

E-Government and the Drive for Growth and Equity

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Organization for Economic Cooperation and Development
E-Government Project

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Introduction: A proposed outline for assessing E-Government benefits

The burst of the “dot.com bubble” has obliged governments to be less starry-eyed about the benefits of E-Government and to raise more questions about what are the expected and actual returns of E-Government projects. In the context of limited public resources, it is no longer sufficient — or even desirable — for countries to aim to put all public services online as was the objective of many Organization for Economic Cooperation and Development (OECD) governments in the late 1990s and early 2000. Instead, individual E-Government projects need to demonstrate their contribution to overall government objectives.

Increasingly, countries are putting in place business case methodologies in order to demonstrate the risks and expected returns on ICT (information and communication technology) investment, in terms both of savings to government and benefits to citizens and businesses. Analysis of E-Government costs and benefits allows governments to support investment decisions and evaluate results. In the absence of a business case, governments risk developing technology-enabled services that may not correspond to the needs of citizens and businesses. To counter this, traditional business case methodologies from the private sector have sometimes been adopted. While these can be useful, they are business-centric. Traditional business cases can effectively calculate the expected return on investment (ROI) of individual ICT projects, but they do not (and are not meant to) measure broader effects. Governments therefore risk not seeing the forest for the trees, i.e. overly focusing on short term financial and electronic service delivery objectives, while overlooking the overall impact of E-Government on a state as a whole (OECD 2005b).

In order to measure the impact of E-Government, the observer first needs to decide *which* type of benefits he or she is interested in and the population to *whom* those benefits will accrue. Table 1 presents a simple categorization of the universe of E-Government benefits and beneficiaries.

Table 1: E-Government Benefits: a proposed outline

| beneficiaries type of benefit | Business | Citizens | Government |
|---|--|---|--|
| Financial (direct) | Reducing burden: administrative simplification | Reducing burden: administrative simplification | Efficiency savings to government: freeing resources for public and private innovation |
| Public (both direct and indirect) | Improving Trust in Government: customer satisfaction and equity; achieving overall policy and program outcomes; meeting security and privacy | | |

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| | |
|--|--|
| | expectations |
| Economic (both direct and indirect) | Supporting Growth: Contributing to a sound business environment: promoting the information economy; creating business opportunities |

The three types of benefits are complementary and not mutually exclusive. For example, ensuring secure online transactions can both promote overall trust in government and support the growth of the information economy. The type of benefit that one may wish to focus on depends on the time-scale, the purpose of the analysis (i.e. for investment decisions or for marketing of online services), and the level of decision-making as the focus of E-Government projects can be quite different at the project, agency, and national level. The following paper will lay out each of the three broad types of benefits: financial, public, and economic, with particular emphasis on the latter two, having argued that they are the least well understood.

Financial benefits: Direct benefits for government and users

Financial benefits, whether they are for government or for citizens and business, are the most immediate for many E-Government decision-makers and form the basis for most ROI calculations. Some projects may have a mandate to achieve cost savings to government within a fixed amount of time. Even if not obligated, projects may look to service innovation as a natural way to free up limited resources. As financial savings are the most direct and measurable benefits, it is not surprising for governments to focus on them first. This may be the reason why tax services with the large potential for administrative savings to government have consistently been among the first and most advanced online services to be developed in OECD countries.

To date, only two countries have attempted to move beyond the costs and benefits of individual E-Government initiatives to look at the aggregate case for E-Government. Australia and the United Kingdom have each developed consistent cost-benefit methodologies in order to compare and aggregate individual business cases. Based on a survey of thirty-eight Australian E-Government projects, the National Office for the Information Economy estimated that an estimated investment of 108 million AUD (Australian dollars) could be expected to generate 100 million AUD in savings for government, as well as 14.62 AUD in savings per transaction for users and over 25 AUD in savings for businesses as compared to the delivery of comparable services over traditional channels (NOIE 2003).

Government Efficiency

Both studies mentioned above concern *ex ante* or expected financial benefits. The actual benefits achieved have yet to be measured. Generally speaking, savings to government can be divided into “front office” and “back office” savings. The “front office” refers to government as its constituents see it, meaning the information and service providers, and the interaction between government and both citizens and business. The “back office” involves the internal operations of an organization that support core processes and are not accessible or visible to the general public.

In terms of the front office interface with users, governments are realizing that putting information and services online has created a new parallel channel to the existing service-delivery channels. At least in the short term, this has led to an overall increase in government spending. In a 2002 OECD survey of Finnish government IT offices, over 20 percent of the respondents felt that E-Government had actually increased the costs of service delivery (OECD 2003c).

