

ANTI-CORRUPTION HELPDESK

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THE ROLE OF TECHNOLOGY IN REDUCING CORRUPTION IN PUBLIC PROCUREMENT

QUERY

What role does technology/e-procurement play in allowing or hampering transparency and accountability and reducing corruption in public procurement? Please provide examples of good practice/case studies from other regions and countries

CONTENT

1. The role of technology in public procurement
2. Can e-procurement increase transparency and accountability and reduce corruption
3. Country examples: Successful e-procurement in Albania, Georgia and South Korea
4. References

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SUMMARY

Information and communication technology has been increasingly used by governments in the acquisition of goods and services, the allocation of contracts to bidders and in contract management (e-procurement). The benefits of e-procurement are many and include improvements in market access and competition, promotion of integrity, reduced information costs; easier access to information, and increased transparency and accountability, among others. In this context, e-procurement also has the capacity to prevent and reduce the opportunities for corruption in the different stages of public procurement. Countries such as Albania, Georgia and South Korea have improved their procurement systems and mitigated the opportunities for corruption by publishing information on procurement online, standardising and streamlining processes, and facilitating control and oversight over the procurement cycle.

Nevertheless, the establishment of e-procurement as a stand-alone reform is unlikely to bring about positive transformational results. Countries have to invest in coherent legal frameworks, training and oversight capacity to ensure that the potential benefits of e-procurement in terms of reducing corruption are exploited to their maximum.

1. THE ROLE OF TECHNOLOGY IN PUBLIC PROCUREMENT

Corruption risks in public procurement

Public procurement is an operational area with high corruption risks as the large amounts of funds involved and the frequently high levels of discretion and bureaucracy provide both incentives and opportunities for rent-seeking behaviour (Transparencia Mexicana 2012). The OECD estimates that the money lost through corruption amounts to between 20 and 25 per cent of the procurement budgets (OECD 2013).

In addition to monetary loss, corruption in public procurement also distorts competition, reduces the quality and safety of public projects and purchases, and erodes society's trust in governments (Transparency International 2014).

Using technology in public procurement

Information and communication technologies have been increasingly used by governments across the world as part of procurement reform processes. This so-called e-procurement, defined as "the use of any internet-based inter-organisational information system that automates and integrates any parts of procurement process in order to improve efficiency, transparency and accountability in the wider public sector" (Vaidya 2007) has been used by governments to conduct procurement-related tasks, such as the acquisition of goods and services, and the allocation of contracts to bidders (Neupane et al 2014).

There are several types of e-procurement, including e-tendering, e-auctions, and contract management databases (OECD 2011). Each of them aims to address issues that are also seen as problematic from a corruption risk perspective in the different stages of the procurement process, namely, (i) contracting process, covering the initial needs assessment, budget allocation and initial market research through to the preparation of the tender, and (ii) evaluation of applications and (iii) award of contracts).

In general, the application of e-procurement systems to public procurement has become the focus of attention for various reasons, most notably because of its potential to enhance efficiency and to increase the speed and quality of the purchasing processes.

This answer analyses the role of e-procurement in enhancing transparency and accountability and reducing corruption, and provides an overview of how e-procurement was designed and implemented in three different contexts.

2. CAN E-PROCUREMENT INCREASE TRANSPARENCY AND ACCOUNTABILITY AND REDUCE CORRUPTION?

The literature highlights several benefits of e-procurement, including: improvements in market access and competition, promotion of integrity, reduction of costs of information, easy access to information, and increased transparency and accountability, among others. With regard to corruption, Schapper (2007) stresses that "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".

Nevertheless, the extent to which the use of technology in public procurement will de facto lead to less corruption and more accountability depends on a series of other factors, including a clear legal framework on public procurement that supports the e-procurement vision and objectives, effective training to both public officials and business, public awareness initiatives to develop civic oversight, as well as, strong oversight and law enforcement bodies that make use of the information available to investigate and punish corruption and mismanagement throughout the procurement process.

