



Mixed incentives: Adopting ICT innovations for transparency, accountability, and anti-corruption

Tim Davies and Silvana Fumega

U4 is a web-based resource centre for development practitioners who wish to effectively address corruption challenges in their work.

U4 is operated by the Chr. Michelsen Institute (CMI) – an independent centre for research on international development and policy – and is funded by the Australian Department of Foreign Affairs and Trade, FPS Foreign Affairs, Foreign Trade and Development Cooperation/ BTC (Belgium), Danida (Denmark), DFID (UK), GIZ (Germany), Norad (Norway), Sida (Sweden) and the Ministry for Foreign Affairs of Finland.

All views expressed in this Issue are those of the author(s), and do not necessarily reflect the opinions of the U4 Partner Agencies or CMI/ U4. (Copyright 2014 - CMI/U4)

Mixed incentives:
Adopting ICT innovations for transparency,
accountability, and anti-corruption

Tim Davies
Silvana Fumega

U4 Issue
June 2014 No 4



Contents

Abstract	iv
About the authors	iv
Acknowledgements	iv
Executive summary	v
1. Introduction.....	1
2. Understanding ICTs and anti-corruption.....	2
2.1 Transparency portals.....	6
2.2 Open data portals.....	8
2.3 Citizen reporting channels.....	10
3. Incentives for adopting anti-corruption ICTs	12
3.1 Improving information flow and government efficiency.....	12
3.2 Enabling innovation and economic growth.....	14
3.3 Addressing principal-agent problems.....	14
3.4 Responding to international pressure and funding flows	15
3.5 Responding to bottom-up pressure and domesticating disruptive innovation.....	16
3.6 Do incentives matter? Asking critical questions.....	17
4. Implementing anti-corruption ICTs: Engaging users and intermediaries	18
4.1 Users.....	18
4.2 Barriers to uptake.....	19
4.3 Engagement.....	20
4.4 Intermediaries	21
4.5 The importance of context	22
5. Conclusions.....	23
References	24

Abstract

Governments adopt anti-corruption-related ICT innovations for many reasons. Different motivations for adopting these technologies shape the way they are put into practice and the anti-corruption impacts they may have. ICT for anti-corruption should not be understood as a single approach, since different technologies, and different modes of technology adoption, create different dynamics. Whether or not a particular ICT can bring anti-corruption benefits will depend upon the design of a specific implementation, the incentives driving its adoption, and the wider context in which it is applied. This issue paper raises critical questions for policy makers, funders, and advocates to consider when seeking positive anti-corruption impacts from ICTs.

Acknowledgements

The authors would like to recognise the detailed comments shared by Andrew Ecclestone, Aranzazu Guillan Montero, Doug Hadden, and several anonymous contributors to an earlier draft of this paper, as well as the comments offered by the reviewers.

About the authors

Tim Davies is a research fellow at the Harvard Berkman Center for Internet and Society, and open data research coordinator with the Web Foundation.

Silvana Fumega is a PhD candidate at the University of Tasmania.

Executive summary

Initiatives facilitated by information and communication technology (ICT) are playing an increasingly central role in discourses of transparency, accountability, and anti-corruption. Both advocacy and funding are being mobilised to encourage governments to adopt new technologies aimed at combating corruption. Advocates and funders need to ask critical questions about how innovations from one setting might be transferred to another, assessing how ICTs affect the flow of information, how incentives for their adoption shape implementation, and how citizen engagement and the local context affect the potential impacts of their use.

ICTs can be applied to anti-corruption efforts in many different ways. These technologies change the flow of information between governments and citizens, as well as between different actors within governments and within civil society. E-government ICTs often seek to address corruption by automating processes and restricting discretion of officials. However, many contemporary uses of ICTs place more emphasis on the concept of transparency as a key mechanism to address corruption. Here, a distinction can be made between technologies that support “upward transparency,” where the state gains greater ability to observe and hear from its citizens, or higher-up actors in the state gain greater ability to observe their subordinates, and “downward transparency,” in which “the ‘ruled’ can observe the conduct, behaviour, and/or ‘results’ of their ‘rulers’” (Heald 2006). Streamlined systems that citizens can use to report issues to government fall into the former category, while transparency portals and open data portals are examples of the latter. Transparency alone can only be a starting point for addressing corruption, however: change requires individuals, groups, and institutions who can access and respond to the information.

In any particular application of technology with anti-corruption potential, it is important to ask:

- What is the direction of the information flow: from whom and to whom?
- Who controls the flow of information, and at what stages?
- Who needs to act on the information in order to address corruption?

Different incentives can drive government adoption of ICTs. The current wave of interest in ICT for anti-corruption is relatively new, and limited evidence exists to quantify the benefits that particular technologies can bring in a given context. However, this is not limiting enthusiasm for the idea that governments, particularly developing country governments, can adopt new technologies as part of open government and anti-corruption efforts. Many technologies are “sold” on the basis of multiple promised benefits, and governments respond to a range of different incentives. For example, governments may use ICTs to:

- Improve information flow and government efficiency, creating more responsive public institutions and supporting coordination.
- Provide open access to data to enable innovation and economic growth, responding to claims about the economic value of open data and its role as a resource for private enterprise.
- Address principal-agent problems, allowing progressive and reformist actors within the state to better manage and regulate other parts of the state by detecting and addressing corruption through upward and downward transparency.
- Respond to international pressure, following the trends in global conversations and pressure from donors and businesses, as well as the availability of funding for pilots and projects.
- Respond to bottom-up pressure, both from established civil society and from an emerging global network of technology-focussed civil society actors. Governments may do this either as genuine engagement or to “domesticate” what might otherwise be seen as disruptive innovations.

In supporting ICTs for anti-corruption, advocates and donors should consider several key questions related to incentives:

- What are the stated motivations of government for engaging with this ICT?
- What other incentives and motivations may be underlying interest in this ICT?
- Which incentives are strongest? Are any of the incentives in conflict?
- Which incentives are important to securing anti-corruption outcomes from this ICT?
- Who may be motivated to oppose or inhibit the anti-corruption applications of this ICT?

The impact of ICTs for anti-corruption is shaped by citizen engagement in a local context. Whether aimed at upward or downward transparency, the successful anti-corruption application of an ICT relies upon citizen engagement. Many factors affect which citizens can engage through technology to share reports with government or act upon information provided by government. ICTs that worked in one context might not achieve the same results in a different setting (McGee and Gaventa 2010). The following questions draw attention to key aspects of context:

- Who has access to the relevant technologies? What barriers of connectivity, literacy, language, or culture might prevent a certain part of the population from engaging with an ICT innovation?
- What alternative channels (SMS, offline outreach) might be required to increase the reach of this innovation?
- How will the initiative close the feedback loop? Will citizens see visible outcomes over the short or long term that build rather than undermine trust?
- Who are the potential intermediary groups and centralised users for ICTs that provide upward or downward transparency? Are both technical and social intermediaries present? Are they able to work together?

Towards sustainable and effective anti-corruption use of ICTs. As Strand (2010) argues, “While ICT is not a magic bullet when it comes to ensuring greater transparency and less corruption . . . it has a significant role to play as a tool in a number of important areas.” Although taking advantage of the multiple potential benefits of open data, transparency portals, or digitised communication with government can make it easier to start a project, funders and advocates should consider the incentives for ICT adoption and their likely impact on how the technology will be applied in practice. Each of the questions above is important to understanding the role a particular technology might play and the factors that affect how it is implemented and utilised in a particular country.

1. Introduction

Initiatives facilitated by information and communication technology (ICT) are playing an increasingly central role in discourses of transparency, accountability, and anti-corruption. The Internet and mobile phones are widely hailed as powerful anti-corruption tools. From corruption crowdsourcing platforms to open government data portals providing citizens with access to state-held datasets, technology-centric interventions are increasingly attracting both political attention and donor funding. The Open Government Declaration, launched in 2011, commits the 64 Open Government Partnership (OGP) member states to “seiz[e] this moment to strengthen our commitments to promote transparency, fight corruption, empower citizens, and harness the power of new technologies to make government more effective and accountable” (OGP 2011). In the first action plans published by OGP members, e-government and open data initiatives were the most common commitments, illustrating the prominence given to ICTs in creating more open and accountable government (Global Integrity 2012).

However, the “sales pitch” for governments to adopt ICTs touts a broad range of uses beyond anti-corruption applications, and the fact that a government adopts a particular technology does not necessarily mean that its potential corruption-reducing role will be realised. Criticisms have already been levelled at open data portals that give an initial appearance of government transparency yet either omit any politically sensitive content or remain, in practice, inaccessible to the vast majority of the population. There are also numerous examples of crowdsourcing platforms, designed to receive citizen feedback on public services or reports of corruption, that have languished with just a handful of reports and no submissions made for months on end (Internews 2012; Brown 2013).

Yet, as Strand (2010) argues, “While ICT is not a magic bullet when it comes to ensuring greater transparency and less corruption . . . it has a significant role to play as a tool in a number of important areas.” While one cannot assume that ICTs will inevitably drive positive change, it would be a mistake to ignore them as merely high-tech distractions. Rather, one must look in detail at the motivations for ICT adoption and at the contexts in which ICTs are being deployed, seeking to identify strategic and sustainable investments that can promote the integrity of public services and enlarge the capacity of officials, citizens, and other stakeholders to secure effective and accountable government. Experience with use of ICTs by governments has shown that a technology adopted for one reason can have other consequences, both intended and unintended, that may either facilitate or hinder the achievement of other government goals. The various motives and incentives that induce governments to adopt ICT-based interventions have the potential to support more sustainable and scalable programmes of action (Weinstein and Goldstein 2012), but a critical awareness of those incentives is vital.

In this issue paper we consider the reasons that may lead governments to adopt anti-corruption-related ICT innovations, and we look at the evidence on how the uptake and use of these ICTs may affect their impacts. In doing so, we draw upon literature from a range of fields, including open government, anti-corruption, e-government, and technology for transparency, and speculate based on our own observations of the open government field over the last five years. To ground our argument, we offer a range of illustrative case studies that show some of the different kinds of ICT interventions with which governments are engaged.

2. Understanding ICTs and anti-corruption

Corruption involves the abuse of entrusted power for private gain (Transparency International 2009). Grönlund (2010) has identified a wide range of actions where ICTs can facilitate efforts to combat corruption, from service automation to the creation of online and mobile phone-based channels for reporting corruption to the online publication of government information for citizens to access. Some of these innovations have their roots in e-government projects, originating in the state as part of management reforms. Others were developed by technically able civil society groups outside of government and were later adopted by governments or targeted by funders for investment, scaling up, or replication in new settings.