In order for government to reap some of the benefits of online service delivery, it is essential that users of government services migrate from consuming them through traditional delivery channels to the new electronic channels as they become available (and as appropriate for a given user and/or service). Mainly as the result of equity considerations, most governments have chosen not to force users to adopt new channels by denying them services through existing channels or imposing fees or charges that are higher off-line than online (except for certain services delivered specifically to business). This means that the burden is on governments to demonstrate to users the value proposition of electronic service delivery, but in order to find an equilibrium between equity and efficiency considerations, governments may have to reconsider developing incentives for users to move voluntarily to online channels, for example by sharing administrative savings with users. If they fail to do so, front office savings as the result of electronic delivery of information and services will not materialize (OECD 2005b).

The internal efficiency benefits of E-Government in the back office is more fully dealt with in chapter x, but one of the major challenges to measuring the impact on the internal efficiency of government relates to treatment of the potential costs and benefits of additional organizational changes that may have to be implemented alongside the direct development of E-Government initiatives. This is an important factor that should be considered in both individual and aggregate or comparative evaluations of E-Government. E-government initiatives often involve cooperation, coordination, and collaboration across service or agency boundaries. This is frequently accompanied by organizational restructuring or business process and IT systems reengineering. It is difficult to break down the allocation of the direct and indirect (or spillover) costs and benefits of such initiatives, either to government or users.

Even when governments are able to demonstrate financial benefits from E-Government projects, that is no guarantee of how such benefits would be allocated: would realized savings be reallocated to other priority areas, spent internally, or to be returned to taxpayers in the form of reduced government spending? The custodial responsibility of government to manage public resources responsibly has implications for the public and economic benefits addressed in the next sections of this paper.

Savings to Citizens and Businesses

Reduction of administrative burden on citizens and business represents a major area of potential E-Government benefit. An OECD survey of small and medium sized enterprises (SMEs) in ten countries found that on average, SMEs spent nearly 27,500 USD per year or about 4 percent of annual turnover, complying with the administrative requirements of tax, employment, and environmental regulations. This equates to an average cost of 4,000 USD per employee (OECD 2001).

The costs that government rules and regulations impose on citizens and businesses generally fall into three categories (Deloitte Research 2004):

1. Finding which rules and regulations are needed for compliance;
2. Understanding what the regulations mean and figuring out how to comply with them;
3. Complying with rules and regulations

The third category is typically the biggest cost driver in terms of the direct costs related to collecting required information, completing forms, and dealing with administrators. Costs are, however, also incurred by time delays and uncertainty in the provision of either information or answers to requests.

Administrative simplification is increasingly driven by ICT mechanisms. A 2001 survey conducted by the OECD revealed that twenty-six of the twenty-eight countries responding had included ICT initiatives as an element of their strategy to reduce administrative burden (OECD 2003a).

Examples of reducing burden by simplifying the electronic front office interface include electronic one-stop shops, web-based portals, and Internet-based registers. For example, Mexico has established a “Federal Register of Formalities and Services” on the Internet which includes the principal procedural requirements imposed by all federal departments and agencies on private citizens and businesses. The register enables users to obtain all business forms online and to carry out some regulatory transactions electronically with the Ministry of the Economy. An advisory service is available to assist users. In this way, along with facilitating compliance, the register both simplifies users’ access to rules and their understanding of what is required of them (categories one and two above).

E-government initiatives also involve the standardization of data submitted to the government and to the interchange of data between enterprises and administrations. These “electronic data interchange” (EDI) projects are directed at facilitating the direct electronic transfer of enterprise data to governmental authorities. Another aim is to reduce enterprise data to its basic elements, so that every governmental authority can assemble the data that it needs without duplicative requests. This process is facilitated by the development of a unique business identification numbers so that businesses only need to have a single identifier for all dealings with government. Putting such a system online makes electronic registration and searching for business ID numbers possible. This may also be known as a “single enterprise register”.

Government procurement systems have also benefited greatly from the advent of the Internet. Such systems allow government purchasing units to list their goods, services, leasing, and public work requirements on the Internet. These listings enable suppliers and contractors to identify opportunities, to submit bids by the same means, and to subsequently follow the entire process to its completion. Such measures allow citizens and businesses to redirect cost savings from reduced administrative burden toward more productive activities (OECD 2003a).

Public Benefits: Improving Trust in Government

E-procurement systems have also been implemented in many countries in the hope of strengthening the overall integrity of public procurement processes, thereby improving the public value of such systems. Public value refers to the value created by government through services, laws, regulation, and other actions. The value added by government is the difference between these benefits and the value of the resources and powers which citizens decide to give to their government (Kelly et al. 2002).

The outline in Table 1 proposes to distinguish between those benefits for which a specific monetary value can be estimated (i.e. the financial value of time and money savings), and benefits that are equally real, but more difficult to enumerate (i.e. service quality and confidence). Also known as “intangible” benefits, it is important to understand this category of benefits in order to understand the full impact of E-Government and to guide the direction of E-Government projects. For example, while the potential cost savings of reducing the number and complexity of government formalities and paperwork as discussed in the previous section are impressive, these estimates do not encompass the wider benefit of maintaining overall compliance rates as well as the general level of respect for the law which hopefully accompanies recognized public efforts to reduce the burdens of administrative procedures.

