Chapter 3
The potential of new technologies to prevent bribery in procurement: e-announcements, e-bidding and e-procurement

Electronic media have the potential to contribute to reducing bribery risks in public procurement: they limit face-to-face contacts between suppliers and procurement personnel, allow the efficient distribution of information to a large number of potential suppliers at low cost, increase transparency of forthcoming and current tender opportunities and collect evidence throughout the process that can help trace bribery. As electronic media become widely available in an increasing number of Asian and Pacific countries, their use in public procurement is rising.

Technology alone, however, will not help reduce corruption—the potential to curb bribery only unfolds if electronic tools are employed to reduce bribery risks and if mechanisms are tailored for this specific purpose. Experience from countries that have been forerunners in the implementation of electronic public procurement reveals the strong potential of different media to reduce bribery in procurement, as well as highlights pitfalls and risks related to the use of e-procurement.

One potential benefit of electronic procurement is increased transparency, as a survey on the impact and benefits of e-procurement in 14 countries has shown; providers and users of e-procurement services in these countries ranked greater transparency, competition, and efficiency as the most significant benefits of e-procurement.

The introduction of e-procurement only complements, and can not replace, a comprehensive regulatory approach. Experience from Indonesia and
India further indicates that e-procurement brings new risks that need to be mastered in order to benefit from e-procurement in the fight against corruption.
The impact of e-procurement on corruption: The potential of e-procurement for curbing corruption risks

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Transparency International has found that public procurement presents one of the highest risks of corruption. Systematic corruption has been estimated to account for 20%–30% of government procurement, and maybe more. The curtailing of procurement corruption may be one of the most effective economic development programs that a country can adopt.¹

Much of what we heard in earlier sessions of this conference reflected the traditional reform responses to the issues. Traditional reform agendas for public procurement have started with a reform of the legislation and regulations, followed by formalization of processes around these regulations and some associated training.

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Traditional reform agendas

A target for procurement regulatory reform has specifically been the discretionary power of officials, which is perceived as presenting high risk:

- "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, serv[ing] to reduce the opportunities for delay and discretion—the breeding ground of corrupt practice."  

- "The higher the degree of regulatory discretion, the higher the incidence of bribery of officials."  

- "Whenever regulatory officials have discretion, an incentive for bribery exists."

To minimize discretion, the procurement framework is often codified into comprehensive regulatory rule sets that prescribe processes for as many specific cases as possible. Thus, procurement is largely defined in terms of the regulations around it and compliance with these regulations.

An attempt to facilitate and standardize 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 formalized to guide countries in evaluating and modernizing their procurement laws and practices.

Micro-regulation of the process, while often considered crucial, 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 reduces transparency by making the processes difficult for stakeholders such as business to comprehend. Similarly, it is 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."

Finally, 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 with alternative approaches, the immediate objective being transparency, and the ultimate goal, corruption control. Evidence suggests that
countries with an abundance of such laws often experience the very same problems as those where laws are subsumed into mainstream administration.

Transparency

While transparency is the foundation for anti-corruption agenda and is a precondition for accountability, transparency essentially represents information access. The OECD Global Forum (2004) titled Governance: Fighting Corruption and Promoting Integrity in Public Procurement agreed that transparency is among the most effective deterrents to corruption in public procurement. “Transparent procedures allow a wide variety of stakeholders to scrutinize the decisions and performance of public officials and contractors. 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.”

Transparency is recognized as a precondition to allow stakeholders to exercise scrutiny over decisions and performance of public officials and contractors, thereby minimizing their capacity to abuse their discretionary power. This is a matter of relevant and timely information access to all stakeholders.

It is in driving this transparency agenda that technology, or specifically information technology, has such powerful potential.

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 facilitating access to information. 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 and thereby reduce discretion in practices prone to corruption.

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

E-procurement can have several benefits. It
- enhances management and audit data and transparency;
- automates processes that might otherwise attract bribery;
- provides real-time information systems, including real-time bidding;
- facilitates supplier management, including identifying past performance;
- reduces discretion in calls for quotations for small acquisitions;
- applies policies and rules more consistently at each phase;
- simplifies processes, for example, by allowing payment through purchase cards;
- reduces the costs of competition through one-time registration; and
- makes document transmission efficient and secure.

Electronic standardized catalogs including product and service classifications also facilitate the creation of more meaningful management information and allow for more accurate price and supplier comparisons. Moreover, e-procurement systems can also be configured to provide gatekeeper roles in management checklists and authorizations, to strengthen control and accountability.

E-procurement implies procurement reform

E-procurement is a reform program rather than a software program. It does not replace the need for procurement law reform but rather complements this traditional approach.

