific interests (*e.g.* rotation of public procurement officials).

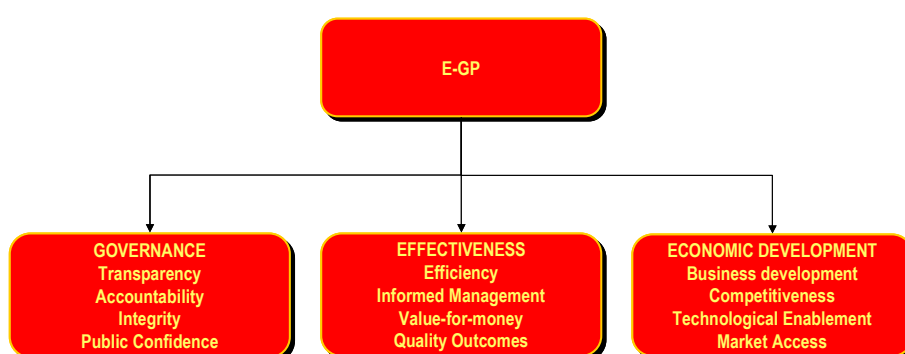
Finally, transparency, to be effective, requires an audience. Even the best transparency will have little significance if the media or the public are just not aware or interested. It is particularly in relationship to transparency (or information access) that technology can contribute significantly to the anti-corruption agenda.

TECHNOLOGY: E-PROCUREMENT

Impact of Technology

Procurement of goods, works and services through internet-based information technologies (e-procurement) is emerging worldwide with the potential to reform processes, improve market access, and promote integrity in public procurement. E-procurement, when properly designed, can drastically reduce the cost of information while at the same time facilitate information accessibility. The strength of e-procurement in the anti-corruption agenda arises from this capacity to greatly reduce the cost and increase the accessibility of information, as well as automate practices prone to corruption.

Figure 3
Opportunities from E-Procurement



Objectives of efficiency, transparency, enhanced policy-making capacity and greater competition are major driving forces for e-procurement. E-procurement can also be a

catalyst for the accelerated take-up of new technologies into the economy generally. These objectives, illustrated in Figure 3, can be pursued simultaneously for much the same costs as aiming for just one alone. The issues are primarily about design, standards, management and policy rather than resources.

However, these benefits do not automatically arise simply because technologies are being applied, and while all of these outcomes are mutually compatible it does not follow that the pursuit of, for example the efficiency agenda, will automatically deliver greater transparency. That is, not all e-procurement methodologies are the same: there are effective applications of technology that can account for the objectives, methods, sensitivities and vulnerabilities of public procurement, and there are other methodologies that will fail to maximise the potential.

The benefits to be targeted by the e-procurement programme need to be identified at the outset and specifically designed in. Thus, to reduce corruption effectively, greater transparency and accountability must be consciously built into the e-procurement specifications and design, including the capacity to track the actions and decisions of individuals in the procurement cycle, routinely profile the history of decisions of individual officials, map purchase prices against benchmarks, generate meaningful management and audit reports, etcetera. If such design specifications are implemented corruption can be impacted significantly. On the other hand, overlooking these factors and simply adopting some existing software applications can defeat the whole purpose.

E-procurement can also be a means of standardising and monitoring processes, thereby facilitating the control and reduction of discretion through benchmarking. Decisions become comparable and histories profiled, which allows for internal control, audit and exceptions reporting.

Benefits of e-procurement can include:

- Enhanced management and audit data and transparency;
- Automation of processes that might otherwise attract bribery;
- Real-time information systems including real-time bidding;
- Facilitating supplier management including identifying the past performance;
- Reduction of discretion in call for quotations for small acquisitions;
- More consistent application of policies and rules at each phase;
- Simplifying processes – for example payment through purchase cards;
- Reducing costs of competition – one-time registration;
- Efficient and secure document transmission.

Electronic standardised catalogues including product and service classifications also facilitate the creation of more meaningful management information as well as allowing for more accurate price and supplier comparisons. Moreover, e-procurement systems can also be configured to provide gatekeeper roles in management checklists and authorisations, such as to strengthen the levels of control and accountability.

E-Procurement Implies Procurement Reform

These technologies do more than simply provide access to information: the effective application of these technologies requires that processes be formally defined, lines of authority and accountability clearly specified and procedures and terms and conditions be standardised. Thus, e-procurement is not simply the application of technology to existing processes, but a reform process in itself that requires in many instances, that traditional processes be modified or abolished - that management processes, protocols and procedures be standardised, reformatted and often simplified, all of which are conducive to greater transparency. E-procurement also requires new training both of procurement officials and business stakeholders, and even a public awareness programme to develop civil oversight. Standardisation itself with the appropriate computer protocols acts, inter alia, to reduce discretion of public officials.

It has been noted that transparency is a cornerstone of anti-corruption programmes, and transparency means comprehensive access to relevant information – this is precisely what information technologies should be designed to exploit. An approach to e-procurement that simply maps existing processes and protocols into the online environment will under-achieve the potential.

Reconciliation of Process Control with Efficiency

The enhanced transparency arising from the application of technology to the procurement function delivers directly what many rules and regulations seek to do indirectly. Both for high value bidding exercises and low value purchasing, procurement regulations usually aim at ensuring transparency through due process by stipulation of procedural steps. The outcome of this is, as already noted, often a lack of transparency because of over-regulation. Technology can bypass much of this by delivering very low cost audit paths and highly accessible activity records: transparency is delivered more directly.