In the context of several decades of declining public confidence and trust in government (Holzer et al. 2004), improving service quality through the development of E-Government service provision could have a significant positive impact on increasing public value and thereby improving citizen confidence and satisfaction with government. If people believe that government is incompetent and cannot be trusted, they are less likely to provide such crucial contributions as taxes and voluntary compliance with laws, and government will have more difficulty recruiting talented staff. This forms a cumulative downward spiral in which government's ability to perform is continuously degraded, thereby reinforcing citizens' levels of dissatisfaction and distrust (Nye 1997).

Improving Customer Satisfaction

In addition to delivering user benefits in terms of reduced burden as discussed in the last section, E-Government holds the potential to improve service quality — a much more subjective and difficult to measure indicator which incorporates elements of accessibility, convenience, accuracy, speed, and cost. Service quality can be improved and a more personalized service provided through the use of ICTs; government emails, portals, and better search technologies found on the Internet have the potential to make access to information and services easier and more intuitive, without any specialized knowledge of government required on the part of users. But service quality is not the only element in determining user satisfaction. Evidence suggests that user satisfaction is likely to be shaped by a wide range of factors:

- **Customer service:** Private sector studies have highlighted that the way people are treated by staff ranks only just behind quality and price of product in determining their satisfaction.
- **Information:** There is a strong correlation between satisfaction with different services and whether people feel that they are well informed about them.
- **Procedural fairness:** Customers are willing to revise their expectations as long as they feel that they are being treated fairly. Of equal importance is the possibility for recourse and feedback.
- **Choice:** There is some evidence that enhanced levels of choice can boost user satisfaction, even if it does not have a discernible impact on service outcomes.

A quantitative study of factors influencing trust and government in Belgium found that satisfaction with federal government and the working of democracy in Belgium have an impact on the level of trust, but that the largest effect comes from satisfaction with the public administrations and the services that they provide (Kampen et al. 2003). A Canadian Study (Institute for Citizen Centred Service, 1998) found a similar strong positive correlation between satisfaction with services and overall opinions of government. These results appear to confirm that there is a role for ICTs in improving the quality of public administrations and the services that they provide and that this can have a positive impact in improving citizen satisfaction and trust.

Conversely, a study undertaken by the Pew Research Center in the United States (1998) found that in a period where trust in federal government had fallen, satisfaction with the services provided by nineteen agencies had risen significantly. Other commentators (Bouckaert and Van de Walle 2001; Kelly et al. 2002; Bouckaert 2003) suggest that the relationship between service provision and trust is highly complex and unclear.

Successful delivery of E-Government and customer satisfaction can be measured, in part, by using service uptake as a proxy measure. The uptake of E-Government services is steadily increasing worldwide, and the picture for growth is encouraging. People see the Internet as an increasingly acceptable means of interacting with government. Canada, for instance, relaunched its government portal with a new user focus and improved design and doubled its unique audience numbers over a period of two years. In the United States, a September 2002 report from the Pew Foundation found that 71 million Americans have used government web sites, up from 40 million in March 2000 (Larsen 2002), and a survey released in April 2003 by the Council for Excellence in Government

noted that 75 percent of E-Government users think it has made it easier to get information, and 67 percent like doing governmental transactions online (Hart-Teeter 2003).