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 standardized. 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, and that management processes, protocols, and procedures be standardized, reformatted, and often simplified for greater transparency. E-procurement also requires new training of both procurement officials and business stakeholders, and even a public awareness program to develop civil oversight. Standardization itself with the appropriate computer protocols acts, among others, to reduce discretion of public officials.
It has been noted that transparency is a cornerstone of anti-corruption programs, 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 not 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 are usually aimed at ensuring transparency through due process by stipulating procedural steps. The outcome of this is, as already noted, often a lack of transparency because of overregulation. 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, technology has effects at three levels. First, technology can reduce the monopoly or rents available by increasing competition. Second, technology, when applied to standardize and regularize 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.

Complementary functions

Clearly e-procurement can greatly strengthen corruption detection in public procurement. It strengthens the effectiveness of anti-corruption institutions, civil oversight, and sanctions, rather than replaces them.

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.

System design

The benefits of technology do not automatically arise simply because
technologies are applied, but instead are the result of design, implementation,
and associated reforms. For example, 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 that 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 hard copies;
• 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 bidding by suppliers;
• Customized e-mail/SMS notification of new bids and amendments to
  suppliers;
• Online tracking capacity for suppliers in relation to their bid processing;
• Online 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,
  and comprehensive management information, allowing for
  aggregation as well as disaggregation down to the 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 often apply.

Similarly technology assists with 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.

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 government procurement processes generate a large amount of information. In the case of bidding processes the information relevant to transparency and accountability includes:

- Bid details and identifiers;
- Bid addenda;
- 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 online price quotes or 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.

The information generated during e-procurement processes can be automatically entered into a database for subsequent use in auditing and reviewing 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, etc. 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 behavior of purchasing officers and suppliers.

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 also include 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.

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 catalogs) 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 use.

Some countries also sometimes depend significantly on the application of digital certificates as another security overlay. 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 be significant barriers to competition.

Results

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 impact on corruption in procurement.

E-procurement programs 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.

While there has yet to be a definitive study to quantify the impact of technology on procurement corruption, research into e-GP by the multilateral development banks (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 toward 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.

A 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). The reported benefits of e-procurement from this sample are listed in table 1.
Table 1: Benefits of Using the Systems (All Regions)*

<table>
<thead>
<tr>
<th>Priority</th>
<th>For Providers of e-Procurement Services and Systems</th>
<th>For Users of E-Procurement Services and Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improved transparency of the process (9)</td>
<td>Reduced time for procurement (7)</td>
</tr>
<tr>
<td>2</td>
<td>Larger pool of suppliers, increased competition (9)</td>
<td>Improved access to procurement opportunities via a single national portal (5)</td>
</tr>
<tr>
<td>3</td>
<td>Reduced cost to provide the procurement service (6)</td>
<td>Improved transparency of the process (5)</td>
</tr>
<tr>
<td>4</td>
<td>Reduced time for the procurement process (6)</td>
<td>Reduced errors in process and documentation for buyers (2)</td>
</tr>
<tr>
<td>5</td>
<td>Access to better information for decision making and assessment of issues (4)</td>
<td>Sophisticated market intelligence based on past transaction history and record (2)</td>
</tr>
<tr>
<td>6</td>
<td>Better consistency of process via standard process and documentation (3)</td>
<td>Increased participation in the market (1)</td>
</tr>
<tr>
<td>7</td>
<td>Improved efficiency and effectiveness (3)</td>
<td>Better work integration for buyers (1)</td>
</tr>
<tr>
<td>8</td>
<td>Improved engagement / communication with suppliers (3)</td>
<td>SME promotion (1)</td>
</tr>
<tr>
<td>9</td>
<td>Better audit trail of the process and transactions (2)</td>
<td>Transparent and secure way to cut costs and to make real savings (1)</td>
</tr>
<tr>
<td>10</td>
<td>Guaranteed quality standards in PA purchases (1)</td>
<td>Access to price comparisons (1)</td>
</tr>
<tr>
<td>11</td>
<td>Reduced errors in process and documentation (1)</td>
<td>Time- and cost-effectiveness (1)</td>
</tr>
<tr>
<td>12</td>
<td>Reduced use of paper (1)</td>
<td>Product standardization through international catalog use (1)</td>
</tr>
<tr>
<td>13</td>
<td>Timely announcement of procurement information (1)</td>
<td>Less paperwork (1)</td>
</tr>
<tr>
<td>14</td>
<td>Promotion of SMEs worldwide (1)</td>
<td></td>
</tr>
</tbody>
</table>

*The numbers in brackets indicate the number of responses out of 14 countries.

The system providers were predominately either private sector or a public-private consortium or contracted arrangement. Table 1 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 and also, as discussed, 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.
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 more extensive advertising of tender opportunities and results, greatly improved decision-tracking capability, as well as capacity to generate standard and ad hoc reports of a scope that is impossible in the paper environment.

E-GP also enhances transparency because it catalyses the standardization of documentation, tendering templates, and tendering rules; policies, and procedures; and enhances supplier and civil society access to oversight of procurement processes. The responses listed in table 2 show these effects. Table 2 further 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 still 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.