E-procurement adds more than transparency however, by automating some basic process controls such as the distribution of forms and the acceptance of bidding documents this technology removes officials from steps that have often been associated with bribery. Thus the regulation and transparency versus performance issue, discussed previously, often becomes circumvented.

The prospect of at least partly reconciling regulation, discretion and efficiency can also be derived from the conceptualisation of the risk of corruption as provided by Robert Klitgaard²⁶:

$$\text{Corruption} = (\text{Monopoly}) + (\text{Discretion}) - (\text{Accountability})$$

He states that “the opportunity for corruption is a function of the size of the rents under a public official’s control (M), the discretion that official has in allocating those rents (D), and the accountability that the official faces for his or her decisions. This formula can be reinterpreted with accountability as the product of consequence (or impunity), and risk of discovery, where, in turn, risk of discovery is represented by transparency:

²⁶ Robert Klitgaard: *International Cooperation Against Corruption*, Journal of Finance and Development March 1998, Volume 35, Number 1

$$\text{Corruption} = (\text{Monopoly}) + (\text{Discretion}) - (\text{Consequence}) \times (\text{Transparency})$$

Technology has an impact at several points in this representation. First technology can reduce the Monopoly or rents available by increasing competition. Second technology when applied to standardise and regularise processes will reduce Discretion by officials to arbitrarily vary many processes to bias the outcome. Finally technology can significantly increase Transparency through its capacity to track, retrieve and process information. The fourth factor – that of Consequence (or Impunity) – depends on the effectiveness of legislation, the courts and other accountability vehicles such as debarring as noted in the following section. It can also be noted that, from the foregoing discussion, the requirement to increase the effectiveness and efficiency of procurement may tend to increase the discretionary roles of officials which need not lead to additional corruption if there is a corresponding increase in transparency combined with proper enforcement.

The potential impact of technology on the effectiveness of anti-corruption measures is also illustrated in Appendix II which shows how this may support the World Bank procurement anti-corruption toolkit.

Complementary Functions

E-procurement, if properly designed and implemented, can significantly enhance the anti-corruption agenda. However e-procurement, like other anti-corruption initiatives, cannot deliver these outcomes in a vacuum: much greater access to audit information will be of little benefit if the role of audit itself is weak; similarly improved information and systems to detect collusion will be of little benefit if anti-trust legislation is ineffective; online systems will be of little benefit if officials are also permitted to conduct procurement offline; and ultimately, enhanced corruption detection capabilities will mean little if the courts are corrupt or the public is indifferent. E-procurement also requires other reform such as the ways in which audits are undertaken, the training of procurement officials and the services provided to the business sector.

Clearly e-procurement can greatly strengthen corruption detection in public procurement - it acts to strengthen the effectiveness of anti-corruption institutions, civil oversight and sanctions, rather than replace them.

RE-DESIGNING TRANSPARENCY THROUGH E-PROCUREMENT

It has already been discussed that benefits do not automatically arise simply because technologies are being applied, but instead are the result of design, implementation and associated reforms. The following discussion seeks to define some of the essential design characteristics and considerations for e-bidding.

E-Bidding

The implementation of an e-bidding service requires the posting of all bidding information on a single internet site, streamlining traditional management and information systems, and facilitating oversight by the general public.

The functional capabilities which make up an e-bidding service suitable for public procurement in most countries include:

- A single central site
- A Supplier Registry
- A complaints function
- Downloading of bid documents and technical drawings
- Uploading of bid documents and technical drawings
- A capacity for suppliers to use the site to request hardcopy
- Intelligent search facilities by locality, business type and value if applicable
- All procurement policies and regulations for each department
- Annual and quarterly procurement plans for each department
- Advertising of bid opportunities online
- Early advice on bids currently under preparation in public agencies
- Electronic lodgement of bids by suppliers
- Customised email / SMS notification of new bids and amendments to suppliers
- An online tracking capacity for suppliers in relation to their bid processing
- On-line data and indicators on major procurement operations
- Contract award information
- Archived contracts with public interrogation capabilities
- Authenticated supplier histories and reports
- A secure procurement management and information system that enables for each step, decision or activity: audit trails, access logs as well as comprehensive management information that allows for aggregation but also disaggregation down to individual officer level.

The provision of information on a single internet site about the bidding processes will generate the dynamics involved in the use of this internet site by government agencies and suppliers. This high profile site will also promote ease-of-access to information and therefore civil oversight.

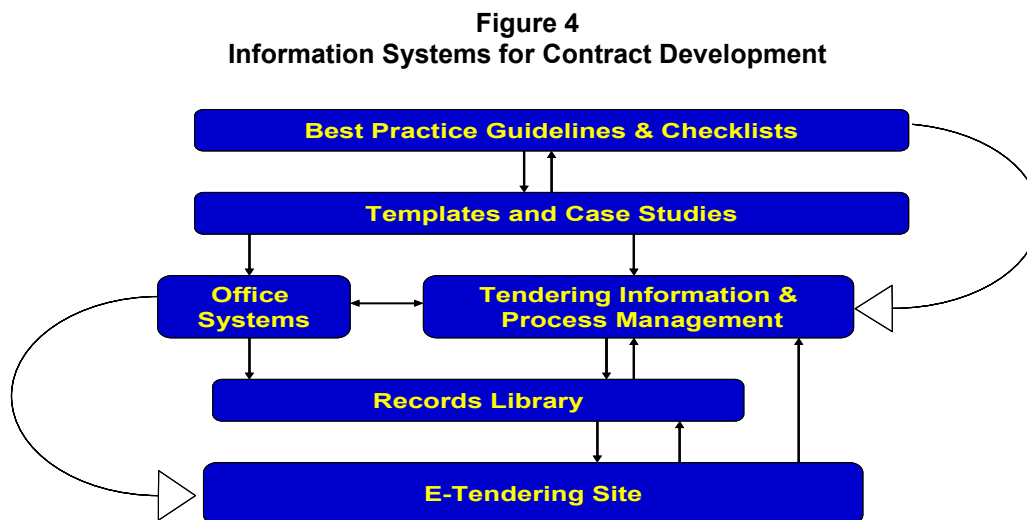
Because e-bidding procedures are similar to traditional bids, the laws and standards already in effect can often be expected to be applicable.