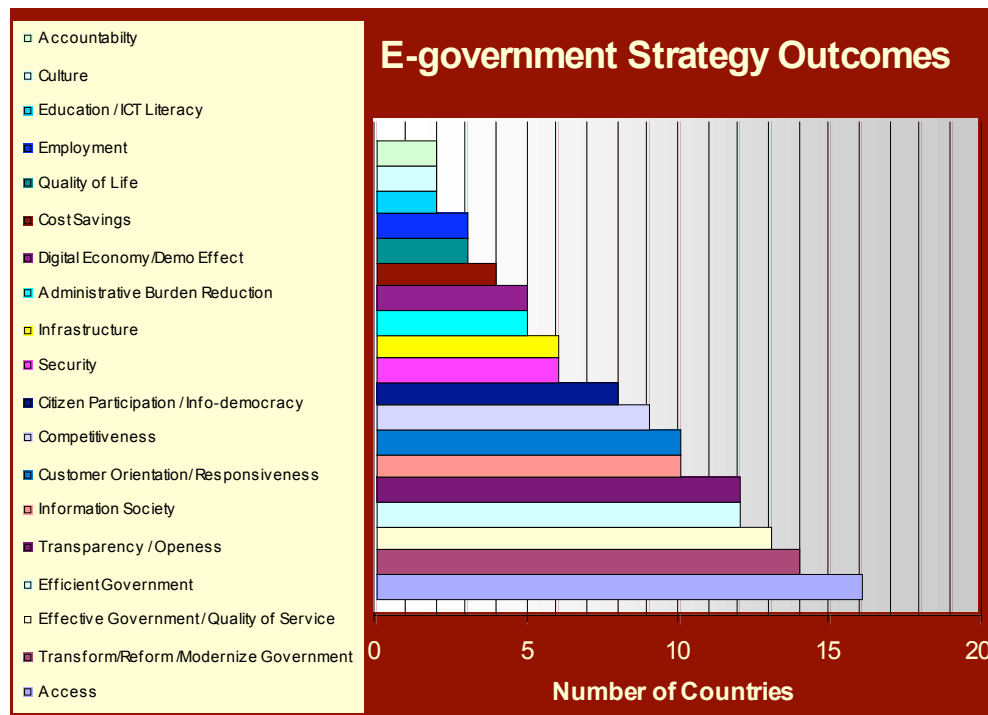
Achieving Policy Outcomes

A second area in which public benefits can be achieved is the potential for E-Government to realize overall governmental objectives which extend beyond satisfaction with individual transactions. Once again, this is a subjective area, as success will depend on the objectives that each government sets out for itself, but enhancing outcomes is also expected to improve trust in government, though the exact relationship is still unclear.

Governments have increasingly sought to focus attention of their E-Government projects on supporting government-wide outcomes. Public Service Agreements and Service Level Agreements are becoming increasingly commonplace in the United Kingdom as a means to specify outcomes. Focusing on overall outcomes also allows governments to make the business case for cross-cutting and horizontal E-Government initiatives that may not have sufficient benefits for an individual governmental agency, but which either enable broader service delivery as in the case of electronic authentication and digital signatures, or which hold benefits for government as a whole. Opportunities to “cross-sell” related services to common user groups, for example, are enhanced by approaching E-Government from a whole-of-government perspective and should lead to greater use of services as more personalized information is known about users and services are better targeted at potential new users.

Figure 1 below shows the frequency with which national governments in the European Union (EU) raised certain outcome objectives in their E-Government strategies published in the period 2001 to 2003.

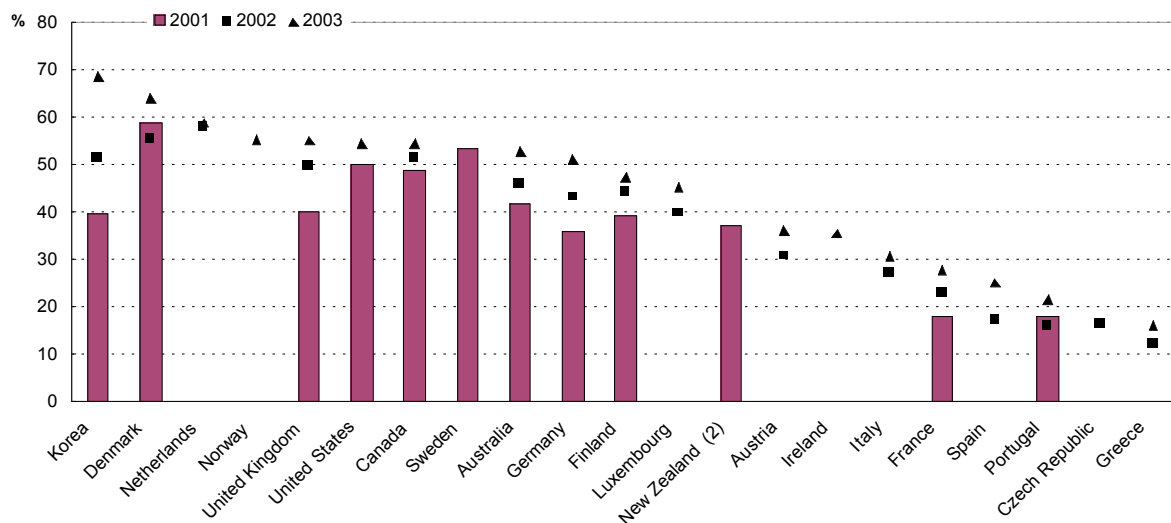
Figure 1: E-Government Strategies in EU Countries: Frequency of Stated Outcome Objectives



As Figure 1 shows, access was the most frequently cited component of an E-Government strategy among EU countries. The risk that E-Government will benefit only those who already have access to ICT and the knowledge to use it is a very real one. In the interest of equity, governments need to extend the benefits of ICT to as much of their populations as possible. This challenge has often been addressed in terms of the “digital divide” (the gap between those with the skills and access to use ICTs and the Internet and those without) both among countries and among the diverse populations within individual countries. As this gap narrows in many OECD countries, governments wanting to provide user-focused electronic services equitably will need not only to examine questions of physical access to and affordability of hardware, software, connectivity, and ICT skills, but also the extent to which the online services offered by government contribute to the overall incentives that individuals and businesses have to become connected and familiarize themselves with online procedures. This is particularly true if governments desire to reap some of the financial benefits of E-Government through a channel management strategy.