Table 2: System Support for Process Integrity and Transparency

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

<table>
<thead>
<tr>
<th>Reforms</th>
<th>Positive responses (max 13)</th>
</tr>
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<tbody>
<tr>
<td>Policy</td>
<td></td>
</tr>
<tr>
<td>1. Procurement policy was reviewed to ensure it supported the e-procurement vision and objectives</td>
<td>10</td>
</tr>
<tr>
<td>2. E-Procurement aspects of policy were linked to policies for e-Commerce and e-Government</td>
<td>10</td>
</tr>
<tr>
<td>3. Procurement guidelines were reviewed to ensure consistency and relevance to e-procurement</td>
<td>11</td>
</tr>
<tr>
<td>4. Policies and guidelines applicable to e-Procurement were made available online</td>
<td>10</td>
</tr>
<tr>
<td>Management and Planning</td>
<td></td>
</tr>
<tr>
<td>5. Existing procurement process structure, efficiency, and effectiveness were reviewed to better support the introduction of e-procurement systems</td>
<td>10</td>
</tr>
<tr>
<td>6. Standardized documents for the use of supplies are available online (e.g., supplier request/response forms, response to request for tender)</td>
<td>11</td>
</tr>
<tr>
<td>7. A procurement information database was established to assist government buyers in better understanding the market and making future procurement decisions</td>
<td>7</td>
</tr>
<tr>
<td>Legislation and Regulation</td>
<td></td>
</tr>
<tr>
<td>8. The responsibilities for the legislation and regulation relating to e-procurement were allocated and effectively resourced</td>
<td>8</td>
</tr>
<tr>
<td>9. Regular monitoring and reporting of compliance by government agencies with the policy, legislation, and regulatory framework is carried out</td>
<td>9</td>
</tr>
<tr>
<td>10. Regular monitoring and reporting of e-procurement performance at the national/regional level is carried out</td>
<td>9</td>
</tr>
<tr>
<td>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)</td>
<td>9</td>
</tr>
</tbody>
</table>

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

Similarly, table 3 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.

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, and debarment.

Many governments also have been pursuing reform but frequently there is insufficient understanding of procurement itself, with some pursuing this through law reform while others by strengthening management. 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 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 organized through such technology. Electronic government procurement provides extensive new management information, management controls, and new procurement methods. e-procurement is a reform program rather than a software program. It does not
replace the need for procurement law reform but rather complements this traditional approach. The enhanced information availability strengthens transparency and audit, while, by providing easier access for business, it increases competition and lowers 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 have an impact on corruption would seem to be very significant, this is sometimes assumed to be easily done; if results do not come easily, the potential is assumed to be not so significant. It needs to be recognized 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. Success is, however, 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 program also needs strong government leadership, standardization of procedures, and retraining 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 mean 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 centerpiece of such reform.
NOTES


6 Executive Summary In Fighting Corruption and Promoting Integrity in Public Procurement (Paris: OECD), page 11.

E-procurement impact on corruption: E-GP Scenario/Model in Indonesia

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To support the anti-corruption efforts and initiatives of the Government of Indonesia, the Millennium Challenge Corporation (MCC), through the Indonesia Control of Corruption Project (ICCP) under its Country Threshold Program, is assisting the Government in implementing a set of reforms to measurably reduce corruption in the country. These reforms will include implementing administrative reforms and greater judicial transparency, increasing enforcement capabilities to fight money laundering, prosecuting cases of public corruption, and finally reducing opportunities for corruption by developing and implementing an electronic government procurement system in five selected provincial governments.

E-GP potential impact on bribery

E-procurement is one of the most efficient tools of governments for not only helping the public sector to achieve efficiency gains but also restoring public trust by preventing corruption in public procurement.

Good governance in procurement is characterized by values such as transparency, accountability, open competition, and value for money. All known

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* Miroslav Alilovic has been managing e-procurement programs for 17 years through work with the US Agency for International Development (USAID), European Union–funded projects, the Government of Croatia, and private firms. Since 2003, he has accelerated the use of electronic procurement management systems by incorporating EU standards into systems that handle tracking, budget organization, and multi-year planning for complex government procurement.

As the head of Mobilia Company’s procurement unit for four years, Mr. Alilovic developed an innovative e-procurement system that allows review of supplier performance against key indicators modeled on Croatian procurement regulations. As the public procurement management specialist on the USAID-funded Local Government Reform project in Croatia for three years, Mr. Alilovic collaborated with the Public Procurement Office and USAID/Croatia.
anti-corruption procurement initiatives recognize transparency as a cornerstone of anti-corruption programs.

E-GP introduces transparency in all procurement decisions/actions, rules, procedures, and performance of procuring entities. Sophisticated procurement management information and reporting tools integrated in e-GP systems give the public an opportunity to monitor and scrutinize public administration and hold it accountable. E-GP definitely increases the level of trust in the procurement system among bidders, the media, and citizens.

