Information and Communications Technology To Control Corruption

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In every sector, information and communications technologies (ICTs) are powerful tools for controlling corruption. They work particularly well when they are embedded in broader institutional reforms.

Generally, ICTs for controlling corruption operate by shining a bright light upon institutional processes. ICTs enhance transparency particularly at the transactional level, while offering opportunities for easier access to public records, and establishing linkages among geographically separated systems for better accountability. At USAID, sector specialists (e.g. for the environment, agriculture, or education) identify the specific institutional reforms that are required to control corruption, while ICT specialists assist their counterparts in finding the right tools to get the anti-corruption job done.

We offer a few examples, complementing reports from particular sectors. The key to understanding these examples is the recognition of the particular role ICTs play within broader institutional reform.

Environment

Studies in the forestry sector regularly call attention to the problem of illegal logging. In the Russia Far East region, for example, illegal logging in some areas constitutes from 30 to 50 per cent of the total harvested timber. Key multinational non-governmental organizations have said that enforcement measures are not enough. ICTs can be used in prevention programs, for example by installing remote sensing and video monitoring systems, linked to a geographic information system (GIS), to generate maps from any computer linked to the Internet.

Personal digital assistants (PDAs) have been used successfully to track wildlife in programs designed to minimize and control poaching., and to record fisheries catches at dockside for more precise monitoring of compliance with special environmental regulations. When data on catch are recorded in the PDA, the boat captain's statement on catch location can also be recorded and then used in a GIS to generate assessment maps linked to data on ship movements and catch from other boats. Anomalies can help track down violations of applicable regulations.

Procurement

Procurement scandals are endemic in all sectors, and can have particularly dire consequences when, for example, inferior construction materials are illegally substituted, or compensation funds in public-works projects are diverted. Recently, in Lesotho's

Highlands Water Project, some believe that corruption prevented funds from reaching the communities to be adversely affected by a new dam. One company was convicted of accepting bribes totaling more than a quarter million US dollars.

ICTs in the form of electronic procurement systems can inhibit the ability of government officials to solicit bribes from bidders. Online public review of tender documents can assure appropriate competition and public scrutiny of procedures. The registration of permits online, with fees paid separately to a commercial bank, can reduce fraudulent construction practices that lead to structural failures and human casualties.

Legal Systems

Isolated courtrooms with little public scrutiny regularly host improper if not fraudulent proceedings. One innovation is to record court sessions for public review. ICTs can take this innovation one step further, through cheap digitization and streaming audio available anywhere on the Internet for public review. Community information centers with Internet access in public libraries, schools, universities, or other facilities can provide a place for the public to go to access such a resource.

Many jurisdictions are requiring public officials to publicize their assets and liabilities in order to identify and preclude conflicts of interest. ICTs can carry this innovation one step further, making such disclosures more accessible to the public via the Internet through community information centers, enhancing transparency. The disclosure documents themselves can be filed electronically, using online forms and simple document uploading systems, at which point they become immediately public and accessible.

Agriculture

Land registries are a frequent locus of corruption. A geographic information system can link public records on parcel ownership rights to the payment of taxes or of fees for construction and other permits. Cash transactions can be handled in one location, neutral to the agency receiving the cash, while the permit or registration documents themselves can be filed online at community information centers. Maps can be generated via the Internet that quickly highlight where fees have (and have not) been paid, enabling the landholder to identify when a payment has not been properly registered.

Rules and regulations, for example about public commodity auctions or export requirements, are often difficult to discern and subject to arbitrary interpretations by corrupt government officials or by brokers who exploit their favored access to information to extract fees that would otherwise be unnecessary. Online publishing of such rules and regulations, with access through community information centers, would alleviate this problem. Placing these access points at major ports, border posts, or transit points would substantially enhance effectiveness.

Many agriculture programs endeavor to make price information more readily available to farmers and marketing agents. In Bolivia, USAID's market access program broadcasts market prices daily on both broadcast radio and the Internet, resulting in higher revenues for producers.

Education

Almost anyone who has worked in a low-income community overseas is familiar with the story of the corrupt schoolmaster who stole the exam fees of an unwitting student, or who requires payments for after-school tutorials before a passing mark can be awarded. Innovators like Cisco have introduced worldwide tutorial and testing systems, with carefully constructed exam systems to assure the integrity of high-level testing.

In some countries, donated textbooks and other teaching materials rarely make their way intact to remote schools in rural areas. Online systems accessible through community information centers can list what was shipped so that parent associations can compare to what was actually delivered to their children.

In the Gambia, the Education Management Information System tracks and ranks teachers by their seniority, language abilities, and subject specialization for use in making teacher assignments to particular schools. Such ICT systems shine a bright light, permitting greater public scrutiny and challenges to questionable decisions, helping parents assure that their school districts assign their children the teachers they rightly deserve.

Energy

Consumers of public utilities frequently pay their usage fees, yet have their service disconnected anyway. At the utility office in many countries, there is inevitably no record of payment, and the receipt presented as proof of payment is discounted as fraudulent. Geographic information systems that incorporate third-party payment locations and mapping to confirm proper recording and account status are relatively easy to implement and can alleviate this kind of corruption.

Consumers can visit kiosks or other types of public Internet access points, pulling up maps tied to geographic information system (GIS) databases showing their particular residence or place of business, color-coded to indicate whether payment has been received. Online payments using smart cards tied to payroll accounts can appropriately be implemented in some countries where appropriate banking networks have been established.

In the mining industry, excise taxes on mined ores and other commodities are frequently based on inspections at the mines. Frequently what is officially loaded on trucks at the mines does not match what gets transferred to ocean-going vessels at the port. Integrated computer systems linked by satellite can compare receipts and bills of lading, reducing corruption.

Conclusion

The key to understanding how information and communications technologies can reduce corruption is to understand that ICTs are tools used in the context of broader programs of institutional reform. Thus sector specialists (e.g. in energy, education, or agriculture) are best situated to identify problems and construct the necessary reforms. ICT specialists within USAID work with these sector specialists to identify the right tools to make those institutional reforms work most efficiently.

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