E-Contract Management

Government agencies typically manage numerous contract relationships simultaneously, each with various deadlines, expiry times, conditions and performance criteria, and often without any standardization between contracts for easy monitoring. The opportunities for corruption in contract management are acute. There have been cases in various jurisdictions where important schedules, conditions and performance criteria have been overlooked. For construction contracts Transparency International has reported that the problems are even more entrenched. An e-contract management system can be designed to address many of these issues, standardize processes, exploit templates and automatic bring-ups and strengthen transparency and efficiency for both government and businesses.

Figure 4 illustrates a model for some of the information management systems that apply and that can be facilitated by this technology.

This task also includes the preparation of final evaluations of contract performance based on previously defined parameters. These evaluations are then used to compile records of each process, identify best practices, and systematize the information on each supplier's performance for use in subsequent operations.



The major contracting agencies and suppliers, especially for works contracts, can participate in the development workflow management, bring-ups and approvals templates for online performance management of large contracts. The prospects for greater transparency in this area are considerable. .

E-Procurement Information Systems

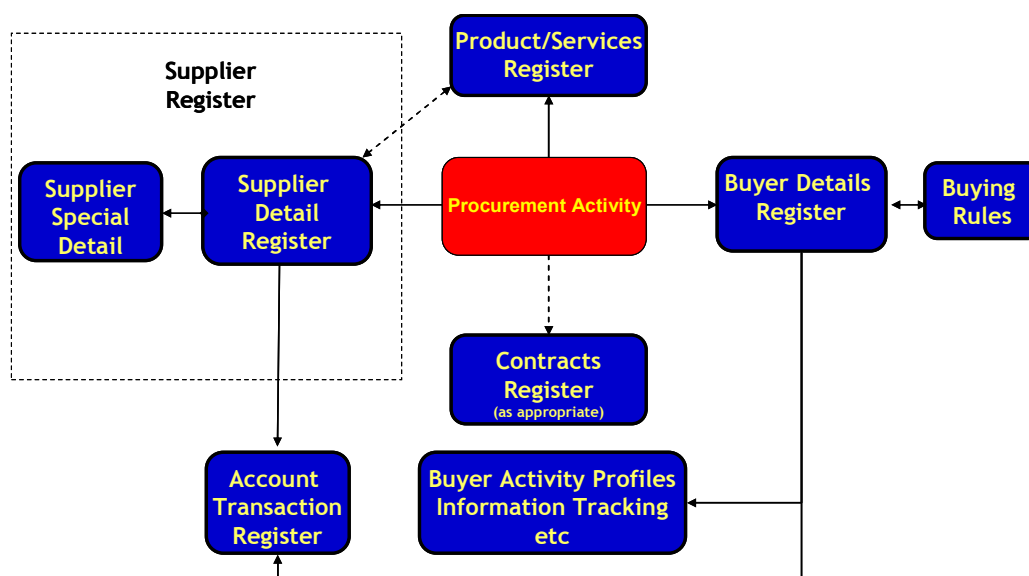
From the foregoing discussion it is clear that there is a large amount of information generated by government procurement processes. In the case of bidding processes the information relevant to transparency and accountability includes:

- Bid details and identifiers
- Bid Addendum
- Potential Bidders
- Bid Submissions
- Bid Workflow Actions
- Bid Method Roles and Actions
- Suppliers (from Supplier Register)
- Government personnel (from Buyer Register)
- Government Offices (from Corporate Facilities Register)

Similarly government procurement based on the use of on-line price quotes or sometimes framework contracts also generates large amounts of data. This method is to be used for low-value goods and services, for which bids are not required; instead, a list of sources of supply is used for such purchases.

A model of information registries that are appropriate is shown in Figure 5 which illustrates a power to create, audit and manage information and transparency, and therefore anti-corruption agenda, that could not reasonably be paralleled in a paper-based environment

Figure 5
Information Management for Purchasing



The information generated during e-procurement processes can be automatically entered into a database for subsequent use in auditing and review of individual transactions and classifying information by purchasing individuals, organization, suppliers, region, price, type of good, and any combination of these criteria. This information is basic for oversight by civil supervisory and auditing units, budgeting etcetera. These statistics furnished by the system can be used to monitor practices and control corruption by individual officials through profiling of their activities.

E-bidding promotes transparency primarily by increasing information access directly by the business sector and civil society generally. For small purchases the mechanism is different. Transparency in this case is ensured by the development of 'data warehouses' or databases designed to allow comprehensive analyses of all aspects of purchasing and the behaviour of purchasing officers and suppliers.