With respect to uses of ICTs for anti-corruption, we suggest that it is useful to distinguish between, on one hand, those uses that focus on transactions between citizens and government, in which information flows to and within governments, and on the other hand, uses that emphasise opening up the state and increasing the flow of information from government to citizens. Heald refers to the former as “upward transparency,” in which the state gains greater ability to observe its citizens, or senior actors in the state gain greater ability to observe their subordinates, and to the latter as “downward transparency,” in which “the ‘ruled’ can observe the conduct, behaviour, and/or ‘results’ of their ‘rulers’” (2006, 3).¹

ICTs for upward transparency can reduce opportunities for corruption by restructuring, standardising, and systematising business processes through a combination of e- and mobile technologies and social media (Bertot, Jaeger, and Grimes 2010). They can channel reports of corruption directly to the authorities who are able to act upon them, bypassing layers of government where such reports may previously have been lost and ignored. ICTs for downward transparency operate by giving actors outside of government greater access to information – either reactively, as in the case of digital Right to Information (RTI) requests, or proactively, as in the case of thematic transparency portals or general-purpose open data portals.

Table 1 gives examples of a range of different ICTs with anti-corruption potential, categorised broadly along a spectrum between upward transparency and downward transparency. This is not an exhaustive survey but focuses on widely discussed categories of innovation, particularly those that governments appear to be interested in adopting or replicating as part of the Open Government Partnership.

¹ Heald also distinguishes between inward and outward transparency from the perspective of an organisation, but for our purposes the simple upward/downward dichotomy is enough.

Table 1: Types and examples of ICT innovation for anti-corruption

Focus	Innovation	Examples
Upward transparency: introducing ICTs into transactions with government	Service automation: Processes that replace discretionary decision making by public officials with auditable software processes. Often part of e-government reforms.	Bhoomi Project: This project in Karnataka state, India, was designed to reduce the discretion of civil servants. It has taken steps to digitise paper land records while also creating a software mechanism to control changes to the land registry in the district (Grönlund 2010).
	Moving services online: Processes that remove intermediaries, giving citizens direct access to public services and information and reducing space for corrupt officials to extract bribes or rents.	National Rural Employment Guarantee: Following concerns that officials and politicians were inflating wage bills and appropriating wages destined for the rural poor labouring on public works, the government shifted to providing payslips and job cards digitally and making them available online (Grönlund 2010, 18).
	Online corruption reporting: Web or mobile platforms for reporting corruption or grievances to government. Reports and responses are generally not made public.	Odisha e-grievance portal: The government of Odisha state, India, created the Sanjog Helpline in 2008. The system facilitates online transfer of citizen grievances to the relevant departments. Officials and citizens can monitor progress on the complaints through a ticket number provided to them.
	Citizen reporting channels: Issue-reporting platforms that citizens can use to report problems with public services (e.g., potholes in roads) or to report corruption, often via mobile phone.	Fix My Street: This website allows citizens to report issues on a map and routes requests to the right government agency. A public log of issues is available so that citizens can see whether government is fixing problems or not. This British initiative has been replicated in many countries around the world, including Australia, Canada, Cyprus, Georgia, Germany, the Republic of Korea, the Netherlands, New Zealand, Greece, Japan, Sweden, and Tunisia among others.
Downward transparency: using ICTs to get information on government into the public sphere		I Paid a Bribe: This website invites citizens to report corruption via mobile phone or the Web, and displays information on corruption trends. Reports are not sent directly to government but are made transparent.
	Online RTI requests: Online platforms that allow users to file Right to Information requests digitally. In some cases government agencies create these platforms, but in other cases civil society organisations build them, mostly in the absence of an official website. They also republish the official responses.	What Do They Know: This website was created by mySociety, a civil society organisation. It allows users to file Freedom of Information requests via the Web to government departments and public authorities in the United Kingdom. Infomex: This website allows users to send information requests to the Mexican federal government. It also allows users to appeal agency decisions through the oversight body, the Federal Institute for Access to Public Information (IFAI). The website was created by the Mexican government after the enactment of the Mexican access to information law.

	<p>Transparency portals: Websites that offer timely publication of key government documents online. They are often focused on financial information and can be backed by legal mandate.</p>	<p>Peru transparency portal: The Peruvian government implemented a comprehensive transparency strategy in early 2000. It comprised several initiatives, including a law on access to financial information, promotion of citizen involvement in transparency processes, and launch of a financial transparency portal. In the beginning, the portal provided access to documents on economic and financial information. After more than a decade, it currently publishes datasets on several economic and financial topics, which are provided by each of the agencies in charge of producing or collecting the information.</p> <p>Brazil transparency portal: Created in 2004, this portal allows users to follow up on the financial execution of all programmes and actions of the Brazilian federal government. It provides information on funds transferred by the federal government to states, municipalities, and the Federal District; funds directly transferred to citizens; and direct spending of the federal government on procurement or contracts for projects and services, among other things.</p>
	<p>Open data portals: Portals that provide free access to a wide range of government datasets in machine-readable formats. The intention is to enable third parties to scrutinise the data and build applications on top of it.</p>	<p>US open data portal: Launched in 2009 to bring together datasets from across government, the Data.gov portal now catalogues over 90,000 datasets from more than 220 departments and agencies of the US government.</p> <p>Kenya open data portal: This portal was launched in 2011, following the template of open data initiatives in the United States, United Kingdom, and elsewhere. It provides access to a range of government datasets in machine-readable formats, as well as applications that third parties have built with this data. A number of initiatives to encourage media and entrepreneurs to use data from the portal have taken place.</p>

Many of the innovations in the top rows of Table 1 have their roots in e-government reforms of the last 20 years. The connection between transactional e-government reforms and anti-corruption has only recently been explored. As Bhatnagar (2003, 24) notes, most e-government projects did not begin as anti-corruption measures, but were adopted in an effort to modernise government and make it more efficient. Bhatnagar explains that “reduction of corruption opportunities has often been an incidental benefit, rather than an explicit objective of e-government.”

A focus on the connection between e-government and downward transparency is still more recent. Kim, Kim, and Lee (2009) note that “e-government’s potential to increase transparency and combat corruption in government administration is gaining popularity in communities of e-government practitioners and researchers,” arguably as a result of increased Internet diffusion. This means that, for the first time, data and information from within government captured by digitised government processes can, in theory, be made directly accessible to citizens through computers and mobile phones, without requiring new data collection or the passing of data through the hands of intermediaries. However, this may require conscious decisions in the implementation of e-government

projects to ensure that key data they collect can be released. It is also necessary to manage any tensions that may emerge between objectives of increasing service efficiency through automation, on one hand, and increasing democratic control over public services by making data on their operation transparent and giving citizens a greater role in the governance of these services, on the other. As this paper is mainly concerned with anti-corruption through transparency and accountability mechanisms, we focus primarily on the downward-transparency-enabling aspect of e-government. What might incentivise governments to build transparency and accountability aspects into their e-government projects while also using such tools for better internal management and control?²

It is important to note that many ICT innovations for transparency and accountability have emerged from within civil society and the private sector and only later have been adopted by governments. The middle rows of Table 1 show examples of this. For instance, civil society organisations (CSOs) like mySociety in the United Kingdom have built upon the introduction of legal frameworks to support Right to Information requests. MySociety has responded to the lack of user-friendly processes for making such requests by building a digital platform, What Do They Know, to streamline the RTI request process.³ Citizens can search for agencies, and the system routes the requests and keeps track of whether responses are received within the statutory deadlines. Recognising that in the past RTI responses often went to individuals and were not made public, the platform also publishes all correspondence and responses relating to a request, making the information searchable. The platform has since developed into an open source tool, called Alaveteli, that other civil society groups have been implementing around the world. Other citizen reporting channels, such as the I Paid a Bribe platform⁴ (see section 2.3), focus more directly on creating transparency and less on digitising transactions with government that might have a side benefit of bringing transparency. In these cases, crowdsourced reports of corruption can be used to highlight hot spots in need of political attention.

Government can adopt such externally developed ICT innovations in various ways. They can create an enabling environment and cooperate with requests received through the external systems, interfacing their internal ICT systems with these external platforms. Or they can create alternative government-controlled systems for managing requests and reports from citizens. In Mexico, for example, the Infomex platform⁵ provides many features similar to the Alaveteli platform, but with user login required. When governments implement these platforms entirely on their own, with no outside assistance, they gain control over what is or is not made transparent as a result.

The last two innovations considered in the table concern proactive disclosure by government of information and data, whether in thematic transparency portals or general-purpose open data portals. Whereas upward transparency innovations, channelling information into government, generally rely on government to act to address the corruption identified, downward transparency innovations rely upon actors outside government to respond in the first instance.

² It is important to clarify that transparency does not necessarily lead to accountability. Transparency, understood as the disclosure of information that sheds light on institutional behaviour, can be also defined as answerability. However, accountability – or “hard accountability,” according to Fox (2007) – implies not only answerability but also the possibility of sanctions.

³ <https://www.whatdotheyknow.com/>.

⁴ <https://www.ipaidabribe.com>.

⁵ <https://www.infomex.org.mx>.

With an understanding of the broad landscape of ICTs that can be used in anti-corruption, we can start to identify critical questions that the funder, advocate, or implementer of an anti-corruption ICT project needs to ask. In particular:

- What is the direction of the information flow: from whom and to whom?
- Who controls the flow of information, and at what stages?
- Who needs to act on the information in order to address corruption?

It may be possible to offer general answers to each of these questions for particular kinds of ICT innovation. For example, in general, open data portals lead to information flowing from government to citizens: government chooses what information to publish, but the choice of what to do with it can be made by outside parties, and citizens, media, and activists need to act if anything is to happen as a result of the data release. However, the specific answers to the questions vary from implementation to implementation. Furthermore, in any use of ICTs for anti-corruption, the technology itself is only one part of the picture. Legal frameworks, organisational processes, leadership, and change management strategies may all be necessary as complements to digital tools in order to secure effective change.

The following sections review how three of the ICTs mentioned in Table 1 have developed in recent years and how particular implementations have occurred. We then explore the motivations and incentives that might persuade governments to adopt these and other anti-corruption ICTs.