Among OECD countries, a growing proportion of the population has access to the Internet (see figure 2), but in many instances, the heaviest consumers of public services are among those least able to access and use the Internet or online services. Governments face a tension between the desire to open up new channels in order to improve efficiency and quality and the need to maintain the traditional ones for reasons of equity and effectiveness. To date, governments have emphasized that implementation of E-Government will not mean that the traditional ways of interacting with government will disappear. Looking forward, when governments start to seriously seek the efficiency gains that they have seen that E-Government can enable, they will be faced by the need to make choices between these objectives.

Figure 2. Household access to the Internet in selected OECD countries, 2001–2003



1. Internet access via any device (desktop computer, portable computer, TV, mobile telephone, etc.).
2. July 2000 to June 2001.

Source: OECD, ICT database and Eurostat, Community Survey on ICT usage in households and by individuals, 2001 to 2003, November 2004.

While these choices are inherently political, it is important to recognize the dynamic nature of this situation in order to time decisions optimally. For example, as time goes by, governments can reasonably assume that more users will be able and willing to access and use online services. In some instances, it will be possible to close down traditional channels simply through a gradual erosion of demand for them. In others, at some point it may become economic to invest in providing skill development or mediated access to online services for the small percentage of users who are left

unable to use them online without assistance. What is most important as governments reach the point of making such choices is that they and their agencies base their decisions on a common policy framework (OECD 2005b).

As ICT is increasingly integrated into governmental processes, the border between what is E-Government and what is simply government becomes less and less clear. As the OECD E-Government Project has found, E-Government is more about government than about “e” (OECD 2003d). Governments are adopting information society tools and working practices in both the front and back office to remain responsive to citizens’ needs. This gives rise to an “e-enabled” administration in which both traditional and electronic service delivery channels share common information resources which allow users to move seamlessly across channels.

The Australian government has begun work on a multi-channel service delivery strategy that focuses on E-Government as a system to improve data flows and coordination for all types of services, regardless of how they are delivered. A user can therefore look up information on a government service on the Internet, contact a call center with specific questions, and go into a governmental office for a final transaction, all based on seamless access to a common set of data. Such a strategy may also look to steer more people to less expensive online contact as they become more comfortable with the Internet (OECD 2005).

The multi-channel approach, along with seamless service strategies that seek to provide a single-door entry point for services, seeks to organize government services and the means by which they are delivered around the needs of users. A user-focused, rather than a technology-determinist approach naturally refocuses programs on outcomes rather than input (e.g. IT spending) or output indicators (e.g. number of services online) that may or may not be indicators of success. In some cases, effective use of government-held information can enable governments to eliminate some obligations entirely. For example, through the reuse of existing data, New Zealand and most of the Nordic countries have eliminated the requirement for most wage and salary earners to file annual tax returns.

Good Governance and Legitimacy

While the Nordic approach to tax systems may raise many concerns about security and privacy in countries less accustomed to such an integrated use of central registers, it also illustrates how increasing levels of trust in government can lead to other financial and public benefits in terms of administrative savings and increases in innovation, thereby establishing a “virtuous cycle” of good governance and legitimacy. A recent survey, for example, ranks Norway number 3 in terms of the population’s perception of online safety. Forty percent of Norwegians feel that it is safe to use the Internet to provide the government with personal information (Taylor Nelson Sofres 2003).

Examples of using ICT to promote good governance can also be found in other OECD countries, in particular for increasing the transparency and accountability of government. In 2004, IMSS (the Mexican Social Security Institute) released its *IMSS va a comprar, IMSS compró* portal (“IMSS will buy, IMSS has bought”), which publishes a list of prospective purchases, as well as the terms and conditions under which the purchases were made. IMSS is one of the largest purchasers in the Mexican government, acquiring over 3 billion USD worth of goods and services each year. The purchase and expenditures portal not only opens up the market to a substantial set of competitors, but also reduces corruption and saves taxpayers’ money (OECD 2005d).

As part of Mexico’s “Good Government Agenda”, the Mexican E-Government initiative has been an important tool in making government more transparent and providing access to public information for all citizens. The parliament passed a Freedom of Information Act in 2002 which led to the creation of the IFAI (Instituto Federal de Transparencia y Acceso a la Información Pública), a public institution in charge of giving citizens access to public information. In order to fulfill IFAI’s mandate to provide information in an efficient and cost-effective manner, IFAI and the Mexican Ministry of Public Administration developed SISI, an electronic system that manages citizens’

information request processes. This online system processes citizens' information demands on a wide array of public information: from ministers' mobile telephone expenditures and public purchases to budget accountings and organizations' investments. When SISI receives a request, the system chooses the most adequate agency and government official to provide the information requested, if it is a viable request. Once the agency and the official are noticed, they are legally bound to reply to that request through the SISI system within a period of ten days if the information is public and twenty days if the information is not. SISI has proved to be a useful tool: in 2003, there were on average 43 000 information requests, and in 2004, there were 850 requests on average per week. IFAI also handles information requests via telephone and mail, but 93 percent of requests have been made online through SISI.