The establishment of an e-procurement system as a stand-alone reform is unlikely to bring about positive transformational results. Transparency and accountability must be built into e-procurement specifications and design in order to allow for a meaningful analysis of the information generated. For

example, e-procurement should allow for the generation of meaningful management and audit reports, and the tracking of actions and decisions of individuals throughout the procurement cycle (Schapper 2007).

Within this framework, when well designed and implemented, e-procurement in the public sector usually enhances transparency and it has the potential to increase accountability and minimise the risks of corruption (OECD 2008).

Standardising and establishing the automation of processes

Non-standard bidding documents can create space for manipulation and lead to opaque decision-making. In order to reduce the opportunities for corruption, it is essential that administrative procedures and decisions happen in full compliance with the law, in a transparent manner and with limited discretionary decision-making powers (Transparency International 2014).

E-procurement can facilitate that if designed and implemented in a manner that rules and procedures are standardised and consistent, increasing predictability and easy access to bidding documents and information about the process. For instance, the standardisation followed by the automation of the basic steps of the bidding process, such as the distribution of forms and the acceptance of documents, limits the opportunity for public officials to manipulate the process or request bribes and kickbacks.

In addition to reducing the risk of manipulation, the automation of processes and procedures may also reduce the number of encounters between potential bidders and public officials, thus further limiting opportunities for corruption (Pictet & Bollinger 2008). In Georgia, for instance, prior to the adoption of electronic procurement, bidders had to make approximately five physical visits to procurement entities in a system that, according to the Georgian government, was highly inefficient and prone to corruption. With the adoption of e-procurement, bidders can access all documents, raise queries and

bid online, and only the successful bidder is expected to visit the procuring agency to sign the contract (Georgian State Procurement Agency 2012).

In the Indian state of Andhra Pradesh, e-procurement has increased transparency and reduced bidder's dependency on public officials to access and submit tender documents, which contributed to reducing arbitrary application of rules and corruption (Bikshapathi & Raghuveer no year).

Moreover, standardisation, consistency, and the possibility of accessing documents and bidding online reduce bureaucracy, time and costs, which in turn may also reduce the incentives for business to resort to corruption to speed up the process and work around bureaucratic bottlenecks in order to participate in procurement tenders (Martini 2012).

Opportunities for corruption in simpler government purchases, such as the buying of office equipment and material, can also be further reduced with the adoption of electronic solutions such as e-catalogues or e-shopping. These are tools that allow for the standardisation and automation of processes, that were previously conducted in a different and opaque manner, and which allow for more accurate price and supplier comparison. For instance, as part of South Korea's e-procurement system, the government established an e-shopping mall where public organisations can easily and in a transparent manner purchase over 23,000 pre-contracted products including office supplies (Iqbal & Seo 2008).

Increasing access to information

One of the main benefits of e-procurement systems highlighted in the literature is the improved accessibility to key documents and information. More transparency and access to information help to improve fairness, efficiency and competition as well as reducing the opportunities for corruption (Transparency International 2014).

In Portugal, the [National e-Procurement Portal](#) offers the possibility of downloading all bid documentation and specifications free of charge. The portal also automatically releases public bid announcements,

allows public or restricted procedures, receives suppliers' queries and manages all communication and information exchange online (OECD 2007).

In Chile, the ChileCompra e-procurement system has been used to allow government officials and citizens to compare the costs of bids to and services purchased by the government. More transparency and access to information has allowed the government to save approximately US\$150 million annually by preventing price fixing or overpricing by corrupt officials and contractors (Bertot et al. 2010).

Increasing competition and avoiding collusion

As mentioned, more transparency in public procurement processes may influence the level of competition in the market, such as the number and quality of bidders. E-procurement system therefore may solve several of the problems often identified by companies wishing to participate in public procurement processes, such as favouritism, where privileged information is distributed to firms related to or in agreement with procuring officials (Amaral, Saussier, Yvrande-Billon 2009). Research has shown that e-procurement, transparency and ease of access to information increase the participation of "honest" firms (Boehm & Olaya 2006).