Sources of Supply on the Internet

There are several other elements required for the development of an efficient, competitive and transparent market for government procurement. Issues that frequently arise in developing countries include online specification of goods and services, identification of reference or purchase prices and identification of legitimate potential suppliers.

Catalogues

Catalogues are used to facilitate product identification, searching and price comparisons. For e-purchasing the use of the Universal Standard Products and Services Classification (UNSPSC) catalogue standard is usually preferred. This catalogue standard is maintained by UNDP to serve as a standard for the classification of goods and services (<http://www.un-spsc.net/>). Its use will lower the cost of preparing and maintaining a separate standard and permit international price comparisons, and it will facilitate the use of e-GP within regional and global integration schemes. It is also an open standard and available without charge.

The selection of a catalogue standard also has significant implications for an anti-corruption agenda by promoting competition as well as transparency. A single internationally recognised goods and services classification system on which bidding or quoting will take place increases the prospects for meaningful price comparisons for bids from competing firms. For this reason experience has been that the adoption of such a catalogue standard is often resisted by some suppliers who already have significant government contracts and are not interested in enhanced competition. A single catalogue standard alone might not increase competition however if it is not accompanied by effective open access policies for suppliers. Thus one example has been a government department (in a developed country) that found the online catalogue of one of its major suppliers to be so convenient that it built this supplier catalogue into its procurement management system to the exclusion of all competitor catalogues – a development that was subsequently deemed illegal. The selection of a catalogue standard can also be used to thwart competition - if this standard is not recognised by many potential suppliers then it will effectively lock them out from bidding.

The preferred model is for suppliers to be encouraged or required to maintain their own international standard catalogues online against which the public system can efficiently seek quotes and information.

Systems for establishing price

There are two main price formation systems for ordinary goods: (i) e-bidding on large volumes of the product in question, which may be used to obtain a floor price; and (ii) historical cost information, which will provide an average price for use as a benchmark.

When e-GP begins to be implemented for on-line purchasing, the bidding system can be used to arrive at a reference price. This should be effective if the market is competitive – competitiveness may need to be assured through the inclusion of international competitors. Once a database has been formed, price information can be kept up to date.

Alternatively, and much to be preferred, is where the market is mature and competitive with little risk of collusion there will generally be no requirement for reference prices as the system can search automatically each time for the

lowest catalogue price in the locality or region (or three lowest if three quotes are sought). A mature competitive market is less prone to corrupt practices (and inefficiencies) involving the manipulation of reference prices, and yield greater value for government.

An electronic marketplace can be instrumental in promoting competitive markets consistent with the anti-corruption agenda. A manifestation of this effect has already been noted in its effect of reducing the anti-competitive practice of physical intimidation as well as bribery against suppliers submitting bids into traditional tender boxes.

Open registration for eligible suppliers

The development of open competitive markets is also consistent with unrestricted registration for all suppliers unless they have been disqualified for non-performance or other reasons. This unrestricted access can be expected to further strengthen competitive pressures on suppliers and improve value for government as well as the robustness of the private sector.

This open access regime can also be defeated by corrupt practices if not carefully managed. For example contracts can be structured in such ways as to render most suppliers as ineligible.

This discussion illustrates that the efficiencies of online technologies can be instrumental to the development of competitive markets for government procurement. Such markets are less prone to some types of corrupt practices associated with restricted supply and historic pricing.

MDB E-Procurement Standards

Benchmarks for the operations and qualities of an e-bidding service have also been developed by the Asian Development Bank, the Inter-American Development Bank and the World Bank. The MDBs²⁷ have some minimum governance standards and qualities that must be met if e-GP systems are to be applied to the loans, grants or credits that they provide. These form a standard for the functions and qualities of the e-bidding system that may be implemented.

These standards are designed to ensure that basic qualities of good governance apply to these resources. Consistent with the foregoing discussion the MDBs require that the core procurement principles of:

- transparency,
- non-discrimination,
- equality of access,
- open competition,
- accountability and
- security of process,

²⁷ The MDBs – see www.mdb-egp.org

apply to the e-GP systems in relation to the deployment of resources provided by them. These core principles can also be adopted as the basis of the operational specifications of an e-bidding system.

E-Procurement Risks

E-procurement is itself not without risk of corruption. The heavy use of computer systems exposes new vulnerabilities around system integrity and security. Clearly also incorrect data can be entered in relation to any project or contract, although the much stronger capability through e-procurement to cross-reference and audit information makes this form of corruption more difficult. Corrupted contract bidding processes will have security risks, although these are often less than those under traditional procurement which have also includes physical threats to individuals submitting a bid.

Some jurisdictions have introduced online tender submission without any security technologies at all. This can even enhance the risk of corruption by reducing the barriers to improper access of submissions before the submission deadline has closed. Security breaches in the online environment also tend to be of higher visibility than for traditional procurement and as such have greater potential to undermine confidence in procurement reform.

The greater areas of risk for e-procurement often arise from the lack of understanding of some of the key design issues and governance requirements such as the need for open access for suppliers, open standards (such as for catalogues) that reduce the barriers to interoperability of systems, the need for sound management systems around security, and appropriate business models that do not restrict or discourage utilisation.

There is also sometimes a significant dependence by some countries on the application of digital certificates²⁸ as another security overlay. Sometimes countries have required that the authentication processes to obtain a digital certificate requires the bidder to physically attend a local office thus effectively disqualifying numerous potential international bidders. These issues can act as significant barriers to competition.