In its first five years of existence, Mexico's E-Government initiative has registered an impact of transparency. An OECD survey of the Mexican government in 2004 found that over 70 percent of Mexican E-Government officials responding to the survey saw an increase in governmental transparency as the result of E-Government while almost 40 percent saw an increase in trust in government (OECD 2005d).

The value achieved through E-Government is exponential when it moves beyond simply implementing specific initiatives to contributing to driving the actions and expectations of both citizens and public servants by reinforcing a culture of good governance and reform. The immediate Internet exposure of public decisions and accounts, as well as over-bureaucratic, unclear or duplicative forms has in many cases triggered strong direct reactions from users and media, urging the agencies to explain decisions, change existing practices, and to simplify forms and subsequently back-office procedures. It also has a strong incentive on public servants to be more accountable in their decision-making. In the area of administrative simplification, for example, agencies have sometimes used "shaming strategies" as a driver for further simplification among reluctant reformers (OECD 2003a).

As with other public benefits, the challenge remains of developing reliable indicators to measure the impact of E-Government on good governance. Developing a better understanding of the relationship between E-Government and citizen trust is a subject of particular political interest as politicians seek to increase citizen engagement, but public servants also realize that proactive efforts are necessary in order to be responsive to citizen demands. Measures of public value will help governments fine-tune the direction of their E-Government initiatives and to capture unintended effects and externalities in order to generalize good practices across government. Developing comparable measures across countries that focus on outcomes rather than outputs will also help to create an additional external driver for change.

Economic Benefits: E-Government as a Driver for Growth

The relationship between E-Government and competitiveness has been a topic of rising interest in both the United States and the European Commission (EC). In 2004, the EC launched an economic analysis of E-Government impacts which will seek to provide by the end of 2005:

- E-Government impacts economic model
- Predictions and observed outcomes of E-Government impacts
- Policy recommendations to improve E-Government adoption, usability, and outcomes

Supporting a Sound Business Environment

At an aggregate level, individual increases in trust as the result of user satisfaction and good governance as discussed above also have a broader impact on the economy as a whole in terms of creating a safe environment for investment and for doing business. The World Economic Forum (WEF), for example, includes “public trust of politicians” and “business costs of corruption” as components of its Global Competitive Index (WEF 2004). E-Government can reduce corruption by maintaining data on transactions, lessening individual discretion, and providing ways to trace corrupt acts, thus helping to reinforce a culture of accountability.

E-Government can also improve market functioning by promoting the free flow of information. Incomplete and asymmetric information (the unequal possession of information by market actors) is a source of market failure. By publishing information online, governments can reduce information asymmetries and generate economic efficiency. For example, information about healthcare options can improve market efficiency by reducing moral hazard and adverse selection. Regular publishing of macroeconomic indicators (more cheaply and easily diffused over the Internet) also reduces asymmetric information and can lead to more efficient and stable financial markets. Businesses can use available information to conduct analysis, leading to more optimal price setting.

At the international level, businesses can gain access to valuable information, such as import/export processes, market information on sectors and countries, intellectual property protection, currency exchange risks, insurance, licensing rules, and country requirements. E-Government web sites can attract investment by providing useful information, such as foreign direct investment (FDI) and environmental policies. In the European Union, efforts to standardize data across the EU further promote market integration and cross-border electronic public procurement.

As mentioned in the earlier section, reduction of administrative burden for citizens and businesses is a major area of potential E-Government benefits and represents one of the most apparent linkages between E-Government and competitiveness. Empirically, decreasing the costs of interacting with government is associated with greater economic growth. For example, EUROSTAT data analysis in an EC working document on benchmarking enterprise policy shows a negative correlation between level of burden (based on 6 point scale) and average annual growth of employment in start-up enterprises (<9 persons) (European Commission 2000). Public procurement and regulation compliance represent some of the main areas where E-Government can promote competitiveness.