For instance, a study analysing public works through e-procurement in India and Indonesia shows that e-procurement helped to attract better quality bidders. While there was no reduction in the prices paid by the government, the quality of the services contracted improved significantly (Lewis-Faupel et al 2014).

Studies have also demonstrated that e-procurement, through more transparency led to an increase in the average number of bidders in Japan, from 8.2 bidders under discretionary practices to 13.7 bidders under e-procurement (Balsevich et al 2011), and in Georgia, from 1.75 bidders in 2011 to 2.11 in the first half of 2013 (Georgian State Procurement Agency website).

A low number of bidders competing for a public contract is seen as being strongly correlated to potential corruption and collusion (red flag)

(Transparency International 2014). Therefore, if more firms participate in the public procurement process, it is expected that there are fewer risks of corruption (Balsevich et al. 2011).

Facilitating contract oversight

After the contract is awarded, the risks of corruption and mismanagement are numerous. The specifications of the contract can be altered by public officials to benefit the awarded supplier, invoices may not be paid on time, the service may not be performed/delivered according to the original specifications (e.g. bad quality material), there may be delays in the delivery of goods and costs overrun, etc. (Transparency International 2014).

An electronic procurement system that includes contract management solutions can help to address some of these problems. By making information available to a wider number of public officials, oversight agencies and for the public at large, e-procurement may provide disincentives for corrupt behaviour (e.g. corrupt officials or companies may be afraid of being caught), and it certainly facilitates the collection of information and the monitoring of contract implementation.

For instance, a study of e-procurement implementation in the United Kingdom highlighted that one of the benefits of using technology in procurement in the country was an increased compliance with existing contracts (Croom & Jones 2007).

Nevertheless, not all e-procurement systems disclose the actual contract and provide information on contract implementation online. In many countries, confidentiality clauses also hamper the disclosure of information on awarded contracts.

The [Open Contracting Initiative](#) has been calling on governments to publish contracts and all related information online. Countries that have recently reformed their e-procurement system to also include data on contracts include Portugal. In 2012, the Portuguese government decided to make all contracts for all types of procedures available online, including the contract documents themselves (Rosa 2012).

Improving oversight and audit capabilities

According to Neupane et al. (2012), public e-procurement is particularly important in improving the government's audit trail capabilities, which in turn can help to increase transparency and accountability and detect corruption.

Electronic systems may allow the detection and prevention of corruption in public procurement if data on tenders, bidders and contractors are collected and stored in a structured way and is accessible for investigation and analysis. For instance, this data could allow ex-ante monitoring and ex-post analysis of indicators of corruption (e.g. number of contracts awarded to the same bidder, number of bidders, etc.), and data mining techniques could be used to detect anomalies in the data, revealing potential cases of fraud or corruption (PricewaterhouseCoopers 2013).

This, however, will depend on the existence of a well-functioning and resourced oversight or audit body that makes use of the available information, conducting, for example, performance and random audits in addition to formal checks.

Nevertheless, it seems that this potential of e-procurement is rather under-utilised in many countries. A PricewaterhouseCoopers report (2013) shows that although the majority of EU countries have central and/or local databases for public procurement, only half of them query their data about unusual patterns, and only a few develop or use indicators that point to possible cases of corruption. Similarly, only three countries have e-procurement platforms that contain a module designed for the detection of corruption.

Enhancing horizontal accountability

E-procurement may also increase and improve opportunities for citizens, the media, civil society and even bidders themselves to monitor procurement processes (Transparency International 2014).