EVALUATION

The foregoing discussion has identified significant potential outcomes from the introduction of e-procurement capabilities and applications. The actual effects of technology on the procurement environment should be evaluated in terms of the broad objectives of transparency of process and efficiency, and the direct and indirect impacts on corruption in procurement.

E-procurement programmes implemented in Korea, Mexico, Italy, Brazil and Australia are examples that demonstrate the innovative use of information technology to prevent and control corruption in public procurement and which have reported significant increases in transparency and public confidence.

²⁸ Schapper, P.R.; Rivolta, M, Leipold, K; E-Signatures and Risk; Journal of Digital Evidence

While there has yet to be a definitive study to quantify the impact of technology on procurement corruption, research into e-GP by the MDBs has revealed some supporting information. A comprehensive study of the effects of technology on procurement corruption should seek to measure not only the overall before-and-after levels of corruption but also changes in the levels of public, media and business awareness and perceptions of the issues. The measure of perceptions towards public procurement is especially important as it reflects the level of public confidence in its governance. Such an assessment would need to be carefully designed given that there have been several observations where e-procurement has experienced negative feedback from users, but on closer analysis these were corrupt users who had lost out from this innovation.

Table 3
Benefits in using the Systems
All Regions*

Priority	Providers of e-Procurement Services and Systems	Users of e-Procurement Services and Systems
1.	Improved transparency of the process (9)	Reduced time for the procurement process (7)
2.	Larger pool of suppliers, increased competition (9)	Improved access to procurement opportunities via a single national portal (5)
3.	Reduces cost to provide the procurement service (6)	Improved transparency of the process (5)
4.	Reduced time for the procurement process (6)	Reduced errors in process and documentation for buyers (2)
5.	Access to better information for decision making and assessment of issues (4)	Provide sophisticated market intelligence based on the past transaction history and record (2)
6.	Better consistency of process via standard process and documentation (3)	Increased participation in the market (1)
7.	Improved efficiency and effectiveness (3)	Better work integration for buyers(1)
8.	Improved engagement/communication with suppliers (3)	Promoting SMEs (1)
9.	Better audit trail of the process and transactions (2)	It is a transparent and secure way to cut down costs and to make real savings (1)
10.	Guarantee quality standards in PA purchases (1)	Access to price comparisons (1)
11.	Reduced errors in process and documentation (1)	Time and cost effectiveness (1)
12.	Reduced use of paper (1)	Facilitates products standardisation by international catalogue use (1)
13.	Timely announcement of procurement information (1)	Less paperwork (1)
14.	Promoting SMEs' promotion from all over the world (1)	

*The number in brackets indicates the number of responses out of 14 countries

An ongoing study by the Curtin University of Technology, sponsored by the MDBs, has reported the experiences from 14 countries from Europe, Asia-Oceania and South America.

The comments from respondent countries have been provided in terms of the providers of the procurement services and systems (Providers) as well as for the buyers and suppliers that use the services and systems (Users). Reported benefits of e-procurement from this sample are listed in Table 3. The system providers were predominately either private sector or a public-private consortium or contracted arrangement. Table 3 shows that providers of e-procurement services ranked greater transparency as its most significant benefit while users (suppliers) also ranked this highly. Both providers and users also identified greater competition as a significant outcome which, as discussed, is also a counter-corruption influence. As expected both groups were also able to cite various forms of efficiency gains, which in turn also promote competition. This study has further reported a significant reduction in supplier complaints since the introduction of e-procurement.

Table 4
System Support for Process Integrity and Transparency

Questions		Positive responses (maximum 13)
1.	The system has resulted in the government procurement processes being consistent from agency to agency?	10
2.	Government procurement is held in high regard by suppliers to government?	12
3.	All information to help potential suppliers plan, develop, modify and submit their bidding documents is made available online?	10
4.	All suppliers get exactly the same information throughout each individual procurement process?	12
5.	Each parcel of information provided to suppliers is made available at the one time and is date and time stamped?	10
6.	Suppliers are not impeded from accessing the system based on location?	12
7.	Suppliers are not impeded from accessing the system based on the cost of access or time it is available?	11
8.	Suppliers are not impeded from accessing the system based on the requirement to have specialised hardware or software?	11
9.	Procurement policies, process and its guidelines are publicly available on line?	10
10.	Procurement legislation and regulations are publicly available online?	10
11.	The public can access the system to see details on contracts awarded, prices and the successful suppliers?	10

This research also sought responses to a range of other factors associated with integrity and transparency. The scope of e-GP to enhance transparency arises from many stages in the procurement cycle including the more extensive advertising of tender opportunities and results, a greatly improved decision tracking capability as well as a capacity to generate standard and ad hoc reports of a scope that is impossible in the paper environment.

Other effects of e-GP that also enhance transparency are that it acts as a catalyst for the standardisation of documentation, tendering templates, tendering rules, policies and procedures and enhances supplier and civil access to the oversight of procurement processes. These effects are evident in the responses listed in Table 4.