E-GP builds public, managerial, political, and financial accountability of procuring entities by providing greater access to information to citizens, senior managers, institutions such as parliament, and institutions that provide the financing for the organizations. Standardized and explicit rules and procedures, which must be stipulated in e-GP systems, reduce abuse of discretion of regulatory officials and other opportunities for corruption.

The manual procurement system exposes procurement personnel to the bidders at every stage of the process, and this could lead to various undesirable practices. In the e-procurement system, contacts between public officials and vendors are restricted to the utmost. The possibility of using the e-procurement system to track decisions and actions additionally discourages corrupt activities. The ability of e-GP to track past transaction history and records forces procuring entities to comply with rules and regulations, and thus simplifies auditing of operations.

Common procedures in e-GP systems

Some common procedures in e-GP systems that directly prevent corrupt activities of public servants involved in procurement are as follows:

- System administrators create certificates and passwords, and assign quotas for using system resources.
- Public administrations register/subscribe to the system and organize their electronic environment by
  - identifying to the system the type and characteristic of tenders;
  - assigning user profiles and associated access levels to staff;
  - assigning user profiles and associated access levels to subscribed bidders;
  - activating a search engine to facilitate user search of tenders by keywords;
  - activating tracking mechanisms at certain time intervals to monitor use of resources;
  - time-stamping all documents submitted during the tendering period;
date-locking all tender documents after the submission deadline;
- opening submitted tenders while preserving the four-eyes principle (only authorized public servants and members of the receiving and evaluation committees can access the system and open the tenders by simultaneous actions); and
- evaluating and awarding contracts based on predefined criteria.

E-GP systems outcomes review

Multilateral development banks have undertaken research on e-procurement systems in South America, Asia and the Pacific region, and Europe. Table 1 shows encouraging results of measuring e-procurement systems outcomes.

The low number of responses on some outcomes indicates that reporting and monitoring systems in some countries are not at a satisfactory level.

Results suggest that e-GP systems have generated increased transparency to the extent of online publication of tender documentation and award results, significant online engagement of suppliers with substantial numbers of tenders submitted online and documents downloaded, a reduction in complaints, and greater satisfaction of suppliers.

Table 1: Measures of E-GP System Outcomes

<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th>Asia and Oceania</th>
<th>South America</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of procurement opportunities advertised online</td>
<td>100 (4)</td>
<td>100 (3)</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>50–80 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of government bidding documents made available online</td>
<td>95–100 (5)</td>
<td>100 (4)</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>40 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of government bidding documents distributed online</td>
<td>70–100 (5)</td>
<td>100 (3)</td>
<td>ND</td>
</tr>
<tr>
<td>% of government contract awards made public online</td>
<td>35–40 (2)</td>
<td>97 (1)</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>95–100 (4)</td>
<td>100 (3)</td>
<td></td>
</tr>
<tr>
<td>% of bids submitted online</td>
<td>30 (1)</td>
<td>0 (1)</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93–100 (3)</td>
<td>100 (2)</td>
<td></td>
</tr>
<tr>
<td>% of increase in number of suppliers participating in e-GP</td>
<td>100 (1)</td>
<td>ND (3)</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>5 (1)</td>
<td>100 (1)</td>
<td></td>
</tr>
<tr>
<td>% reduction in supplier complaints regarding transparency, integrity and fairness of the e-GP processes</td>
<td>50 (1)</td>
<td>97 (1)</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 (3)</td>
<td></td>
</tr>
<tr>
<td>% of suppliers satisfied with the use of the e-GP system</td>
<td>78–86 (2)</td>
<td>0 (2)</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>75–90 (1)</td>
<td>100 (1)</td>
<td></td>
</tr>
</tbody>
</table>

Potential risks in e-GP systems

It should be emphasized that e-procurement brings some new risks, which may jeopardize efforts to prevent bribery in public procurement. The potential technical risks posed by e-procurement infrastructure pertain to the following:

- Conversion of documents from electronic form to hard copy;
- Modern bureaucratic dependencies;
- Introduction of computer viruses into electronic tenders;
- Nonelectronic material accompanying bids;
- Lack of availability of the system near deadlines due to increased demand in bandwidth;
- Availability of the submission service;
- Increased participation of bids in the process;
- Private channels of communication.

The security features of the e-GP system should be configured, enabled, tested, and verified before e-procurement activities begin.

It is worth mentioning that required sophisticated technical infrastructure, as well as highly skilled IT personnel, introduces modern bureaucratic dependencies. To eliminate such a risk, we should concentrate on implementing systems that are highly parametric, are user-friendly, and can be easily customized and maintained.

E-GP Scenario/Model in Indonesia

The development and implementation of an e-GP system nationwide is one of the most important priority objectives of procurement reform in Indonesia. Instead of analyzing and trying to estimate which e-procurement software available on the market might be the best one, the Government of Indonesia has decided to gradually develop and implement its own single, integrated, Internet-enabled National Electronic Procurement System (NEPS). Metaphorically speaking, the system will operate like a master light panel where everyone is using the same energy source (data) and processes.