2.1 Transparency portals

A transparency portal is a website where government agencies routinely publish defined sets of information. Such portals are often concerned with financial information and might include details of laws and regulations alongside more dynamic information on topics such as government debt, departmental budget allocations, and government spending (Solana 2004). They tend to have a thematic focus and are often backed by a legal mandate, or regulatory requirement, that information be published on an ongoing basis. National transparency portals have existed across Latin America since the early 2000s, developed by finance ministries after more than 15 years of investment in financial management capacity building in the region. Procurement portals have also become common, linked to efforts to make public procurement more efficient and to comply with regulations and good practice on public tenders.⁶

More recently, a number of governments have mandated the creation of local government transparency portals or dedicated transparency pages on local government websites. For example, in the United Kingdom, the prime minister requested that local governments publish all public spending over £500 on their websites. In the Philippines, the Department of Interior and Local Government has pushed the implementation of a Full Disclosure Policy requiring local government units to post on their websites specified documents related to financial transactions, including revenues collected, funds received, appropriations and disbursement of funds, and procurement. The government of the Philippines has also created an online portal to support local government units in publishing the documents as required by the policy.⁷

⁶ Examples include Dirección ChileCompra (<http://www.chilecompra.cl>), the Public Procurement Portal of Mauritius (<http://publicprocurement.gov.mu/Pages/default.aspx>), and the National e-Government Procurement Portal of Bangladesh (<http://www.eprocure.gov.bd>).

⁷ <http://fdpp.blgs.gov.ph/>

In focus: Brazilian Transparency Portal

Responsible agency: Government of Brazil, Office of the Comptroller General

Experience: In 2004, the Brazilian Office of the Comptroller General (Controladoria-Geral da União) launched the Transparency Portal with a view to increasing fiscal transparency of the Brazilian federal government by disclosing all the expenses of the executive branch in a single website. The initiative was developed together with the Federal Data Processing Service (Serviço Federal de Processamento de Dados), or Serpro, which is a government-owned corporation of information technology services in Brazil.

When launched, the portal only documented transactions from the federal to local governments. It has since expanded to include information on many other topics, such as elected officials' charges on government-issued credit cards; federal agency expenditures on travel, staff salaries, office supplies, equipment, and contractor services; tax revenues; grants to nongovernmental organisations; and social-welfare payments (Chambers, Dimitrova, and Pollock 2012; Viana and de Toledo 2011). The restructuring of the Transparency Portal is one of the measures that Brazil has included as part of its Open Government Partnership commitments.

Impact: The Office of the Comptroller General keeps track of the average time spent on the website, as well as pages per visit, number of visitors, and most demanded searches, among other data. According to a 2012 report from McKinsey (Cruz and Lazarow 2012), the portal drew about 32,000 visitors a month in its first year. This number grew as the government added more information, and in 2012, the portal averaged 345,000 visits a month. According to the same report, the portal has become a useful tool for journalists. For example, in 2008, using information from the portal, the media reported on improper credit card use by government officials, leading to internal investigations.

Further information:

<http://www.portaltransparencia.gov.br>

<http://www.opengovpartnership.org/country/commitment/restructuring-transparency-portal>

<http://www1.folha.uol.com.br/fsp/brasil/fc2301200802.htm>

In general, financial transparency portals have focused on making government records available, often by hosting image file versions of printed, signed, and scanned documents. This means that anyone interested in analysing the information from across multiple reports must retype it into spreadsheets or other software. Although a number of aid and budget transparency portals are linked directly to financial management systems, it is only recently that a small number of portals have started to add features giving direct access to datasets on budget and spending.

In the international aid field there are a number of transparency portals that focus on providing datasets in standardised formats. This reflects the well-established nature of aid management platforms used by aid-recipient governments to track their donor-funded projects and budgets, as well as the influence of the International Aid Transparency Initiative (IATI). Built with funding and support from international donors, aid transparency portals such as those in Timor Leste and Nepal offer search features across a database of projects.⁸ In Nepal, donors have funded the geocoding of project information, allowing display of a visual map that shows where funding flows are going.⁹

⁸ See <https://www.aidtransparency.gov.tl/> and <http://portal.mof.gov.np/> for the Timor Leste and Nepal portals, respectively.

⁹ For more information on efforts to geocode aid data, see the work of the Open Aid Partnership (<http://www.openaidmap.org/partnership.html>).

Underlying the role of transparency portals in anti-corruption is the idea that citizens and civil society will demand and access information from the portals and will use it to hold authorities to account (Solana 2004). While transparency portals have become well established, in many contexts direct demand from local citizens and civil society for the information they contain remains, as Alves and Heller (2013, 102) put it in relation to Brazil's fiscal transparency, "frustratingly low."

However, transparency portals may also be used by the media and other intermediaries, suggesting an alternative, more indirect theory of change in which coverage of episodes of corruption creates electoral pressures (in functioning democracies, at least) to reduce corruption. Section 4 below explores the role of intermediaries in more depth. The impact of media coverage cannot, however, be easily determined in advance. Power and Taylor's (2011) work on democracy and corruption in Brazil suggests that while increased awareness of corruption can have impacts on voting decisions, these effects are often confounded in practice by other non-corruption-related factors that influence voter preferences. Moreover, a wide range of contingencies, from electoral cycles to political party structures to electoral math, influence whether disclosures (whether from investigative reporting or transparency portals) actually lead to political shifts and electoral punishment of corrupt politicians.

2.2 Open data portals

Whereas transparency portals publish specific kinds of information (on financial transactions, aid, government projects, and so on), open data portals act as a hub for bringing together diverse datasets published by different government departments.

Open data involves the publication of data online using file formats that let users manipulate and explore the data, with explicit permission granted for anyone to reuse the data in any way.¹⁰ This contrasts with the approach of many transparency portals, which may publish scanned documents that cannot be loaded into data analysis software or impose copyright restrictions that deny citizens and businesses the right to reuse the data. Open data has risen to prominence in the last five years. In 2007 a group of activists meeting in Sebastopol, California, drafted a set of Eight Principles for Open Government Data, calling for governments to provide online data that are complete, primary (i.e., not edited or interpreted by government before publication), timely, machine-readable, standardised, and openly licensed (Malmud and O'Reilly 2007). The movement for open data received a substantial boost in the Obama administration's 2009 Memorandum on Transparency and Open Government,¹¹ which provided the context for the launch of the Data.gov portal.

Open data portals have caught on as a policy intervention, with hundreds now online around the world, including an increasing number in developing countries. The 2013 Open Data Barometer found that 55% of 77 states surveyed had some form of open data initiative (Davies 2013, 11). Brazil, India, and Kenya all have national open government data portals, and Edo state in Nigeria recently launched one of the first subnational open data portals on the African continent, expressing a hope that it would "become a platform for improving transparency, catalyzing innovation, and enabling social and economic development."¹² However, a number of open data portals have already turned out to be short-lived. For example, the Thai open data portal launched by the prime minister's office in 2011 was already defunct and offline by early 2014.

¹⁰ Open data advocates may talk of these as the principles of "proactive publication," "machine readability," and "open licenses," although in practice these principles are not always applied in full to all the data on government data portals.

¹¹ http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment.

¹² <http://data.edostate.gov.ng/>.

In focus: Kenya Open Data Initiative

Responsible agency: Government of Kenya

Experience: Since 2008, Kenya has gained a reputation as a regional hub for ICT innovation. Civic technology projects like the Ushahidi crowd-mapping platform, created to track post-election violence (Okolloh 2009), and the growth of commercial ICTs such as the M-Pesa mobile payments platform supported the emergence of a vibrant ICT innovation scene in Nairobi. This made Kenya an appealing location for the first sub-Saharan African open data platform, launched in 2011 by then President Mwai Kibaki (Rahemtulla et al. 2011). The platform's development was spearheaded by Bitange Ndemo, then permanent secretary in the Ministry of Information and Communication (now Ministry of Information, Communications, and Technology). It received funding and knowledge support from the World Bank (Majeed 2012; Open Institute 2012). The platform was launched in the context of the new 2010 Constitution, which recognised citizens' right of access to information. However, a Freedom of Information law is still a pending task for the Kenyan government.

The portal currently hosts over 500 datasets and includes a number of inbuilt visualisations of the data. However, much of the data made available on launch and subsequently come from a limited number of sources, and the portal is not regularly or systematically updated. The portal also hosts a Community Apps section, showcasing over 10 visualisations and applications that have been built with data from the platform. The Code4Kenya program has sought to catalyse the use of government open data by media organisations, leading to the creation of applications for monitoring school performance, finding voting locations for the 2013 elections, and showing health sector performance.*

At the end of 2012, a number of activists and analysts reported that the Kenya Open Data Initiative had stalled because of lack of political will across government to support it (Wokabi 2012). The portal had not been updated in several months, and its use had slowed significantly. Many applications built with data from the portal had ceased to be accessible. According to Greg Brown (2013), the lack of a Freedom of Information law, together with the existence of an Official Secrets Act, which prevents government employees from disclosing official information, has created a closed culture in government and has starved the portal of information. The initiative was closely associated with the personal leadership of Bitange Ndemo, who left government following the 2013 elections, and questions have been raised about whether it can be sustainable over the long term. However, new efforts to revitalise the platform were underway at the start of 2014.

Impact: While some studies have looked at the context in which the Open Data Initiative was adopted, there is a lack of evidence on its impact in terms of data use. It is also important to note, as mentioned by Davies (2012), that the Kenyan efforts largely focus on stimulating economic growth through the creation of commercial apps, rather than on transparency and accountability goals.

** It should be noted that many of these applications do not actually use official open data sourced from the opendata.go.ke portal but instead rely on locating data through other sources, such as by "data scraping" or by making direct approaches to departments to get the required datasets.*

Further information:

<https://opendata.go.ke/>

<http://www.code4kenya.org/>

The data hosted on open data portals vary widely, ranging from information on the locations of public services and public transport timetables to government service performance statistics, government budgets, and environmental monitoring data gathered by government research institutions. Not all of this is useful for anti-corruption work, although the availability of information as structured data makes it far easier for third parties to analyse a wide range of government datasets to look for patterns and issues that might point to causes for concern. In general, theories of change around open data for anti-corruption assume that skilled intermediaries will access, interpret, and work with the datasets published, as portals are generally designed with a technical audience in mind.