Table 5
Technology Driven Reforms

Reforms		Positive responses (maximum 13)
	Policy	
1.	Procurement policy was reviewed to ensure it supported the e-procurement vision and objectives	10
2.	e-Procurement aspects of policy were linked to policies for e-Commerce and e-Government	10
3.	Procurement guidelines were reviewed to ensure consistency and relevance to e-procurement	11
4.	Polices and guidelines applicable to e-Procurement were made available on line	10
	Management and Planning	
5.	Existing procurement processes structure, efficiency and effectiveness were reviewed to better support the introduction of e-procurement systems	10
6.	Standardised documents for the use of supplies are available online (e.g., supplier request/response forms, Response to Request for Tender)	11
7.	A procurement information database was established to assist government buyers to better understand the market and make future procurement decisions	7
	Legislation and Regulation	
8.	The responsibilities for the legislation and regulation relating to e-procurement were allocated and effectively resourced	8
9.	Regular monitoring and reporting of compliance by government agencies with the policy, legislation and regulatory frame work is carried out	9
10.	Regular monitoring and reporting of e-procurement performance at the national/regional level is carried out	9
11.	Regular internal monitoring and reporting of e-procurement performance at the government agency level is carried out (i.e. agencies are accountable for their procurement performance)	9

Table 4 shows that for a range of indicators these systems have generated positive outcomes for transparency and integrity of the process. However the research also

showed that the technology has usually not penetrated back into many of the management systems related to procurement which sometimes continue to lack transparency. Also it has been noted that the greater share of malpractice in procurement occurs where all of the specified procedures have nominally been complied with. This means that greater attention is required of the monitoring and reporting systems as well as all the other governance controls.

E-procurement systems can support improved process integrity and transparency through wide access to opportunities, information and providing a means to build a consistent approach to the process.

Similarly Table 5 suggests that e-procurement is a catalyst for significant reform of procurement. This is encouraging given that there has sometimes been a tendency for authorities to regard e-procurement as simply a technical matter to be attended to independently of procurement reform. Nevertheless these responses were also consistent with the observation that in a number of cases the authorities perceive e-procurement to be a mechanical mapping of their existing processes into a software system, rather than taking advantage of the technology to review and redesign policies and procedures.

Also some authorities apparently have not established performance criteria for the management of procurement. Additionally, others have not established databases to gather procurement data.

While more studies are needed, these results seem to support the proposition that e-procurement can be a significant influence in the reform of procurement and in the anti-corruption agenda.

SUMMARY AND CONCLUSIONS

Corruption in government procurement represents the greatest share of worldwide corruption and is of a proportion that is undermining not only good governance and economic performance but also the political and social institutions of developing countries. In many cases 30% or more of government expenditure on major infrastructure projects can be diverted in this way. Effectively addressing corruption is as much an aid programme as any of the more traditional forms of assistance and may represent one of the most effective economic development programmes that a country can adopt.

Various strategies have been proposed to address the issues including reform of procurement law, training and codes of conduct, removal of discretion from public procurement officials, debarment, etcetera. The MDBs are seeking to strengthen their governance rules around the use of bank-source funds and have developed new assessment tools and guidelines.

Many governments also have been pursuing reform but frequently there is not a good understanding of procurement itself, with some pursuing this through law reform while others by strengthening management or even by implementing an FMIS. In many cases these proposals seem not to reflect the structure of public procurement and the

potential for proposals relating to reform of the procurement rules to conflict with legitimate procurement management agenda. The simplification of rules is seen as an important element for transparency but may be incompatible with removal of discretion and so incompatible with other aspects of the corruption agenda. A compromise is required between performance management, rule simplification, reduction of discretion and transparency. Such compromise leaves the way open for continuing corruption. This analysis helps to explain the difficulties that have been faced by procurement reform strategies and their record of progress.

There would seem to be considerable potential to apply information technologies to these issues to reconcile the need for greater transparency, control of discretion and efficiency. In addition, the very large amount of data and information required to properly account for and manage government procurement can, realistically, only be organised through such technology. Electronic government procurement provides extensive new management information, management controls and new procurement methods. The enhanced information availability strengthens transparency and audit, while by providing easier access for business, competition is increased and lower prices as a result. It was also noted that rather than dispensing with other accountability measures and anti-corruption strategies, technology has the potential to strengthen them.

Despite the strengths of the technology few if any governments have as yet implemented a fully comprehensive e-procurement system that addresses all aspects of this function and considerable potential remains.

While the potential of technology to impact on corruption would seem to be very significant there have sometimes been presumptions that this means that it is easy, and because results have not come easily the potential therefore not great. It needs to be recognised that technology can significantly enhance the procurement function but only if these objectives are part of the design itself. The reform of public procurement through the application of information technologies has many advantages but success is not assured unless there is a clear understanding of what e-procurement is about. A lack of understanding of e-procurement by governments represents the major risk to its successful implementation. Such a reform programme also needs strong government leadership, standardisation of procedures and re-training for procurement professionals as well as for the business sector itself.

Recognition needs to be given to the impracticality of marrying an effective anti-corruption agenda with traditional procurement management tools, not least because traditional procurement management cannot hope to process the information and data requirements for the transparency and oversight requirements of such an agenda.

The strengths and relevance of information technologies to procurement reform and the anti-corruption agenda means that e-procurement should not be perceived merely as an adjunct to traditional procurement, to be incorporated when time and opportunity become available.

Rather, given the very great significance of procurement corruption and the transparency and information systems needed to combat it, the application of information technologies, that is e-procurement, could be a centrepiece of such reform.

The MDBs can have a leadership role by providing benchmarks for the basic functionality for e-procurement that will support the key attributes of transparency, accountability and competition.

It is of course also clear that even highly transparent processes can be corrupted. This can occur where law enforcement is weak or itself corrupt or where there is only weak political fallout because the media or the broader community have little interest. These factors are easily observed in some developing countries. Technology alone cannot be expected to stand in for such problems and can also be used corruptly. However it is also clear that without the information and information systems needed to deliver transparency, other reforms relating to the other parts of the management and political environment will be undermined.