A single point of access for all government procurement, including access to local procurement opportunities, is a basic benefit NEPS plans to provide to citizens. The NEPS portal will allow all system users to access online services from their offices, home terminals, and public Internet kiosks.

NEPS will run on a single database that records every transaction processed in all regional e-GP centers. Having all the relevant data in a single
location, and stored in an integrated, standard format, means that management can access this information whenever they need to.

Access to collaborative contracts will be possible for all government organizations. NEPS as centralized system will act as a watchdog, ensuring that national public procurement policies are applied.

Procurement transparency will be improved by supplying up-to-date comprehensive procurement management information and reports. One true source of data will ensure working with the most current and accurate information. Data sharing by all system users will reduce the likelihood of fraud.

**NEPS anti-corruption activities**

Since people generally resist change, the most difficult element of any implementation relates to people issues, mainly the users and suppliers, but can also include implementation team members.

As training, technical assistance, and policy dialogues are capacity-building techniques identified by the United Nations Development Programme (UNDP) as a key component of all anti-corruption strategies and programs, the MCC/ICCP, together with its Indonesian counterparts, plans to implement various capacity-building activities.

It plans to redesign procurement processes according to new electronic tools that will be used, draft required policies and guidelines to implement e-GP, and create an interpretative document on the new rules on e-GP.

Since a lack of understanding and strong executive support by governments is the major risk to the successful implementation of the e-procurement initiative, a specific communication strategy for introducing the system to government agencies (elected and senior bureaucrats) will be put in place.

Training in the use of the new e-GP system will be provided to public servants, who will learn not only about the benefits of using the e-GP system but also about the consequences of noncompliance. Even if the change makes business sense and they see the benefits and are part of the process, people will still go back to old habits if there are no consequences.

Columns in table 2 show the impact of each capacity-building activity on transparency and competition.
### Table 2: Impact of Capacity-Building Activities of the Government of Indonesia and the Millennium Challenge Corporation

<table>
<thead>
<tr>
<th>Activity</th>
<th>Impact on Transparency</th>
<th>Impact on Competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drafting required policies and guidelines to implement e-GP</td>
<td>★★★</td>
<td>★★★</td>
</tr>
<tr>
<td>Creating interpretative document on the new rules on e-GP</td>
<td>★★★</td>
<td>★★</td>
</tr>
<tr>
<td>Putting in place specific communication strategy for introducing the system to government agencies (elected and senior bureaucrats)</td>
<td>★★</td>
<td>★★</td>
</tr>
<tr>
<td>Training public servants to use new e-GP system</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Waging public awareness campaign on benefits and requirements for e-GP to introduce the system</td>
<td>★★★</td>
<td>★★</td>
</tr>
<tr>
<td>Implementing specific PC channels and tools for SMEs, young entrepreneurs’ associations, businesses owned by women and disadvantaged groups, etc.</td>
<td>★★</td>
<td>★★</td>
</tr>
<tr>
<td>Training vendors to use the new e-GP system before it is introduced</td>
<td>★★</td>
<td>★★★</td>
</tr>
<tr>
<td>Training civil society, university lecturers, traditional community leaders, etc., with an interest in government transparency</td>
<td>★★★</td>
<td>★</td>
</tr>
<tr>
<td>Providing grants to watchdog NGOs that will monitor e-GP processes</td>
<td>★★★</td>
<td>★★</td>
</tr>
<tr>
<td>Promoting transparency, auditing and traceability of e-GP</td>
<td>★★★</td>
<td>★★</td>
</tr>
</tbody>
</table>

### NEPS performance measures

Finally, the success of NEPS implementation can be estimated only by measuring performance against the goals set at the start.

GOI and MCC ICCP tactical goals and outputs are the following:

- Reduce corruption in procurement by up to 50% in each of the five selected provinces through a more transparent, open, fair, and accountable process.
- Reduce by at least 10% the cost of government procurement in each of the five selected provinces.

MCC ICCP has developed the following key performance indicators:
The potential of new technologies to prevent bribery in procurement

- Percentage increase in procurement undertaken by electronic means;
- Percentage decrease in sole-source public procurement; and
- Percentage increase in number of registered e-GP vendors.

A true story

Instead of the next steps, let us see what the captain of the Titanic, E. J. Smith, had to say about technology.

Never in all history have we harnessed such formidable technology. Every scientific advancement known to man has been incorporated into its design. The operational controls are sound and foolproof.