Data portals can act both as a catalyst of data publication, providing a focal point that encourages departments to publish data not otherwise available, and as an entry point, helping actors outside government locate datasets that are available. At their best, open data portals provide a space for

engagement between government and citizens. However, few currently incorporate strong community features that support in-depth online dialogue around government datasets (De Cindio 2012) or broker connections between data portal users and the government officials responsible for specific datasets.¹³

Recently, transparency and open data efforts have also started to focus on the importance of cross-cutting data standards that can be used to link up data published in different data portals and to solicit the publication of sectoral data. Again the aid sector has taken the lead, with the development of the International Aid Transparency Initiative data standard and a data portal collating all the information on aid projects published by donors to this standard.¹⁴ New efforts are seeking to build on experiences from IATI with data standards for contracts information in the Open Contracting initiative, which targets not only information from governments but also potentially disclosure of contract information in the private sector.¹⁵

2.3 Citizen reporting channels

Transparency and open data portals focus primarily on the flow of information from government to citizens. However, many efforts to challenge corruption require a flow of information in the other direction: that is, citizens reporting instances of corruption or providing government agents with the information they need to identify and address corrupt behaviour. When citizens file reports on paper or with local officials, it can be hard for governments to ensure that the reports are adequately addressed. By contrast, platforms like the Odisha State Redress Grievance Portal in India allow the tracking of submitted reports.¹⁶ Therefore, where there is political will to challenge corruption, citizen reports will have a greater chance of leading to change through complaints processes, investigations, and sanctions backed by judicial processes or integrity agencies. Where reports are made public, media attention may also create political pressure for change.

Many online channels for citizen reporting have in fact grown outside government. Platforms like Fix My Street in the United Kingdom, and many similar platforms across the world, have been launched by civil society groups frustrated by having to deal with government through antiquated paper processes. Fix My Street¹⁷ allows citizens to point out on a map where civil infrastructure, such as pothole in a road, requires fixing. The website then forwards the citizen reports to the relevant governance agency. Government agencies or officials are asked to report back to the site when the issue is fixed, providing a traceable and transparent record of government responsiveness. In some areas, governments have responded to these platforms by building their own alternative citizen reporting channels, though often without the transparency of the civil society platforms (reports simply go to the public authority, with no open tracking provided). In other cases they have worked to integrate the civil society solution with their own systems.

¹³ One exception may be the Indian government's open data policy and portal. Each government agency has been asked to provide a contact person, whose details are listed on the portal. The platform also includes features that let the National Information Centre (responsible for managing the portal) monitor whether or not nominated contacts are responding to enquiries made through the site.

¹⁴ <http://www.iatistandard.org>.

¹⁵ <http://www.open-contracting.org>.

¹⁶ <http://cmgcorissa.gov.in>.

¹⁷ <http://www.fixmystreet.com/>.

In focus: I Paid a Bribe

Responsible agency: Janaagraha, a nonprofit organisation in Bangalore, India

Experience: One of the platforms developed by civil society actors is I Paid a Bribe, an Indian website that collates stories of bribes paid (or not paid) by citizens across the country. This crowdsourcing of reports makes it possible to track and publish trends in bribery and corruption. The initiative was launched on August 15, 2010 (India's Independence Day), and the website became fully functional a month later. Janaagraha, the organisation responsible for developing the platform, believes in the power of the "collective energy of citizens" to tackle corruption problems. They also believe that the lack of indicators to quantify corruption often prevents the translation of solutions from policy to practice (One World Foundation 2011). I Paid a Bribe aims to clarify the role of bribery in public service delivery by transforming the data collected from citizen reports into knowledge that informs the government about gaps in public transactions and by strengthening citizen engagement to improve the quality of service delivery (Strom 2012).

In order to reach a greater audience, Maine Rishwat Di, the Hindi-language version of the website, was launched in 2013. At the same time, Janaagraha launched mobile apps and SMS services in order to make bribe reporting easier and more accessible to citizens across India. I Paid a Bribe has also been replicated with partners in a number of other countries such as Pakistan, Kenya, Morocco, and Greece.

Impact: The experience of Bangalore, capital of Karnataka state in India, illustrates the impact that citizen reporting initiatives can have when there is political will within the public administration to act on the reports. Bhaskar Rao, the transport commissioner for Karnataka, used the data collected on I Paid a Bribe to push through reforms in the motor vehicle department. As a result, citizens now apply for driver's licenses online, making it possible to avoid demands for bribes (Strom 2012).

Further information:

<https://www.ipaidabribe.com>

<http://hindi.ipaidabribe.com/>

<http://www.janaagraha.org/>

3. Incentives for adopting anti-corruption ICTs

Transactional and transparency ICT-based solutions have become a central part of the open government and anti-corruption narrative. By far the most common commitments made in the first round of the Open Government Partnership National Action Plans were centred on e-government and open data (Global Integrity 2012). It might be argued, in parallel, that transparency and accountability “features” of ICTs have become part of the sales narrative for these technologies. In practice, the current evidence base for the efficacy of government-led ICTs as anti-corruption measures is limited (McGee and Gaventa 2011). This is to be expected in a diverse, complex, and fast-moving field, where longitudinal or comparative studies are difficult given the pace of technological change and given the importance of studying technologies in their implementation context rather than in the abstract. However, evidence gaps are not damping enthusiasm for ICT-based anti-corruption interventions.¹⁸ Governments and civil society around the world will undoubtedly continue to invest in ICTs as part of their anti-corruption strategies in the coming years. If proven impact is not the primary driver of ICT adoption, then what is?

In this section we consider a range of different factors that might drive governmental adoption of ICTs, with a particular focus on the incentives for developing country governments. Our list is broad and speculative, and more research is needed to fully survey and analyse the motivations and incentives driving ICT adoption.¹⁹ This noted, we suggest that governments may have the following motivations, among others:

- Improve information flow and government efficiency
- Enable innovation and economic growth
- Address principal-agent problems
- Respond to international pressure and funding flows
- Respond to bottom-up pressure, and domesticate disruptive innovation

These motivations are not mutually exclusive, and they often interact with one another. In many cases, ICT-driven open government initiatives are justified in relation to several motivations at the same time. We contend, though, that it is important to understand which incentives come into play in each individual case. Incentives shape implementation, and the way in which an ICT innovation is adopted and implemented is likely to significantly influence how effectively it can serve an anti-corruption goal. In the following sections we consider both positive and negative implications of these incentives, pointing to issues that funders and advocates of ICTs for anti-corruption should consider.

3.1 Improving information flow and government efficiency

The Open Government Declaration states that citizens are seeking to make “governments more transparent, responsive, accountable, and effective” (OGP 2011). The pairing of transparency with effectiveness is a common one, often based on the idea of horizontal (outward/inward) transparency (Heald 2006) – in other words, the use of transparency to increase the free flow of information between different agencies and partners of the state. For example, this model is evident in the

¹⁸ Nor, indeed, should they necessarily do so. Innovation and development has to step beyond what has been proven to work, and in a rapidly changing world “evidence-based practice” is extremely hard to apply. However, practice should be intelligent and informed, particularly by learning from what has not worked.

¹⁹ To our knowledge there have been no large-scale empirical studies of government motivations for adopting technology for transparency.

International Aid Transparency Initiative, where a strong motivation for sharing structured open data is to improve coordination and planning between different donor agencies. Vertical downward transparency, allowing citizens of donor and recipient countries to see where money is spent, is to some extent an attractive by-product of more efficient data exchange between aid agencies and governments, although it could be pursued as an end in itself. This reinforces the earlier point that ICTs used for one principal purpose may have other intended or unintended effects that are also useful.

Open data has particular value as a tool to break down organisational silos. Both the UK government and the World Bank have reported anecdotally that many of the hits on their public-facing open data portals come from their own staff. Apparently, staff members are seeking to access data that they in theory have previously had access to, but in practice have not been able to find, acquire, or use. Contrary to the design of many e-government systems, which implement layers of access control and permissions, the move towards open data allows agents within government, and partner agencies outside government, to interact more efficiently through data flows. The removal of access control can also enable innovators and reformers within government to overcome bureaucratic roadblocks put in their path by gatekeepers of key information: they gain space to explore new ideas before alerting colleagues who might feel threatened by the developments they are pursuing. However, at the same time, depending on their configuration, more open flows of data could empower the bureaucratic centre to monitor and control innovative agencies and departments.

Open data is also associated with processes of technical standardisation, often based on the use of open non-proprietary standards (Fitzgerald and Pappalardo 2009). Government ICT projects are notorious for leading to large monolithic systems, where governments become locked into contracts with a small number of suppliers and data are locked up in proprietary formats that can be only be read with expensive software (Dunleavy et al. 2006; Dunleavy and Margetts 2004). Open data projects encourage the use of lightweight standards for representing data. These support the exchange of comparable data between different systems and allow for joining up data across silos, as well as increasing the portability of government data between ICT systems. This helps create a more competitive market for the provision of government ICT, open to small and medium enterprises as well as large firms.

Many contemporary arguments concerning the potential of ICT and open data to improve government efficiency draw heavily on references to Silicon Valley start-ups and Internet firms. Projects developing citizen reporting channels with “feedback loops,” in particular, are likely to refer to examples such as Trip Advisor,²⁰ where the private sector appears at first glance to have created an effective platform for gathering information from consumers. Policies that promise to bring to a country some of the glamour and success of Silicon Valley innovation can be very appealing to political leaders in developed and developing countries alike.

However, there may also be another agenda behind the talk of efficient and effective government through technology. Bates (2012) has argued that the UK’s open data programme represents a tool of deregulation and privatisation of public services by making it easier for profit-seeking firms to take on functions previously reserved to the state. Tim O’Reilly, who popularised the phrase Web 2.0 to capture the interactive possibilities of the modern Web, explores this potential in writing about “government as a platform.” He calls for the state to provide basic foundations on which private innovation takes place, delivering efficient and customised services to citizens (O’Reilly 2010). Behind the “efficiency” incentives of certain ICT and open government processes, then, there may also lie a profit motive that encourages certain parties to “sell” the efficiency benefits of open data in ways that will enable them to enter markets for public service provision. The outcomes of this in terms of levels of corruption are likely to be determined by local contextual factors.

²⁰ <http://www.tripadvisor.com>.

3.2 Enabling innovation and economic growth

The argument for the economic impact of open government ICTs is often made much more directly, with the claim that government data provide raw material that the private sector can use to innovate and to create new services that will drive economic growth. In this case, ICTs are not adopted for their anti-corruption potential, though it remains a possible side benefit: if the relevant information is made available, anti-corruption innovations are theoretically enabled along with other profit-motivated innovations. But for the most part, the case that open data will bring about economic growth by stimulating new economic activity remains theoretical. Clear evidence is lacking, although the size of the market for US weather data and geo data, both of which have been available openly for many years, is often cited (Dekkers et al. 2006; Hammell et al. 2011; Newbery, Bently, and Pollock 2008). The economic use of government data need not only be considered as an input into information economy products such as mobile apps or websites. It also has the potential to support better planning and coordination at the firm, market, and whole economy level. In discussing the potential of the Kenya Open Data Initiative, the then permanent secretary at the Ministry of Information and Communication, Bitange Ndemo, argued that open data on trade had the potential to significantly stimulate better trading between African nations, leading to an economic boost for the region (Open Institute 2012). However, the exact mechanisms through which this would occur were not set out clearly.