Promoting the Information Economy

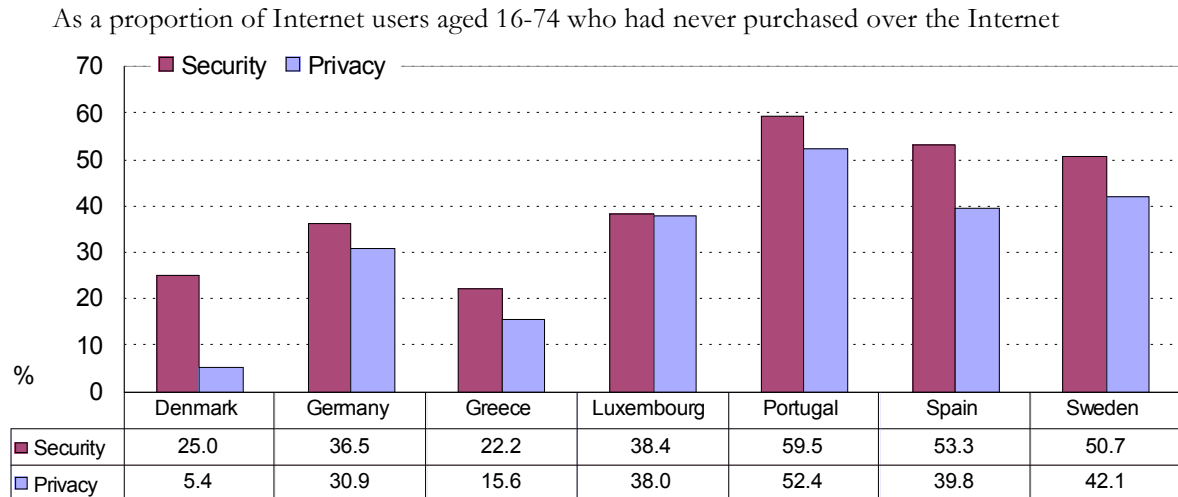
While still a relatively small part of all online transactions, E-Government information and services can benefit from greater familiarity with the innovations and solutions that come from e-commerce and the information society in general to build better services and to draw in more users. But can the relationship work in the opposite direction with E-Government development contributing to IT diffusion in a society?

In its review of E-Government in Finland, the OECD notes that in addition to ensuring access and providing more advanced, secure, and integrated electronic services, increasing adoption of E-Government services requires building users' overall level of experience and skills with regards to both e-commerce and E-Government. In a survey of Finnish ministries and agencies, the two factors that most constrained customer demand for electronic services were identified as “the lack of experience in using electronic services” (70 percent) and “the electronic service delivery not seen as sufficiently advanced” (60 percent). These are followed by other factors, namely security and privacy issues, lack of access, and insufficiently joined-up/integrated electronic services in the public sector (OECD 2003c).

Experience with electronic service delivery not only reinforces ICT competency and familiarity, but may also serve to increase overall confidence in electronic service delivery, provided that

governments ensure the privacy, security, and technical level of service that users expect. Consider the example of server failure during rollout of French Copernic system.

Figure 3. Proportion of Internet users aged 16-74 reporting security and privacy¹ concerns as main reasons for not purchasing over the Internet, 2003



1. Eurostat question wording is “Security concerns/worried about giving credit card details over the Internet” and “Privacy concerns/worried about giving personal details over the Internet”.

Source: Eurostat, Community Survey on ICT usage in enterprises, 2002 and 2003, October 2004.

The provision of online governmental services generates awareness of the capabilities of ICT. Leading by example, governments produce a demonstration effect which can increase the adoption of ICT and e-business in the economy. Furthermore, governments can promote innovation and modernization by exhibiting emerging technologies and business processes. ICT can have far reaching impacts on economic performance and the success of individual firms, in particular when it is combined with investment in skills, organizational change, innovation, and new firm creation. The impact is compounded when demonstration projects foster public and governmental support for other E-Government priorities. In addition to these benefits, E-Government programs can foster a culture of online security through the setting of E-Government security standards.

Creating Business Opportunities

The outsourcing of services and the development of public private partnerships also creates many opportunities for government to extend its business model for service delivery and/or for private firms to develop complementary services, either as service providers to government, as direct intermediaries between government and citizens and business or by developing new value-added services based on governmental data and platforms. Better and more equal access to government information of all types (e.g. research, regulations, analysis, statistics, etc.) can enable new business opportunities or improvement in current activity.

As a consumer of ICT goods and services, governments themselves can play a role in stimulating market demand, in particular as government ICT spending tends to be less influenced by cyclical market downturns. The OECD has identified an impact of the ICT sector on multifactor productivity growth, and as the ICT industry is characterized by high entry rates of new firms, it is therefore a potential engine for growth (OECD 2003b).

The TYVI (Information from Companies to Public Authorities) project in Finland provides an example of new business opportunities generated through E-Government initiatives. In 1997, the Finnish Ministry of Finance established the TYVI project in order to simplify business-to-government (B2G) reporting of financial data through private brokers. The system allows data to be reported only once to one broker which then transmits the data to public authorities upon request. TYVI operators are paid by public authorities according to the volume of data received (along with a monthly connection fee). In fact, however, this is not their main source of income. While companies report to the brokers free of charge, there has been strong demand for complementary services, such as improving the integration of data collection into business software packages. Additional value-adding services can range from converting data into different formats and transferring data to management for monitoring and ongoing support. The TYVI model has seen adoption grow by a factor of five in the period 1999 to 2002 and has demonstrated strong benefits for all parties: the government has improved access to business data at a low public cost, private companies have simplified their reporting relationship to government and have access to market-based complementary services where needed, and the five TYVI brokers are developing a new and expanding market (OECD 2003c).