The history of the Titanic is an excellent testimony that technology is not almighty. Technology should work to accelerate the process, not define it. With a clear understanding of how technology can work, and with well-defined processes and motivated, committed, and collaborative Indonesian leadership, MCC/ICCP has great chances for success.
Indian government tender system and e-procurement in the Indian Railways

Venkataramani Ramachandran*
Chief Technical Examiner, Central Vigilance Commission, India

The Central Vigilance Commission (CVC) in India was established in 1964 at the recommendation of the Santhanam committee. It has a mandate to look into irregularities and misconduct committed by civil servants in the central government, public sector units (PSUs), and public sector banks. In pursuit of the above mandate, the CVC issues circulars and guidelines for the benefit of all organizations under its purview. Its philosophy is to maintain integrity in civil/public service.

Public procurement covers the procurement of goods, works, and services by all government ministries, departments, agencies, statutory corporations, and public sector undertakings in the Center, states, municipal corporations, and other local bodies, and even by private sector undertakings providing public service on a monopoly basis. The canon is to procure work, material, and services of a specified quality within the specified time at the most competitive prices in a fair, just, and transparent manner. In fact, the quantum of procurement in the public domain is so huge that the World Bank estimates the Government of India procurement at over USD 250 billion per year, or about INR 10 trillion. Thus, with money involved being so large, there is huge scope for manipulation throughout the public procurement process, unless measures are taken to ensure that procedures are transparent and equity is guaranteed to the bidders.

Transparency in public procurement shall involve the display of all information, rules and procedures, terms and conditions, specifications, eligibility

* Venkataramani Ramachandran, a senior administrative grade officer belonging to the Indian Railway Stores Service, joined the Central Vigilance Commission as chief technical examiner on deputation in December 2004.

In his over 30 years of service, Mr. Ramachandran has served in various capacities in the Materials Management Department of the Indian Railways. He was executive director in charge of stores procurement policy in the Railway Board (Ministry of Railways), executive director (vigilance) in the Ministry of Railways, and divisional railway manager of Central Railway in General Administration.
criteria, evaluation methodology, and prequalification conditions up front by all
purchase authorities for every participating bidder. This shall mean that
everything is to be clearly visible and understandable to every bidder without
any hidden or concealed information, option, or interpretation. In this regard, the
CVC strives to improve transparency in the procedures followed by departments
by issuing guidelines/circulars.

To tackle corruption, the CVC has issued various important
circulars/instructions in the area of procurement/tendering. A few of these are:

• Observing that negotiations provide great scope for corruption, the
  CVC has issued instructions that there shall be no negotiations with
  bidders after tender opening. If under exceptional circumstances it
  becomes necessary to negotiate, this may be permitted after clear
  valid reasons are recorded, and that too shall be with the L-1 bidder
  only.

• Tenders must be published on the organization’s Web site with
  information such as type of tender, value, number of bidders who
  have participated, information about whether a contract has been
  awarded to the L-1 party with details of the award of contract, along
  with progress in contract negotiation.

• To reduce delays as well as face-to-face contact between purchasers
  and suppliers, the implementation of e-payment has been
  recommended and is being monitored.

• E-procurement/Reverse auction using information technology has also
  been recommended for phased adoption by organizations.

• Improving vigilance administration with the help of technology is
  another way to increase transparency.

• To ensure greater transparency in the award of contracts through
  nomination, the CVC has issued guidelines on the circumstances this
  could be resorted to.

The latest initiative of the CVC is the introduction and implementation of
the Integrity Pact by all major procuring government departments and PSUs in all
their contracts. This is to be monitored by independent external monitors to be
cleared for appointment by the CVC. The Defense Ministry and defense PSUs,
and many other major PSUs, such as the Oil and Natural Gas Corporation Ltd.
(ONGC), major steelmaker Rashtriya Ispat Nigam Ltd (RINL), and the Steel
Authority of India (SAIL), have already implemented the Integrity Pact for their
procurement.

Taking note of the fact that there is scope for a great deal of bribery to
take place in tendering at the initial stage of issue of tenders and curtailment of
publicity, the CVC, as mentioned earlier, has made it mandatory for all
organizations and government departments to upload their tender inquiries to their Web sites or the Government Tenders portal (http://tenders.gov.in). The latter portal, which was originally developed for publishing the National Informatics Centre’s (NIC’s) own tender notifications, has been extended and customized to provide a common platform for online publication of tender information by all government departments and organizations in India, including public sector enterprises. This portal allows a government department or organization to publish complete tender specifications and related documents on the Web for access by all stakeholders including bidders and the public. Tenders can be published anytime from the user end through an online form and uploaded from the organization’s server through XML interface. The user organization has the privilege to edit/update, delete, and correct already published tenders as and when required. A facility to create multiple tender administrator accounts can also be created for various divisions/units/branches, if required. Publication on the portal and access is free of charge.

The CVC has recommended the adoption of the e-procurement application using a secure Web site to provide a common platform for buyers and sellers to participate in the procurement process in a fair and transparent manner. The system is to be governed by the security features provided under the Information Technology Act of 2000.