It has been argued that the existence of an economic case for open data helped sustain movements for open data following the global economic crisis, whereas a movement based only on transparency arguments would have stalled as governments cut back on public spending (Weinstein and Goldstein 2012). Regardless, it is important to explore whether the datasets relevant to stimulating economic activity are the same datasets that can support transparent and accountable government, and to pay close attention to how the envisaged uses for data will shape the ways in which it is provided. This issue has recently come to a head in the United Kingdom, where the mechanism for engagement with government on open data release, the Open Data User Group, has recently appointed a membership dominated by large private sector interests rather than representatives of citizen groups.

While these first two incentives have focussed primarily on open data, the incentives discussed in the following three sections apply equally to all forms of transparency and transactional ICTs.

3.3 Addressing principal-agent problems

Principal-agent problems arise when one party – the principal – motivates or compels another party – the agent – to act in the interests of the principal, rather than in the agent's self-interest (Eisenhardt 1989). Principal-agent problems are at the heart of many corruption situations (Azfar 2002; Klitgaard 1988). For example, citizens (as principals) frequently struggle to get government officials (who are, in theory, the delegated agents of the citizens) to act in the citizens' interest rather than exploiting their power as officials to act in their own interest and extract rents. Similarly, reformist officials inside government may struggle to control the actions of public officials in the field. Transactional and transparency ICTs can all play a role in changing the balance of power within these principal-agent situations, and upward transparency can offer reforming governments and officials a mechanism for addressing corrupt activities.

Governments are not monolithic. Corruption benefits certain actors in government and not others. ICTs can be a resource that one area of government uses to secure the behaviour of another area, either directly or by allowing parties outside of government to provide the necessary scrutiny or political pressure when the government does not have the resources to do so itself. For example, Brazilian officials recognised that they could not investigate whether funds sent to local governments had reached every local area, but by publishing the information on funds allocated, they enabled citizens to act as watchdogs and detect potential corruption (Alves and Heller 2013). Citizen reporting

channels work on the same idea. By taking local officials out of the complaint or reporting process – where they may previously have simply ignored or “lost” reports of problems that would have affected their rent seeking – the principals in government are better able to control their agents.

This is perhaps the most clearly strategic anti-corruption incentive for ICT adoption. Reports on experiences in Georgia provide one example of corruption falling dramatically after the state adopted ICTs in this way, with a consequent increase in public and business confidence (World Bank 2012). However, reformers cannot rely on ICT alone: political conditions also need to be conducive to using the information that ICTs make available. The nature of the ICTs introduced and the ways in which transparency is requested or made mandatory are also important to explore. Transparency in one area of government can empower other areas of government in both positive and negative ways. For example, both the UK and China have sought to increase the transparency of local governments, over and above the transparency requirements placed on central government. This may increase citizen oversight of government, but it can also increase upward transparency of the periphery to the centre, strengthening central government over and above local government in ways that may have significant political and policy consequences.

3.4 Responding to international pressure and funding flows

Doug Hadden (2013) of FreeBalance has suggested that “transparency has become a competitive sport,” with fragile states and emerging economies joining in a global race to adopt ICT-enabled transparency tools and platforms. The adoption of ICTs may be seen as part of policy transfer and replication between states, supported by a strong global discourse. The current discourse around ICT-enabled transparency and accountability may play a significant role in shaping the incentives for developing country governments. The availability of funding to invest in ICTs, advocacy by global institutions such as the World Bank, the involvement of private philanthropists such as the Omidyar Network, and multilateral initiatives such as Making All Voices Count²¹ all contribute to creating an environment in which turning to technology is appealing and more likely to yield external funding than some other kinds of reform. This may help support progressive reformers inside governments and may encourage experimentation with ICTs as a useful tool in the anti-corruption toolbox. We should also note that ICT interventions, commonly funded through innovation grants or small-scale pilots, are also comparatively cheap (and thus low-risk) when set against other potential anti-corruption interventions which may require fewer, larger grants and more institutional buy-in before they can be initiated.

However, the international discourse around technology for transparency also risks allowing a “fig leaf” effect. That is, by introducing technology innovations, states can appear to be engaging with the transparency, accountability, and anti-corruption agenda even as they evade substantive reforms. Publishing low-salience information with great fanfare may be a good way for states to gain attention and initial credibility without facing high political costs or actually addressing corruption. Countries are also adept at taking steps that will receive the approbation of funders and may adopt ICTs in the belief that this is likely to unlock additional donor funding for future projects. Similarly, in regimes with low state effectiveness, where corrupt activity is not captured in the data, or where there are no balancing audit and reconciliation mechanisms such as exist in the Extractive Industries Transparency

²¹ A multi-million-dollar fund launched in 2013 with support from a consortium including the United States Agency for International Development (USAID), UK Department for International Development (DFID), Swedish International Development Agency (Sida), Open Society Foundation, and Omidyar Network. It is administered by Hivos, Ushahidi, and the Institute of Development Studies at the University of Sussex.

Initiative (EITI),²² then the potential to gain credibility by developing a transparency initiative may outweigh the potential risks of established rent seeking being discovered and stopped.

High availability of external funding may also threaten the sustainability of reforms, creating a proliferation of pilots with few efforts to embed initiatives over the long term. Initiatives that depend on outside funding instead of local resources are likely to be focussed on achieving externally specified objectives and “completing” a project, rather than on developing platforms, programmes, and practices that are sustainable beyond the initial round of resourcing (Heeks 2003; Kumar and Best 2006).

3.5 Responding to bottom-up pressure and domesticating disruptive innovation

As with each of the incentives outlined above, the last one is also two-edged. As we noted earlier, much of the “policy transfer” around ICTs in anti-corruption has happened not at the level of states but within civil society, and in particular, within emerging networks of technology-focused civil society organisations and citizen activists. Independent actors and CSOs have created and implemented ICT transparency tools in many developing countries (Avila et al. 2011), supported and catalysed by connections made through ICT hubs,²³ online networks of experts and enthusiasts, and global conferences, such as the Open Knowledge Foundation’s OKFestival and Open Government Data Camp events. Often this has involved the replication of ideas from one place to another, as in the donor-funded work of mySociety to internationalise their suite of citizen reporting tools such as Fix My Street, or the autonomous reuse by many local hackers of open source platforms such as the Ushahidi crowd-mapping platform (Internews 2012). These same networks have supported the emergence of domestic campaigns for open data in many cities and countries, though these are often driven by small groups of technologists. They have also encouraged established civil society groups in some countries to call on their governments to pursue transparency policies through open data portals, online reporting tools, and other ICTs.

Governments may then adopt ICTs in response to bottom-up citizen and civil society pressure. In some cases they may decide to deliver what citizens are seeking, in terms of access to information, data, and feedback channels. But governments may also act to “domesticate” the “disruptive innovations” developed within civil society. For example, while civil society platforms for submitting RTI requests such as Alaveteli make requests and replies public, government-implemented online channels for RTI requests may offer less transparency. By providing a competitor to the civil society platform, but one without certain “disruptive” features of the outside tool, state responses to innovative ICTs may blunt the more radical potential of these technologies. For example, many state-provided RTI request platforms, such as India’s RTI Online,²⁴ do not offer public tracking of responses to requests.

²² The EITI aims to reduce corruption in extractives and to ensure that revenues due to governments from natural resource extraction reach public funds. It works through parallel reporting of revenues and taxes by both companies and government, with an audit to compare these reports, overseen by a multi-stakeholder process.

²³ The AfriLabs network (<http://afrilabs.com/labs/>), for example, includes over 20 physical and virtual ICT hubs in Africa that provide training, support, and funding for local innovators. AfriLabs connects them into wider networks of technologists combining work on both commercial and social issue-focused software development.

²⁴ <http://rtionline.gov.in/>.

3.6 Do incentives matter? Asking critical questions

In this section we have taken a fairly critical and sceptical stance towards the incentives that may drive the state adoption of ICTs. In doing so, we do not mean to suggest that advocates of ICT-enabled open government have bad motives. Many have the very best intentions for their pursuit of technology, transparency, and accountability. However, we do seek to draw attention to the presence of mixed motives in many ICT projects and to highlight the importance of identifying which interests and incentives are strongest in any situation. This has implications for funders as they consider which projects they will support and how they should promote ICT-related innovations; they need to carefully manage the tensions of technologies that have many potential purposes, not just anti-corruption. In introducing any ICT innovation, then, it is important to ask:

- What are the stated motivations of government for engaging with this ICT?
- What other incentives and motivations may be underlying the interest in this ICT?
- Which incentives are strongest? Are any of the incentives in conflict?
- Which incentives are important to securing anti-corruption outcomes from this ICT?
- Which incentives can funders and other outside parties affect? Which are shaped by domestic influences?
- Who may be motivated to oppose or inhibit the anti-corruption applications of this ICT?

Where the incentives that lead a government to adopt ICTs are not well aligned with the anti-corruption use of those ICTs, it will be much more difficult to secure the desired benefits from those technologies. In such cases, while governments may adopt a technology which has been part of anti-corruption efforts in some other country or context, additional activities will be needed to create the conditions for its effective use against corruption. This includes providing support to actors both inside and outside of government whose value structures and skills enable them to apply these technologies for effective anti-corruption efforts.

4. Implementing anti-corruption ICTs: Engaging users and intermediaries

Government motives aside, it is important for both advocates and funders of ICT-enabled anti-corruption initiatives to consider the factors that may affect the impact of these interventions in developing countries. As previously outlined, ICT-based reforms tend to focus on either upward or downward transparency. Both rely upon the engagement of citizens. Depending on the platform, citizens must either access and respond to information that is made available through transparency, or communicate to government their own experience through digital channels. Given these crucial roles of citizens, it is important to identify the incentives for and barriers to citizen engagement and to explore what kinds of citizen engagement are most important for the success of certain initiatives in a given context.