Appendix I – Definitions of Corruption

Definitions of Corruption
Asian Development Bank defines corruption as the abuse of public or private office for personal gain. This means any behaviour in which people in the public or private sectors improperly and unlawfully enrich themselves or those close to them
Transparency International²⁹ : Corruption is the misuse of entrusted power for private benefit. Corruption involves behaviour on the part of officials in the public sector in which they improperly and unlawfully enrich themselves, or those close to them by the misuse of the power entrusted in them. TI distinguishes between petty corruption and grand corruption. Petty corruption or survival corruption is practiced by officials who may be grossly underpaid and depend on small rents. This small-scale corruption may be simply a downward projection of much more damaging corruption at higher levels. Grand corruption of high-level public officials often involves large international bribes and “hidden” overseas bank accounts.
United Nations Development Program (UNDP)³⁰ : Corruption is the misuse of public power, office or authority for private benefit – through bribery, extortion, influence peddling, nepotism, fraud, speed money or embezzlement. Although corruption is often considered a sin of government and public servants, it also exists in the private sector.
Inter-American Development Bank (IDB)³¹ : Corruption encompasses acts performed by officials who use their positions wrongfully, or are requested to do so by others, to obtain some benefit for themselves or others. Corruption activities include the solicitation, payment or receipt of bribes, gratuities or kickbacks, extortion, improper use of information or property, and peddling of influence.
<p>World Bank³²: ‘the abuse of public office for private gain; public office is abused when an official accepts, solicits, or extorts a bribe. It is also abused when private agents give or offer bribes to circumvent public policies and processes for competitive advantage and profit. Public office can also be abused for personal benefit even if no bribery occurs, through patronage and nepotism, the theft of state assets, or the diversion of state revenues. Corruption can also take place among private sector parties, yet interface with and affect public sector performance: for example, collusion among bidders to a public procurement with the intent to defraud the state can seriously distort procurement outcomes’</p> <p>Corrupt practice: offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the action of another party.</p> <p>Fraudulent practice: any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.</p> <p>Coercive practice: impairing or harming, or threatening to impair or harm, directly or indirectly, any party or property of the party to influence improperly the actions of a party.</p> <p>Collusive practice: an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party.</p> <p>Obstructive practice: (a) deliberately destroying, falsifying, altering, or concealing evidence material to the investigation, or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt,</p>

²⁹ Transparency International: Sourcebook 2000.

³⁰ UNDP 2003

³¹ IDB: Strengthening a Systemic Framework against Corruption for the Inter-American Development Bank, February 28 2001.

³² World Bank, Strengthening World Bank Group Engagement on Governance and Anti-Corruption. Washington DC, The World Bank, March 2007.

fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or (b) acts intended to materially impede the exercise of the Bank's contractual rights of audit or access to information.

United States Agency for International Development³³ (USAID): Corruption is the abuse of public office for private gain. It encompasses unilateral abuses by government officials, such as embezzlement and nepotism, as well as abuses linking public and private sectors such as bribery, extortion, influence peddling, and fraud. Corruption arises both in political and bureaucratic offices. It can be petty or grand, organised or unorganised.

³³ USAID: A Handbook on Fighting Corruption; Technical Publication Series, Centre for Democracy and Governance; February 1999.

Appendix II – Anti-Corruption Toolkit

The World Bank's Department of Institutional Integrity (INT) has developed a new tool, the Detailed Implementation Review (DIR), designed to detect fraud and corruption in Bank-financed projects. This methodology includes an extensive list of indicators that are sensitive to the risk of corruption.

Of these, the indicators that relate to procurement are listed in Tables A1&A2 with a reference as to the extent of whether the proper application of technology may be able to address the problem or enhance transparency of the issue.

Table A1
Detailed Implementation Review – Procurement

Bid Document Preparation	
• Absence of, or non-compliance with, procurement plan	✓✓
• Contracts comprising similar goods or services could have been packaged together	✓✓
• Unauthorized deviation from the Bank's Standard Bidding Documents	✓✓
• Narrow contract specifications in bidding documents that appear to favour specific product types/manufacturers	✓
• Weak technical specifications that do not allow for evaluation of the contractor's quality of performance	✓
• References to work being performed to 'National Standard Specifications' instead of a more detailed description	✓
• Inadequate specification that encourages later claims	✓
• Understated quantities in Bills of Quantity (BOQ) that could lead to later claims	✓
Prequalification	
• Vague or unclear prequalification requirements	✓
• Bid not sufficiently advertised	✓✓✓
• Inadequate time given for preparing applications	✓✓✓
• Lack of standard evaluation procedure	✓✓✓
• Exclusion of experienced applicants on minor technicalities	✓
• Requirement to be pre-registered on a government-approved roster	✓✓
• Failure to answer requests for clarification in good time	✓✓✓
Advertising of Bids	
• General Procurement Notice (GPN) not issued	✓✓✓
• Restricted advertising and/or insufficient notice given	✓✓✓
• Advance release of bid documents or relevant information to one bidder	✓
• Sale of bidding documents at unjustifiably high price used to minimize the number of bidders	✓✓✓
Bidding	
• Not all bidders are informed of the contract cost estimate	✓✓✓
• Failure to keep accurate minutes of pre-bid meeting, including questions and answers	✓✓
• Clarification sought by bidders is not answered in writing nor circulated to all bidders	✓✓✓
• Delay between deadline for submitting bids and opening them	✓✓✓
• Different location for receiving bids and opening them	✓✓✓
• Bids submitted and accepted after the submission deadline	✓✓✓
• Bids not opened in public	✓✓✓
• Names of attendees, names of bidders and offer prices not recorded at bid opening	✓✓✓
• Failure to provide secure storage of, and restricted access to, bids received	✓✓✓
• Lack of transparent procedures for handling complaints and determining remedies	✓✓

✓✓✓ indicate that the impact of technology is potentially very significant,

✓✓ indicate a potentially moderate effect

✓ indicates potentially only a marginal effect.