The media, academia and civil society have been making use of the data available in e-procurement portals to investigate and expose potential corruption cases. For instance, Transparency International Slovakia created a web portal to make the

information published by the Slovakian government more easily accessible and encourage social control. The portal allows data comparison and information on procurement processes, and can be filtered by purchaser, vendor, sector, region, type of procurement procedure, criteria and date. In this context, the portal is also an important tool for analysing the degree of competition or market concentration. For example, research conducted by TI Slovakia, based on the information available on the website, shows that 43 per cent of tenders in the country attracted only one bidder in 2011 (Transparencia Mexicana 2012).

However, studies also show that simply making the information available online does not necessarily allow effective social control over public spending. In the Czech Republic, for example, the government publishes the data online in a format that makes it very difficult for citizens to view and extract aggregated data, hampering the possibility of meaningful analyses and investigation (Chvalková & Skuhrovec 2010).

3. COUNTRY EXAMPLES: SUCCESSFUL E-PROCUREMENT IN ALBANIA, GEORGIA AND SOUTH KOREA

This section discusses three examples of e-procurement systems that are considered to be successful, namely Georgia, Albania and South Korea.

Albania

As part of an e-governance reform project, Albania introduced an e-procurement platform in 2008. During the first year, which was considered the test phase in which the system ran on limited capacity, a limited number of public bodies used the system.

The pilot was deemed successful, and from January 2009 onwards all tenders with a minimum value of €3,500 (US\$4,600) were managed through the system. Strong political commitment at the ministerial level to combat corruption and the will to increase transparency in Albanian public procurement lay behind the introduction of this e-procurement system. In 2010, the system received the United Nations

Public Service Award in the category Improving Transparency, Accountability, and Responsiveness in the Public Service. Another key issue for the successful implementation of the e-procurement system was delivering an appropriate training programme on how to use the system. In this regard, two training modules, one for public administration and one for the business community were prepared (Kashta 2012).

Main features

The main features of the Albanian e-procurement platform include (Kashta 2012, Public Procurement Agency Albania 2011):

- an electronic marketplace, allowing all registered suppliers to view all public tenders
- online availability of all tender documents from contract notice to winner notice and notice of the signed contract
- a mechanism that allows contracting authorities to view and analyse tender offers only after the final the contract has been awarded
- two separate servers for data storage. A copy of all the data that is being processed through the system is stored on a second, separate server which is referred to as the black box. This black box is not accessible to normal system administrators but can be accessed by inspection authorities. This practically eliminates the possibility for administrators who have access to data within the e-procurement system to alter data.
- automated report generation that summarises all phases of the tender procedure

Impact

The introduction of the e-procurement system in Albania has led to positive results on various fronts. Competition increased from an average of 2.3

bidders per tender to 7.7 bidders per tender while costs were reduced for all parties involved. Cost savings on the operational budget for the management of the public procurement system amounted to 15 per cent in the year 2009, 12 per cent in 2010 and 20.1 per cent in 2011 compared to the costs connected to the management of the paper based system (Public Procurement Agency Albania 2009, 2010, 2011).

A survey conducted among businesses that had submitted bids before and after the introduction of the new system concluded that 81 per cent of these companies saw a reduction of costs connected to the submitting of bids after 2009. Seventy-one per cent of respondents replied that they stopped having personal contact with officials after the system was introduced and that all communication had gone through the new e-procurement system (Kashta 2012)

Challenges

Unfortunately, the share of tenders that are awarded outside the e-procurement system is still great. The number of unpublished, negotiated procedures increased slightly during 2012, accounting for 26.4 per cent of all procedures and 14 per cent of the total value of tenders. This trend continued during the first half of 2013 (European Commission 2013). In addition, 7 per cent of businesses stated that they still relied on personal contacts for securing of contracts (Kashta 2012)

Moreover, public procurement and concessions continue to be one of the main sectors with severe financial irregularities. The audit institution reported in March 2013 that violations by both central and local authorities regarding public procurement for the period 2008-2011 caused €3.1 million (US\$4.07 million) damage to the state (European Commission 2013). The European Commission concluded that the public procurement agency and contracting authorities need to be strengthened to ensure that recent legislation is implemented effectively.