4.1 Users

Much of the limited available evidence on citizen engagement with transparency and accountability ICTs comes from cases where those tools or platforms have been deployed by civil society. Avila et al. (2011) identify two kinds of interventions, those based on “push” and “pull” transparency. In the former, citizens speak up and communicate their experiences with an issue – a process that is sometimes, though not always, related to Heald’s (2006) upward transparency. In the latter, citizens “pull” down information (downward transparency) from an available pool and use it as a basis for action. In practice, many initiatives require both: citizens need to raise their voices and push issues onto the agenda, and they need to access information on which they can then act (Avila et al. 2011).

An ICT intervention can be designed around the idea of citizens acting individually (e.g., in transactional citizen reporting channels such as Fix My Street) or around the idea of citizens acting collectively. In the case of collective action, for example, citizens may identify corrupt activity through information on a transparency portal, or an open data catalogue, and then speak out politically on the need for change. Citizen action in both cases may be direct or mediated. In mediated cases, technical intermediaries, sometimes termed “infomediaries” (see section 4.5), play a particularly important role, according to theories of change that specify how open data may be used by citizens (Steinberg 2011).

These different models – individual or collective action, push or pull – and different ICT interventions demand significantly different efforts and skills from users. Users can be passive consumers of “transparency,” accumulating information to use at some future point, such as when voting. Or, as Fung, Gilman, and Shkabatur (2011) suggest, they can be asked to act on the information, for example by being active watchdogs and contributing to a transactional citizen reporting channel, or by sharing their views as part of participatory budget exercises.

Differences emerge not only between the users of different models, but also between different users of each model. The motives, skills, resources, and capacity to influence others are not the same for mass or decentralised users (the general public) and centralised users (organised entities such as NGOs, media outlets, and companies). According to Fung, Gilman, and Shkabatur (2011), the interventions that aim to increase political accountability – understood as demand on the “behaviour of political officials whose policies have more generalised effects” (23) – rely mostly upon centralised users, while the general public tends to be more inclined towards interventions designed to demand service

accountability. This distinction seems to bear out the assumption that people value information that is directly relevant to their everyday lives and concerns.²⁵

While users differ in their motives, there are also disparities in terms of resources to disseminate information and capacity to funnel demands through the appropriate institutional channels. As Fung, Gilman, and Shkabatur (2011) point out,

Political campaigns and candidates, for example, may be far more sensitive and responsive to the criticisms that journalists make than to the more diffuse, harder-to-discern views of mass voters (23).

Notwithstanding these clear differences in motives and resources, there is limited evidence-based analysis on the users of ICT-led transparency initiatives. While some reports argue that poorer people are the most affected by corruption (Knox 2009), the available analysis suggests that more educated and higher-income segments of the population are more inclined to engage with ICT-led interventions (Anduiza, Jensen, and Jorba 2012; Kuriyan et al. 2012; Margolis 2007). This is perhaps not surprising, as the affluent and educated are the most likely to be comfortable with technology, to have access to the Internet, and to engage with applications frequently; they are also more likely to participate in politics (Escher 2011). However, such considerations are often an afterthought in the design of technology for anti-corruption, rather than a key design consideration from the start.²⁶ The fact that ICT-based innovations may primarily reach relatively limited (and relatively affluent) segments of the population, at least in the short term, may play a role in making such approaches appealing to governments, which tend to believe they can manage any input they may receive through existing institutional processes. A clear theory of change, together with the inclusion of offline strategies to reach as many users as possible, may be necessary in many countries if these initiatives are to achieve real impact in people's lives and play a key role in a more comprehensive anti-corruption strategy.

4.2 Barriers to uptake

According to recent figures, there is still a big gap between developing and developed countries in terms of the proportion of households with an Internet connection (ITU 2013). These figures show a penetration rate of approximately 70% for developed countries and only 30% for developing ones.

Traditionally, the “digital divide” refers to people's differing levels of difficulty in accessing and using an Internet connection.²⁷ This divide exists not only between countries but also between different segments of the population within each country. Foremost among the barriers are those related to access and cost: many people have access only to older computers and a high-priced connection, if they have access at all. The cost implications of the rapid development in ICT tools

²⁵ This assumption is clearly exemplified by Sasaki (2013) in a recent post where he mentions the failure of two out of three applications developed by the Sunlight Foundation with a grant from the Knight Foundation. The one successful application was Sitegeist, which automatically detects the user's location and provides a large amount of general information relevant to that location, such as age distribution, weather history, average rent, average commute times, and housing statistics. The two efforts that failed were more civic-oriented applications.

²⁶ Unwin (2013) states that innovative technologies are often developed far away from the local reality on the ground, which is often one of poverty. To avoid this situation, Unwin suggests making a thorough baseline assessment of the information and communication needs of the target population, not only of groups with access to the Internet but also of the digitally excluded segments of the population.

²⁷ However, it is important to clarify that access and use are not necessarily synonymous. Some studies have shown that “more people have access than use it . . . ; and, second, that whereas resources drive access, demand drives intensity of use among people who have access” (DiMaggio and Hargittai 2001, 2).

seem to add new barriers to entry. Some analysts such as Gurstein (2011) also argue that some of these initiatives – open data initiatives, in particular – might create a new divide within the population.

Current discourses on ICT tools for transparency and accountability suggest, implicitly or sometimes explicitly, that these new tools will allow everybody to use the data and information provided and to act upon them. However, in addition to access and cost barriers, there are also barriers related to the language, education, and skills needed to use the tools effectively (Gurstein 2011). For the community of potential users to be able to interact with the project, they need to be able to use digital technology and to manage and assess information regarding public interest issues. Thus, the presence and size of an ICT-literate community is an important factor to consider when assessing potential uptake. This is relevant for government projects as well as civil society initiatives (Gigler, Custer, and Rahemtulla 2011).

It is good practice for websites to allow reporting in local languages and to accept SMS texting, a widely accessible technology in many developing countries. These strategies can reach a wider audience and lead to a more successful initiative (Eggle and Park 2013). A high level of publicity also helps (Dawson 2012). In 2013, trying to reach a greater audience, I Paid a Bribe launched a Hindi-language version of the website, *Maine Rishwat Di*. At the same time, they launched mobile apps and SMS services in order to make bribe reporting easier and more accessible to citizens across India (see In Focus box in section 2.3).

4.3 Engagement

Even in the presence of an ICT-literate community with an easy access to technology, there is no guarantee of robust citizen engagement (Bhatnagar 2003). All of the above-mentioned factors can provide insights in terms of user trends and preconditions for citizen uptake. However, when considering technological interventions in a democratic environment, it is important to take into account the legal, policy, and social context in which technology is introduced. In particular, low engagement with upward transparency initiatives could also be a result of distrust or poor relationships. As Finnegan (2012) explains: “Distrust, animosity and secrecy are commonly cited issues [faced by] technology projects working towards government accountability.”

A clear example is the civil society initiative *Map Kibera*, a community-mapping project in the Kibera shantytown in Nairobi. The local mappers working on the project “were originally met with suspicion by residents, and questioned about their right to collect and record information. Some mappers were asked whether they were being paid for their work, or were asked for payment in return for the data they received” (Finnegan 2012).

Poor state-society relations may also reflect, in part, frustration with the absence of institutional mechanisms through which people can submit their demands and grievances. However, even when such mechanisms are in place, the lack of a timely response or even the complete absence of feedback can lead to apathy on the part of users. Clear evidence that the data collected are being used to deter and/or punish wrongdoing could encourage users to engage with anti-corruption ICT projects. For example, in Bangalore, Bhaskar Rao, the transport commissioner for the state of Karnataka, used the data collected on *I Paid a Bribe* to push through reforms in the motor vehicle department. As a result, in order to avoid bribes, license applications are now submitted online (Strom 2012), and citizens have seen a concrete outcome from their use of transactional ICTs to report corruption.

Another example is Karnataka’s verbal and written health-related complaints mechanism (Vian 2013). Even though it did not rely on ICTs, its results are relevant here, as the main problems with technological applications to fight corruption are not technical but political and institutional. An analysis of the mechanism by the University of Leeds indicated that citizens’ trust in government increased when they observed that administrative measures were actually taken in order to tackle corruption (Vian 2013). Thus, the tools (ICT-led or not) for reporting corruption should be part of a

comprehensive strategy that also includes mechanisms, channels, and incentives for providing appropriate responses to the reports received.

The same logic can be applied to all the ICT-led projects we have surveyed. Technology provides tools to enable a greater number of citizens to access a large amount of information, but the pivotal drivers of success in these initiatives are broadly the same as for any other transparency policy. In that sense, transparency-oriented initiatives (online or offline) will not be successful if the political ecosystem does not provide the appropriate mechanisms for public officials to be sanctioned when wrongdoing is exposed (Fox's "hard accountability"), for service providers to be punished when poor performance is revealed, or for reforms to be adopted when evidence points to systemic governance problems (Dokeniya 2012).

Furthermore, following Finnegan (2012), even when there is significant interest from communities of users, if the ICT application or platform is unable to produce any change, the interest and support from those previously enthusiastic users will start to fade. Conversely, when participants realise that their contribution could lead to a useful outcome, support for the tool might increase.

Summarising these ideas, McGee and Carlitz (2013) state that "for sustaining the engagement of users, . . . swift evidence of expectations fulfilled is key and swift evidence of expectations frustrated is fatal."

4.4 Intermediaries

To lower some of the barriers related to lack of easy access to technology, high costs of access, and absence of an ICT-literate community, projects focused on downward transparency, such as open data initiatives and transparency portals, should consider the presence or absence of intermediaries who can amplify and/or simplify the data disclosed.

The term "infomediaries" is widely used to refer to actors who stand between data originating from government and the intended users of the data, facilitating wider dissemination. The United Nations Development Programme explains their role: "Information intermediaries' or 'infomediaries' . . . synthesize, translate, simplify and direct information on behalf of others. The media can often play a role in fulfilling this function but other entities, such as community spokespersons, local government officials, CSOs also fulfil an important intermediary role" (UNDP 2003, 4). To create awareness among citizens and provide the tools for those citizens to later scrutinise, assess, and hold governments accountable, intermediaries are often vital. They can turn abstract ideas and data into simple messages and stories that other citizens can relate to (Swartz 2006).