Bid Evaluation and Contract Award	
• Membership of the Bid Evaluation Committee (BEC) appears to remain constant across procurement packets	✓✓✓
• BEC members do not have the technical expertise necessary to properly evaluate bids	✓
• Bidding process is controlled by a small number of persons in the Project Unit	✓
• Unreasonable delays in evaluating the bids and selecting the winner	✓
• High number of complaints about bid process and evaluation received from losing bidders, especially when lower bids are declared non-responsive	✓✓
• Information necessary to evaluate the procurement process is missing	✓✓
• Only photocopied documents are available for review	✓✓✓
• Incorrect method of procurement noted during review (e.g. single-source instead of International Competitive Bidding (ICB))	✓✓
• Evaluation criteria are amended after receipt of bids	✓✓✓
• Same bidders repeatedly participating	✓✓✓
• Same bidder repeatedly winning	✓✓✓
• Large number of local firms bidding on ICB contracts	✓✓✓
• A narrow variance between the estimate and the bid amounts received	✓✓✓
• Similarities between competing bids (e.g. format of bid, identical unit prices, identical spelling, grammatical and/or arithmetic errors, photocopied documents)	✓✓✓
• Bid bonds are acquired by competing bidders from the same financial institution	✓✓
• Bid bonds have similar date and/or have sequential serial numbers	✓✓✓
• A bidder lists multiple addresses	✓✓✓
• Unit prices in competing bids vary inconsistently by amounts greater than 100%	✓✓✓
• Unit prices in competing bids are identical	✓✓✓
• Bidders propose identical items (e.g. the same make and model)	✓✓✓
• Common ownership in the bids of competing bidders	✓
• The Bid Evaluation Report has been revised or re-issued	✓✓✓
• The Bid Evaluation Report has been performed in an unrealistically short time	✓✓✓
• An arithmetic check of the bid(s) is not performed or results in a bidder being favoured inappropriately	✓
• An evaluated bidder should have been disqualified based on the information submitted in their bid	✓
• The lowest bidder is disqualified and the explanation, if any, provided is weak	✓✓
• Seeking clarification is used as a cloak for financial negotiations	✓
• Vested interests are identified among members of bid evaluation committee	✓✓
• Falsification of curricula vitae in consultant services proposals	✓✓
• Unreasonable delays in negotiating and executing the contract	✓
• Contract is not in conformity with bid documents (e.g. specification and quantities)	✓✓
• Contractor's name differs between Contract and Bid Evaluation Report	✓✓✓
• Contract amount is different than amount in Bid Evaluation Report	✓✓✓
• Contract includes allowances for variations which are not part of the bidding documents	✓✓✓
• Date of contract precedes the date of the Bank's No-Objection Letter (NOL)	✓✓✓
• Subcontracting requirements are imposed	✓
• Rigorous system for handling contract variations and evaluating claims not defined in the contract	✓
• Staff involved in contract award decisions become involved in contract supervision	✓✓

Table A2
Detailed Implementation Review – Contract Administration and Supervision

Contract Administration and Supervision	
• Contract specifications or scope of work altered after contract awarded	✓✓
• Site inspection indicates that work performed was not in accordance with the technical specifications (below-specification civil works, goods and services are accepted)	✓
• Technical specifications of materials provided do not correspond to the specifications agreed upon in the contract	✓✓
• Site inspection indicates that project completion is less than that certified or that a completed project is not operational	✓
• Goods or services not being used, or being used for purposes inconsistent with intended purposes	✓✓
• Wrong quantities of goods and materials are delivered	✓
• Delays in the delivery of goods or services in any part of the project implementation process	✓✓
• Substitution of nominated consultant staff with less qualified and experienced personnel	✓✓
• Frequent changes in key staff of the PMU/PIU	✓
• Changes in PIU/PMU and Bank staff responsible for post-procurement verifications	✓✓
• Lack, or low level, of oversight of the physical works	✓✓
• Absence or insufficient post-procurement verification of scope of work and physical inspections	✓✓
• Site diaries and meeting minutes are not maintained	✓✓✓
• Written instructions are not given to contractors	✓✓✓
• Incomplete records in PIU/PMU – significant number of missing documents	✓✓✓
• Lax checking and certification of progress billings	✓✓
• Incomplete site measurement records to justify claims for progress payments	✓✓✓
• High frequency of Change Orders to the contract	✓✓✓
• 'As-built' drawings are photocopies of technical specifications in the bidding documents	✓✓✓
• The detailed drawings, 'as-built' drawings, back-up data sheets contain errors or repetitive entries	✓✓✓
• Failure to pay progress payments and invoices on a timely basis	✓✓✓
• Excessive number of signatures required to approve progress payments	✓✓✓
• Evaluation of contractors' performance not recorded	✓✓✓
• Costs overruns are inadequately explained or justified	✓✓
• Considerable beneficiary dissatisfaction with completed project facilities	✓✓

Appendix III – Additional References

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