The e-procurement application is expected to ensure uploading of tender documents to the secure Web site of Indian Railways, irrespective of whether they are limited or open tenders. It shall also enable online vendor registration. The system is being implemented with digital signing on tender documents. There is a provision for the issue of online corrections and online submission of commercial and technical bids. Tender downloads shall be free. Tenders shall be opened online and automatically tabulated as they are uploaded. Purchase orders shall also be uploaded to the Web site after they are finalized.

The above features of the e-procurement module essentially eliminate the need for vendors to be present to collect the tender document and submit bids during bid opening, since they can participate from remote locations through the Web portal. The features also eliminate opportunities to tamper with bids before and after the tender opening, since the bids are stored in electronic format and are less vulnerable to tampering unlike physical documents. The procurement module also has an online payment facility.

The entire e-procurement process as implemented in the Indian Railways provides for total transparency in tendering, online access to tender information, online participation and information sharing, online evaluation of financial bids, online technical and commercial evaluation, remote access for tender activities,
time saving on tender tabulation vetting, and reduced procurement cycle time. This has also improved material and inventory management, ensuring faster payments through the payment gateway. The shift to the electronic system from a paper-based system has also improved cost efficiency by reducing the cost of logistics. There is the advantage of online data sharing between units with reduced cost for vendors in tender sale, participation, tender opening, contract tracking, and payments.

While a switchover from the manual system to electronic tendering is technologically advantageous, with all the benefits cited above, the channels through which data pass over the Internet are not secure. The electronic system is also fraught with other dangers of technology that need to be tackled on the security front, failing which the system is liable to be misused or become more prone to corruption. In this regard, several important security services are required to ensure reliable, trustworthy transmission of business messages.

The various security issues that have been managed in an e-procurement process are: confidentiality, integrity authentication, non-repudiation, and access controls. Indian Railway has arranged to address the various security issues as detailed below.

Confidentiality. The most effective technique for making the message confidential is by encryption.

Integrity. A message that has not been altered in any way either intentionally or unintentionally is said to have maintained its integrity. Hash function is used to verify that the contents of a message have not been altered in any way. The message digest is also called a hash function, which is an algorithm that translates one set of bids into another set called a hash value in such a way that a message yields the same results every time the algorithm is executed with the same message as input. It is computationally not feasible for a message to be derived or reconstituted from the result produced by the algorithm, or to find two different messages that produce the same hash result using the same algorithm.

Authentication. When an electronic message is received by a user or a system, the identity of the sender needs to be verified (i.e., authenticated) to determine if the sender is who he claims to be.

Non-repudiation. Non-repudiation provides proof of the origin or delivery of data to protect the sender against a false denial by the recipient that the data have been received or to protect the recipient against false denial by the sender that the data have been sent. Well-designed e-commerce systems provide for non-repudiation, which is a provision for irrefutable proof of the origin,
receipt, and contents of an electronic message. There can be repudiation over
the date and time a message was sent by the sender or received by the
recipient. The most effective way to enable non-repudiation is through the
combined use of hashing in both the transactional direction and digital signing.
Transaction certificates, time stamps, and confirmation services help satisfy the
non-repudiation concern regarding proof of the time when the message was
created, when it was sent, and when it was received. Digital signatures help
provide proof of origin and proof of content. Confirmation services and time
stamping help to provide assurance of proof of receipt and time.

Access controls. Access controls restrict the use of computer system
resources to authorized users, limit the actions authorized users can take with those
resources, and ensure that users obtain only authentic computer system resources.

Other security features of the Indian Railways e-procurement system are
time-locking of the electronic tender box, tender opening with secure digital
permission (private key), and public key infrastructure (PKI) support and digital
signature at different stages of tendering and bidding.

Digital signature. A digital signature functions for electronic documents as a
handwritten signature does for printed documents. The signature is a piece of data
that asserts that the person named wrote or otherwise agreed to the document to
which the signature is attached. A digital signature cannot be forged and actually
provides a greater degree of security than a handwritten signature. The recipient
of a digitally signed message can verify both that the message originated from the
person whose signature is attached and that the message has not been altered
either intentionally or unintentionally since it was signed.

Digital signature is created using hash algorithm and public key
cryptography. To compute the digital signature, hash algorithm is first used to
calculate a message digest. Then the message digest is encrypted with the use
of the sender’s private key. The encrypted message digest is what is commonly
referred to as a digital signature. It is a unique creation of the contents of the
message and the sender’s private key, from which it is generated. The receiver
uses the sender’s public key to decrypt the digital signature and reveal the
message digest. The receiver applies the hash function to the original message. If
the hash value of the message matches the message digest included in the
signature, then there is message integrity.