Georgia

In 2010, the Georgian government took the decision

to introduce a new e-procurement system with the main aim of simplifying the procurement process and increasing transparency by recording all aspects of the procurement process.

The platform is often referred to as an example of good practice (Transparency International Georgia 2013), and it has been recognised as one of the best worldwide according to the United Nations (United Nations Public Administration Network 2012).

Main features

The main features of the e-procurement platform include (Huter & Chanturia 2014):

- information on individual tender documentation, documents submitted by bidders, participating bidders, their bids and all signed and amended contracts
- a clarification mechanism, where bidders can submit questions/requests for clarification regarding bids and receive an answer online within a short timeframe
- a company white list, which consists of a list of companies that have been considered reliable in the past
- a company black list, containing all legal entities that have been barred from contracting with the public sector
- integrated appeal mechanism, where bidders can file complaints against a specific tender
- electronic dispute resolution, where complaints put forward by bidders are reviewed by the review board, which includes a representative from Transparency International Georgia. All complaints and decisions made by the Board are available on the portal

Impact

The e-procurement platform helped to streamline procurement processes, increase competition, limit the discretionary power of procurement officials,

enhance transparency and, in turn, reduce the opportunities for corruption. According to the Competition and Procurement Agency (2012), in 2012 savings of more than US\$142 million were generated due to the new system.

Furthermore, the new system has been instrumental in enhancing the role of civil society and the media in overseeing the public procurement process. For instance, TI Georgia gathers the information disclosed on the e-procurement portal and publishes it on another website (tendermonitor.ge) in a user-friendly manner where the public can search, monitor and analyse the contracts (Huter & Chaturian 2014).

Challenges

While the platform has led to significant improvements in the country's public procurement system, an important loophole remains to be addressed. The law on public procurement provides for many exemptions that allow for contracts to be tendered outside the electronic platform (Huter & Chanturia 2014).

According to TI Georgia, in 2012, contracts worth more than US\$458 million were procured under opaque procedures and without competition as a result of a special approval by the president and the government. Overall, during 2012, approximately 45 per cent of all public contracting was done through non-competitive simplified procurement and approximately 55 per cent was procured through the e-procurement platform (Transparency International Georgia 2013).

South Korea

South Korea has one of the most complete e-procurement systems in the world, and it is often referred to as a best practice example. The current e-procurement system (KONEPS) was developed in 2002 as part of the project Cyber Korea 21.

In 2003, the system received the UN Public Service Award, and in 2004, the UN selected it as the best practice model. The system has since been exported to various developing economies, including Vietnam and Costa Rica.

Main features

The main features of the KONEPS e-procurement system include (Gun Lim, Kim & Bae Lee 2008):

- the publication of all bidding notices of public institutions, both national and local
- a real-time money transfer mechanism and the management of general payment, payment by the government and payment by commercial banks
- user registration. The system conducts registration by user (purchasers/suppliers), applications for bidding, registration of enquiries, information by approver, manages users and approvers and manages companies involved in unfair practices. The system is also constantly updating its database, ensuring that bidders who were disqualified are immediately excluded and unable to participate in any procurement process.
- a corrupt activity analysis system is in place and suspicious cases are investigated by the Fair Trading Committee. There is also a reward system in place that rewards informants of corrupt practices with US\$10,000.

Impact

In 2012, KONEPS was used by 44,000 public entities and 228,000 suppliers, which makes it one of the largest e-commerce systems in the world. Annually, the system saves the public sector US\$1.4 billion in costs and the private sector US\$6.6 billion compared to the use of the paper-based system. The duration of the processing of bids, from the reception over the validation to the selection of the winning bid, was brought down from an average of 30 hours to 2 hours (Public Procurement Service South Korea).

The most important enhancement, however, is to the transparency of public procurement (Shin & Park). Potential corruption factors, for example, the relationships between procurement officials and the staff of private companies are successfully prevented through the system.

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