Intermediaries may be technically or socially skilled groups, and often the involvement of multiple intermediaries may be required to realise anti-corruption potential from downward transparency. In the context of open data portals specifically, some intermediaries may focus on creating applications to simplify the access to and use of raw data from government, such as census data, election results, and, especially, financial data. Others may help by distributing information and by equipping citizens to demand accountability. These roles often split between technically savvy developers and visualisation experts in the former case, and more conventional CSOs in the latter. Without one or the other, the chance to translate downward transparency into effective opportunities for change may be lost. In many countries, technical intermediaries are in short supply, and it is important to consider whether there are incentives for them to engage with civic applications of data, as opposed to engaging with government open data as a resource for entrepreneurship or other forms of activity.

Examples of different approaches to the intermediary role can be found in the United Kingdom, the Philippines, and Mexico. In the UK case, data-driven journalists working with visualisation experts

produced interactive graphics that allow users to understand a large amount of complicated data on British government spending during 2011–12 (Guardian 2013).²⁸ In the Philippines, intermediary activity has focussed on taking information offline. Through a partnership between an NGO and the Department of Education, citizens can monitor the allocation of funds to schools through an online platform and can later report any discrepancies back into the platform. For those who do not have Internet access, the initiative has trained and mobilised intermediaries (some of them on a volunteer basis) to interact with citizens and facilitate community involvement (Shkabatur 2012). In Mexico, existing transparency-oriented organisations have played an intermediary role, targeting information directly at public employees. That is the case of Sonora Ciudadana AC in the state of Sonora. After discovering some irregularities in Sonora's health sector, this organisation opened and published the state's health payroll and approached the public staff so that they could compare their salaries with the state's expense reports (Young 2013).²⁹

4.5 The importance of context

The reliance of both upward and downward transparency initiatives on citizen engagement means that what works in one context might not achieve the same results in a different setting (McGee and Gaventa 2010). In considering how ICTs might be applied in practice in a given context, all the issues addressed in this section must be taken into account. One can begin by asking four key questions:

- Who has access to the relevant technologies? What barriers of connectivity, literacy, language, or culture might prevent a certain part of the population from engaging with an ICT innovation?
- What alternative channels (SMS, offline outreach) might be required to increase the reach of this innovation?
- How will the initiative close the feedback loop? Will citizens see visible outcomes over the short or long term that build rather than undermine trust?
- Who are the potential intermediary groups and centralised users for ICTs that provide upward or downward transparency? Are both technical and social intermediaries present? Are they able to work together?

Sometimes it will be possible for advocates, policy actors, and funders to affect these contextual factors. In other cases these factors will be outside the control of those designing or implementing an ICT for anti-corruption intervention, and will thus be important constraints to consider in the design of the intervention.

At a national level, a number of these questions can be explored, at least in a preliminary sense, through a growing range of indicator data made available in projects such as the Open Data Barometer,³⁰ which looks at the existence of government, civil society, and technical capacity to engage with open data in various countries (Davies 2013). However, full answers to each of these questions will also need input from in-country experts, as well as engagement with the potential beneficiaries of ICT innovations, to understand the local dynamics that might affect adoption and uptake of anti-corruption ICTs.

²⁸ For other examples of financial data interpreted by intermediaries, see Crettaz (2013) and the British website Where Does My Money Go? (<http://wheredoesmymoneygo.org/bubbletree-map.html>).

²⁹ See the Sonora Ciudadana website at http://www.nominasaludable.mx/home/?page_id=45.

³⁰ www.opendatabarometer.org.

5. Conclusions

In this paper we have addressed just a small corner of the vast and growing field of ICT innovations with a potential role in anti-corruption. We have looked at ICTs for upward transparency, which open up transactional digital channels between citizens and governments, and ICTs for downward transparency, particularly open data portals, which seek to increase access to and usability of government-held data and information. We have speculated on the different incentives (efficiency, economic growth, principal-agent problems, outside pressure, and bottom-up pressure) driving many governments to adopt these kinds of interventions, emphasising that multiple overlapping incentives usually converge to make ICT-based solutions attractive. Further work is needed to test our speculative account, to explore how far different incentives are involved in specific cases of ICT adoption, and to investigate how different incentives interact in different fields. We have also considered the contextual factors that need to be taken into account when considering how innovations from one setting might be transferred to and applied in another.

Central to our discussion has been the need to differentiate specific technologies and instances of technology adoption, recognising that whether or not ICTs can bring anti-corruption benefits will depend both on the reasons for which they are adopted and on the wider context in which they are implemented. Funders and ICT advocates need to be sensitive to whether an ICT is right for a given context, and they should be aware that the way an ICT is “sold” to a government (by advocates inside or outside government) will have an impact on how the technology is adopted and whether it can be used effectively to curb corruption.

We have also noted that in both upward and downward forms of transparency, the capacity of citizens to supply and to engage with information is important for the success of many innovations (although there are also some impacts of transparency and transactional ICTs that happen inside government, with limited need for citizen involvement). Unequal access to technology and to the skills, literacies, and language needed to use it effectively will affect the extent to which particular theories of change for an ICT are plausible and likely to lead to equitable outcomes in different countries and contexts.

The presence or absence of certain elements can help lower these barriers to uptake and promote engagement. In particular, the role of some centralised users, such as media and transparency-oriented NGOs, can increase the potential of ICTs for anti-corruption purposes. The power of amplification (through media campaigns) and translation (by skilled intermediaries) can make it more likely that certain ICTs will reach a large number of people and have an impact. A clear hypothesis of change and a comprehensive anti-corruption strategy, together with the inclusion of offline tools to reach as many users as possible, are necessary for these initiatives to achieve real impact in people’s lives. Nevertheless, even in the absence of some of the above-mentioned barriers, there is no guarantee of robust citizen engagement.

We have offered a series of critical questions in summarising each section, designed to give practitioners, policy makers, funders, and advocates issues to consider in designing or assessing ICT applications for anti-corruption. Given the limited evidence base on the impacts of ICTs for anti-corruption, we hope that these questions can also act as a guide for future research, highlighting key issues to consider in case descriptions in order to support future comparative analysis.

While the issues and barriers are real, we remain optimistic about the potential for ICT innovations to be part of anti-corruption efforts. Our goal has been to add to the call for greater awareness of context in the funding and design of ICT initiatives, and for an understanding that incentives matter when one is pursuing the use of ICTs to combat corruption.

References

- Alves, J. A., and P. Heller. 2013. "Accountability from the Top Down? Brazil's Advances in Budget Accountability despite a Lack of Population Mobilization." In *Open Budgets: The Political Economy of Transparency, Participation, and Accountability*, edited by S. Khagram, A. Fung, and P. de Renzio, 76–104. Washington, DC: Brookings Institution Press.
- Anduiza, E., M. J. Jensen, and L. Jorba, eds. 2012. *Digital Media and Political Engagement Worldwide: A Comparative Study*. Cambridge, UK: Cambridge University Press.
- Avila, R., H. Feigenblatt, R. Heacock, and N. Heller. 2011. *Global Mapping of Technology for Transparency and Accountability: New Technologies*. London: Open Society Foundation.
- Azfar, O. 2002. "Disrupting Corruption." In *Performance Accountability and Combating Corruption*, edited by A. Shah, 255–84. Washington, DC: World Bank.
- Bates, J. 2012. "This Is What Modern Deregulation Looks Like": Co-optation and Contestation in the Shaping of the UK's Open Government Data Initiative." *Journal of Community Informatics* 8, no. 2.
- Bertot, J. C., P. T. Jaeger, and J. M. Grimes. 2010. "Using ICTs to Create a Culture of Transparency: E-government and Social Media as Openness and Anti-corruption Tools for Societies." *Government Information Quarterly* 27, no. 3: 264–71.
- Bhatnagar, S. 2003. "E-government and Access to Information." In *Global Corruption Report 2003*, 24–32. Berlin: Transparency International.
- Brown, G. 2013. "Why Kenya's Open Data Portal Is Failing – and Why It Can Still Succeed." *Opening Parliament* (blog), 10 October. <http://blog.openingparliament.org/post/63629369190/why-kenyas-open-data-portal-is-failing-and-why-it>.
- Chambers, L., V. Dimitrova, and R. Pollock. 2012. *Technology for Transparent and Accountable Public Finance*. Cambridge, UK: Open Knowledge Foundation.
- Crettaz, J. 2013. "La pauta oficial benefició a cinco grandes grupos." *La Nación*, 2 September. <http://www.lanacion.com.ar/1616005-la-pauta-oficial-beneficio-a-cinco-grandes-grupos>.
- Cruz, M., and A. Lazarow. 2012. "Innovation in Government: Brazil." *McKinsey and Company Insights and Publications*. http://www.mckinsey.com/insights/public_sector/innovation_in_government_brazil.
- Davies, T. 2012. "Who Is Doing What When It Comes to Technology for Transparency, Accountability and Anti-corruption." In *Global Information Society Watch 2012: The Internet and Corruption: Transparency and Accountability Online*, 37–40. Association for Progressive Communications (APC) and Humanist Institute for Cooperation with Developing Countries (Hivos).
- . 2013. *Open Data Barometer: 2013 Global Report*. World Wide Web Foundation and Open Data Institute.
- Dawson, S. 2012. "Citizens Wield Web Tools to Combat Petty Bribery." Thomson Reuters Foundation, 10 August.