Conclusion

Current available data on the impact of E-Government remains, for the most part, limited to financial benefits for government, citizens, and business. Such data is probably sufficient for the purposes of decision-making on individual ICT investments. The realization that E-Government cannot be treated as a separate, parallel channel to government, however, has led countries to reassess how they measure E-Government benefits, as well as the objectives of E-Government projects and the concept of E-Government itself.

Insofar as there is a link between government performance and economic growth and equity, then E-Government can be expected to also show benefits in these areas provided that it focuses on supporting broader government objectives. Better indicators are needed and initiatives by the OECD, the European Commission, and national governments are working to fill this need. A more complete understanding of the impact of E-Government will help governments adjust the focus of their E-Government initiatives and to better align them with government as a whole.

References

- Bouckaert, G. 2003. Comparing measures of citizen trust and user satisfaction as indicators of “good governance”: Difficulties in linking trust and satisfaction indicators. *International Review of Administrative Sciences* 69(3):329–343.
- Bouckaert, G. and S. Van de Walle. 2001. Government performance and trust in government. Paper presented at European Group for Public Administration Annual Conference, Vaasa, Finland, September.
- Deloitte Research. 2004. Citizen Advantage: Enhancing Economic Competitiveness Through E-Government. Deloitte Development.
- Dunleavy, P., H. Margetts and S. Bastow. 2005. NPM is Dead — Long Live Digital-Era Governance.(unpublished paper).
- European Commission (EC). 2000. Benchmarking Enterprise Policy. Brussels, Belgium: European Commission.
- Hart-Teeter. 2003. The New E-Government Equation: Ease, Engagement, Privacy & Protection. Washington D.C.: Council for Excellence in Government.
- Holzer, M., J. Melitski, S. Yong Rho, and R. Scwester. 2004. “Restoring trust in government: The potential of digital citizen participation.” Washington D.C.: IBM Center for the business of Government.
- Institute for Citizen-Centred Service. 1998. *Citizens first*.
<http://www.ics-isac.org/eng/pubs/CF%2098%20Sum.pdf> accessed 26th February 2005
- IADBC eGovernment Observatory. 2005. Background Research Paper: The impact of e-government on competitiveness, growth and jobs. European Communities.
- Kampen, J., K. Snijkers and G. Bouckaert. 2005. Public priorities concerning the development of e-government in Flanders. *Social Science Computer Review*. 23(1):136–139.
- Kelly, G., G. Mulgan and S. Muers. 2002. Creating public value: An analytical framework for public service reform. London: UK Government Strategy Unit.
- Larsen, E. and L.Rainie. 2002. The rise of the e-citizen; How people use government agencies’ Web sites Washington D.C.: Pew Internet and American Life Project.
- Maithel, S. 2005. Advancing E-government as a Factor of Competitiveness in Europe. Policy Analysis Exercise, John F. Kennedy School of Government, Harvard University.
- National Office for the Information Economy (NOIE). 2003. *eGovernment Benefits Study*. Canberra, Australia: NOIE.
- Nye, J. 1997. Introduction: The decline of confidence in government. *Why People Don’t Trust Government*, ed. J.S. Nye, P.D. Zelikow, and D.C. King. Cambridge, Mass.: Harvard University Press.
- OECD 2001. *Businesses’ Views on Red Tape*. Paris: OECD

- OECD. 2003a. *From Red Tape to Smart Tape: Administrative Simplification in OECD Countries*. Paris: OECD.
- OECD. 2003b. *ICT and Economic Growth — Evidence from OECD Countries, Industries and Firms*. Paris: OECD.
- OECD. 2003c. *OECD e-Government Studies: Finland*. Paris: OECD.
- OECD. 2003d. *The e-Government Imperative*. Paris: OECD.
- OECD. 2004a. *Information Technology Outlook*. Paris: OECD.
- OECD. 2004b. *The economic impact of ICT: Measurement, evidence and implications*. Paris: OECD.
- OECD. 2005a. *Costs and benefits of e-government: identifying public benefits*. Paris: OECD[GOV/PGC/EGOV(2005)6]
- OECD. 2005b (forthcoming). *E-Government for Better Government*. Paris: OECD. [GOV/PGC/EGOV(2005)1]
- OECD. 2005c (forthcoming). *Modernising Government*. Paris: OECD. [GOV/PGC/RD(2005)2]
- OECD. 2005d (forthcoming). *OECD e-Government Studies: Mexico*. Paris: OECD. [GOV/PGC/EGOV(2005)2]
- OECD. 2005e (forthcoming). *OECD e-Government Studies: Norway*. Paris: OECD. [GOV/PGC/EGOV(2005)3]
- Taylor Nelson Sofres. 2003. *Government Online Study 2003*. TNS Global.
- PRS Group. 2005. *International Country Risk Guide*. East Syracuse, N.Y.: The PRS Group.
- World Economic Forum. 2004. *The Global Competitiveness Report; 2004–05*. Davos, Switzerland: World Economic Forum.