Northern Railway has finalized over 500 tenders using the e-procurement
system. This system, after its successful implementation in Northern Railway, is
being ported and will be implemented in eight other zones of the Indian Railways
by March 2008 and in the rest of the zones of the Indian Railways by year-end.
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AUD</td>
<td>Australian dollar</td>
</tr>
<tr>
<td>AusAID</td>
<td>Australian Agency for International Development</td>
</tr>
<tr>
<td>CNY</td>
<td>Chinese yuan/renminbi</td>
</tr>
<tr>
<td>CPI</td>
<td>Corruption Perceptions Index</td>
</tr>
<tr>
<td>CPTU</td>
<td>Central Procurement Technical Unit (Bangladesh)</td>
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<tr>
<td>CSO</td>
<td>Civil society organization</td>
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<tr>
<td>CVC</td>
<td>Central Vigilance Commission (India)</td>
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<tr>
<td>DAC</td>
<td>Development Assistance Committee, OECD</td>
</tr>
<tr>
<td>DIP</td>
<td>Daftar Isian Proyek (annual government project list) (Indonesia)</td>
</tr>
<tr>
<td>DKI Jakarta</td>
<td>Daerah Khusus Ibukota Jakarta (special capital city district) Jakarta (Indonesia)</td>
</tr>
<tr>
<td>DMC</td>
<td>Developing member country</td>
</tr>
<tr>
<td>DOJ</td>
<td>Department of Justice (USA)</td>
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<tr>
<td>e-GP</td>
<td>Electronic government procurement system</td>
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<td>ERRA</td>
<td>Earthquake Reconstruction and Rehabilitation Authority (Pakistan)</td>
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<tr>
<td>EUR</td>
<td>Euro</td>
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<tr>
<td>FCA</td>
<td>False Claims Act</td>
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<tr>
<td>FCPA</td>
<td>Foreign Corrupt Practices Act</td>
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<tr>
<td>GPPB</td>
<td>Government Procurement Policy Board (Philippines)</td>
</tr>
<tr>
<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (German Technical Cooperation)</td>
</tr>
<tr>
<td>ICCP</td>
<td>Indonesia Control of Corruption Project</td>
</tr>
<tr>
<td>IDR</td>
<td>Indonesian rupiah</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
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<tr>
<td>IMED</td>
<td>Implementation Monitoring and Evaluation Division (Bangladesh)</td>
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<tr>
<td>INR</td>
<td>Indian rupee</td>
</tr>
<tr>
<td>ITC</td>
<td>International Trade Centre</td>
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<tr>
<td>JV</td>
<td>joint venture</td>
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<tr>
<td>Keppres</td>
<td>Keputusan Presiden (presidential decree) (Indonesia)</td>
</tr>
<tr>
<td>KPK</td>
<td>Komisi Pemberantasan Korupsi (Corruption Eradication Commission) (Indonesia)</td>
</tr>
<tr>
<td>KPPU</td>
<td>Komisi Pengawas Persaingan Usaha (Business Competition Supervisory Commission) (Indonesia)</td>
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<tr>
<td>LPKPP</td>
<td>Lembaga Pengembangan Kebijakan Pengadaan Pemerintah (National Public Procurement Office) (Indonesia)</td>
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<td>MCC</td>
<td>Millennium Challenge Corporation</td>
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<td>NEPS</td>
<td>National Electronic Procurement System (Indonesia)</td>
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<tr>
<td>NGO</td>
<td>nongovernment organization</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OGC</td>
<td>Office of Government Commerce (UK)</td>
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<tr>
<td>PGC</td>
<td>Public Governance Committee, OECD</td>
</tr>
<tr>
<td>PKR</td>
<td>Pakistan rupee</td>
</tr>
<tr>
<td>PPB</td>
<td>Public Procurement Board (Ghana)</td>
</tr>
<tr>
<td>PPDPA</td>
<td>Public Procurement and Disposal of Public Assets Authority (Uganda)</td>
</tr>
<tr>
<td>PPRA</td>
<td>Public Procurement Regulatory Authority (Pakistan)</td>
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<tr>
<td>PSU</td>
<td>public sector unit</td>
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<tr>
<td>PTF</td>
<td>Partnership for Transparency Fund</td>
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<tr>
<td>Rp</td>
<td>Indonesian rupiah</td>
</tr>
<tr>
<td>RPA</td>
<td>risk potential assessment</td>
</tr>
<tr>
<td>SEC</td>
<td>Securities and Exchange Commission</td>
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<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
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<tr>
<td>SOE</td>
<td>state-owned enterprise</td>
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<tr>
<td>STD</td>
<td>standard tender document</td>
</tr>
<tr>
<td>TA</td>
<td>technical assistance</td>
</tr>
<tr>
<td>TI</td>
<td>Transparency International</td>
</tr>
<tr>
<td>UNCAC</td>
<td>United Nations Convention against Corruption</td>
</tr>
<tr>
<td>UNCITRAL</td>
<td>United Nations Commission on International Trade Law</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
</tr>
<tr>
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<td>-----------</td>
</tr>
<tr>
<td>UNODC</td>
<td>United Nations Office on Drugs and Crime</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USD</td>
<td>United States dollar</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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