- De Cindio, F. 2012. "Guidelines for Designing Deliberative Digital Habitats: Learning from e-Participation for Open Data Initiatives." *Journal of Community Informatics* 8, no. 2.
- Dekkers, M., F. Polman, R. te Velde, and M. de Vries. 2006. *MEPSIR: Measuring European Public Sector Information Resources: Final Report of Study on Exploitation of Public Sector Information – Benchmarking of EU Framework Conditions*. Brussels: European Commission.
- DiMaggio, P., and E. Hargittai. 2001. *From the "Digital Divide" to "Digital Inequality": Studying Internet Use as Penetration Increases*. Working Paper 15. Princeton, NJ: Center for Arts and Cultural Policy Studies, Princeton University.
- Dokeniya, A. 2012. "Opening Government Data. But Why?" *People, Spaces, Deliberation* (World Bank blog), 19 July. <http://blogs.worldbank.org/publicsphere/opening-government-data-why>.
- Dunleavy, P., H. Margetts, S. Bastow, and J. Tinkler. 2004. "Government IT Performance and the Power of the IT Industry: A Cross-National Analysis." Paper presented at the Annual Meeting of the American Political Science Association, Chicago, 1–5 September.
- . 2006. *Digital Era Governance: IT Corporations, the State, and E-government*. New York: Oxford University Press.
- Eggli, S., and K. R. Park. 2013. *Using Information and Communication Technology (ICT) to Improve Transparency in Bank-Financed Projects*. Working Paper 81951. Washington, DC: World Bank.
- Eisenhardt, M. 1989. "Agency Theory: An Assessment and Review." *Academy of Management Review* 14, no. 1: 57–74.
- Escher, T. 2011. *Analysis of Users and Usage for UK Citizens Online Democracy*. London: UK Citizens Online Democracy.
- Finnegan, S. 2012. "Using Technology for Collaborative Transparency: Risks and Opportunities." In *Global Information Society Watch 2012: The Internet and Corruption: Transparency and Accountability Online*, 29–33. Association for Progressive Communications (APC) and Humanist Institute for Cooperation with Developing Countries (Hivos).
- Fitzgerald, A., and K. Pappalardo. 2009. "Moving Towards Open Standards." *SCRIPTed* 6, no. 2: 467–83. doi:10.2966/scrip.060209.467.
- Fox, J. 2007. "The Uncertain Relationship between Transparency and Accountability." *Development in Practice* 17, no. 4–5: 663–71.
- Fung, A., H. R. Gilman, and J. Shkabatur. 2011. *Impact Case Studies from Middle Income and Developing Countries: New Technologies*. London: Open Society Foundation.
- Gigler, B.-S., S. Custer, and H. Rahemtulla. 2011. *Realizing the Vision of Open Government Data: Opportunities, Challenges and Pitfalls*. Abridged version. Washington, DC: World Bank.
- Global Integrity. 2012. "So What's In Those OGP Action Plans, Anyway?" Global Integrity blog, 25 July. <http://globalintegrity.org/blog/whats-in-OGP-action-plans>.
- Grönlund, Å. 2010. "Using ICT to Combat Corruption: Tools, Methods and Results." In *Increasing Transparency and Fighting Corruption through ICT: Empowering People and Communities*,

edited by C. Strand, 7–26. Stockholm: SPIDER (Swedish Program for ICT in Developing Regions).

- Guardian*. 2013. “Government Spending by Department, 2011–12.” *Datablog*, 4 December. <http://www.theguardian.com/news/datablog/2012/dec/04/government-spending-department-2011-12>.
- Gurstein, M. 2011. “Open Data: Empowering the Empowered or Effective Data Use for Everyone?” *First Monday* 16, no. 2. <http://firstmonday.org/article/view/3316/2764>.
- Hammell, R., C. Perricos, D. Branch, and H. Lewis. 2011. *Unlocking Growth: How Open Data Creates New Opportunities for the UK*. London: Deloitte.
- Heald, D. 2006. “Varieties of Transparency.” *Proceedings of the British Academy* 135: 25–43.
- Heeks, R. 2003. *Most eGovernment-for-Development Projects Fail: How Can Risks Be Reduced?* iGovernment Working Paper 14. Manchester, UK: Institute for Development Policy and Management, University of Manchester.
- Internews. 2012. *Mapping the Maps: A Meta-Level Analysis of Ushahidi and Crowdmap*. Washington, DC: Internews Center for Innovation and Learning.
- ITU (International Telecommunication Union). 2013. *The World in 2013: ICT Facts and Figures*. Geneva: ITU.
- Kim, S., H. J. Kim, and H. Lee. 2009. “An Institutional Analysis of an E-government System for Anti-corruption: The Case of OPEN.” *Government Information Quarterly* 26, no. 1: 42–50. doi:10.1016/j.giq.2008.09.002.
- Klitgaard, R. 1988. *Controlling Corruption*. Berkeley: University of California Press.
- Knox, C. 2009. “Dealing with Sectoral Corruption in Bangladesh: Developing Citizen Involvement.” *Public Administration and Development* 29, no. 2: 117–32.
- Kumar, R., and M. L. Best. 2006. “Impact and Sustainability of E-Government Services in Developing Countries: Lessons Learned from Tamil Nadu, India.” *Information Society* 22, no. 1: 1–12. doi:10.1080/01972240500388149.
- Kuriyan, R., S. Bailur, B.-S. Gigler, and K. R. Park. 2012. *Technologies for Transparency and Accountability: Technologies for Transparency and Accountability*. Washington, DC: World Bank.
- Majeed, R. 2012. *Disseminating the Power of Information: Kenya Open Data Initiative, 2011–2012*. Innovations for Successful Societies, Princeton University.
- Malmud, C., and T. O’Reilly. 2007. “8 Principles of Open Government Data.” http://resource.org/8_principles.html.
- Margolis, M. 2007. “E-government and Democracy.” In *The Oxford Handbook of Political Behavior*, edited by R. J. Dalton and H. Klingemann. New York: Oxford University Press.
- McGee, R., and R. Carlitz. 2013. *Learning Study on ‘The Users’ in Technology for Transparency and Accountability Initiatives: Assumptions and Realities*. Brighton, UK: Institute of Development Studies.

- McGee, R., and J. Gaventa. 2010. *Review of Impact and Effectiveness of Transparency and Accountability Initiatives: Synthesis Report*. Brighton, UK: Institute of Development Studies.
- . 2011. *Shifting Power? Assessing the Impact of Transparency and Accountability Initiatives*. IDS Working Paper 383. Brighton, UK: Institute of Development Studies.
- Newbery, D., L. Bently, and R. Pollock. 2008. *Models of Public Sector Information Provision via Trading Funds*. London: BERR and HM Treasury.
- OGP (Open Government Partnership). 2011. Open Government Declaration. <http://www.opengovpartnership.org/about/open-government-declaration>.
- Okolloh, O. 2009. “Ushahidi, or ‘Testimony’: Web 2.0 Tools for Crowdsourcing Crisis Information.” *Participatory Learning and Action* (International Institute for Environment and Development) 59, no. 1: 65–70.
- One World Foundation. 2011. *ICT Facilitated Access to Information Innovations: A Compendium of Case Studies from South Asia*. One World Foundation India.
- Open Institute. 2012. “Dr. Bitange Ndemo telling the Kenya Open Data Story.” Online video. <http://vimeo.com/39353471>.
- O’Reilly, T. 2010. “Government as a Platform.” In *Open Government: Collaboration, Transparency, and Participation in Practice*, edited by D. Lathrop and L. Ruma, 11–40. Sebastopol, CA: O’Reilly Media.
- Power, T. J., and M. M. Taylor. 2011. *Corruption and Democracy in Brazil: The Struggle for Accountability*. Notre Dame, IN: University of Notre Dame Press.
- Rahemtulla, H., J. Kaplan, B.-S. Gigler, S. Cluster, J. Kiess, and C. Brigham. 2011. *Open Data Kenya: Case Study of the Underlying Drivers, Principal Objectives and Evolution of One of the First Open Data Initiatives in Africa*. Abridged version. Washington, DC: World Bank.
- Sasaki, D. 2013. “[Design Thinking] Sitegeist as a Civic Entry Drug.” David Sasaki’s blog. <http://davidsasaki.name/2013/02/design-thinking-sitegeist-as-a-civic-entry-drug/>.
- Shkabatur, J. 2012. *Check My School: A Case Study on Citizens’ Monitoring of the Education Sector in the Philippines*. Washington, DC: World Bank.
- Solana, M. 2004. “Transparency Portals: Delivering Public Financial Information to Citizens in Latin America.” In *Thinking Out Loud V: Innovative Case Studies on Participatory Instruments*, edited by K. Bain, I. Franka Braun, N. John-Abraham, and M. Peñuela, 71–80. Washington, DC: World Bank.
- Steinberg, T. 2011. “Asking the Wrong Question about Data.gov.” *Premise* (blog), 4 April. <http://steiny.typepad.com/premise/2011/04/asking-the-wrong-question-about-datagov.html>.
- Strand, C. 2010. Introduction to *Increasing Transparency and Fighting Corruption through ICT: Empowering People and Communities*, edited by C. Strand. Stockholm: SPIDER (Swedish Program for ICT in Developing Regions).
- Strom, S. 2012. “I Paid a Bribe and Similar Corruption-Exposing Sites Spread.” *New York Times*, 6 March.

- Swartz, A. 2006. "Disinfecting the Sunlight Foundation." *Raw Thought* (blog), 20 November. <http://www.aaronsw.com/weblog/dissunlight>.
- Transparency International. 2009. *The Anti-Corruption Plain Language Guide*. Berlin: TI.
- UNDP (United Nations Development Programme). 2003. *UNDP Practice Note: Access to Information*. New York.
- Unwin, T. 2013. "The Internet and Development: A Critical Perspective." In *The Oxford Handbook of Internet Studies*, edited by W. Dutton, 531–54. Oxford, UK: Oxford University Press.
- Vian, T. 2013. *Complaints Mechanisms in Health Organizations*. U4 Brief 2013:6. Bergen, Norway: U4 Anti-Corruption Resource Centre.
- Viana, G. B., and M. B. F. de Toledo. 2011. "An Evaluation of Brazilian Transparency Portal and How to Improve It." In *2011 International Conference on Information Society (i-Society)*, 366–72. IEEE.
- Weinstein, J., and J. Goldstein. 2012. "The Benefits of a Big Tent: Opening Up Government in Developing Countries." *UCLA Law Review Discourse* 38: 38–48.
- Wokabi, C. 2012. "Kenya Open Data Initiative Has Hit a Dead End, Says PS." *Daily Nation* (Nairobi), November 10.
- World Bank. 2012. *Fighting Corruption in Public Services: Chronicling Georgia's Reforms*. Washington, DC: World Bank.
- Young, Holly. 2013. "13 Ways to Unlock the Potential of Open Government." *Guardian*, 13 November.

U4 Anti-Corruption Resource Centre
Chr. Michelsen Institute (CMI)
Phone: +47 47 93 80 00
Fax: +47 47 93 80 01
u4@u4.no
www.U4.no

P.O.Box 6033 Bedriftssenteret
N-5892 Bergen, Norway
Visiting address:
Jekteviksbakken 31, Bergen

This U4 Issue is also available at:
www.u4.no/publications

INDEXING TERMS:

ITC
Brazil
Kenya
India

Cover image by
Grant Hutchinson on flickr.com

Governments adopt anti-corruption-related ICT innovations for many reasons. Different motivations for adopting these technologies shape the way they are put into practice and the anti-corruption impacts they may have. ICT for anti-corruption should not be understood as a single approach, since different technologies, and different modes of technology adoption, create different dynamics. Whether or not a particular ICT can bring anti-corruption benefits will depend upon the design of a specific implementation, the incentives driving its adoption, and the wider context in which it is applied. This issue paper raises critical questions for policy makers, funders, and advocates to consider when seeking positive anti-corruption impacts from ICTs.