

An Enabling Environment and Economic Zones for Private Sector Development in Bangladesh

South Asia Regulatory Reform and
E-Governance

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Subhash Bhatnagar
Executive Chairman
Indian Institute of Management

Foreign Investment Advisory Service
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1 Introduction

Governments need to develop a vision and strategy, create an organization to support and catalyze e-government, build human capacity, and enact policies that will attract private investment in infrastructure and application development. This paper is written to serve as a basis for discussing the role of government as an enabler, regulator, and provider of ICT based services. The paper presents developments in the area of e-government in Asian countries. It discusses the kind of applications that have been developed to promote business, investments and economic growth, benefits that have been delivered, and the reasons why many developing countries in the world have been quick in adopting e-government. Several factors that are necessary for building effective e-government applications are identified on the basis of an analysis of success and failures of e-government applications that have been developed so far.

Improvement in delivery of Government services is an important issue for many developing countries, as poor service delivery is an impediment to economic growth and the largest cost of inefficiency in social services is borne by the poor. Electronic delivery can improve efficiency, cut delays, and increase transparency. A variety of Government service applications that focus on online delivery to businesses and citizens, and to different arms of government are covered within the broad definition of e-government. E-government reforms the way Governments work, share information and deliver services to external and internal clients. Specifically, e-government harnesses information technologies (such as Wide Area Networks, the Internet, and mobile computing) to transform relations with citizens, businesses, and other arms of government. The resulting benefits can be less corruption, greater convenience and lower costs for business in transacting with Government, increased transparency, revenue growth and cost reduction for Government¹.

2 Reasons for Adoption of E-Government by Developing Countries

E-government is primarily driven by a growing demand for better services from investors and citizens, who now experience vastly improved services from the private sector. Some other factors that have contributed to the growing popularity of e-Government are discussed below.

There has been a considerable demonstration effect of the constructive difference that e-government has made in advanced economies in the delivery of services, provision of information and internal administration of the public sector. Many developing countries that have developed significant capacity in building IT applications feel that they can leapfrog to take advantage of the new electronic channels that are available for delivering government services.

In the last decade, several countries have gone through a process of economic liberalization and economic growth. Many large countries like India and China have grown at 6 to 10 percent per year over the last decade. Having completed the first phase of economic policy reform, such countries are now moving to the next phase of reform i.e. governance reform. Since e-government pilots have demonstrated a positive impact on corruption, transparency and quality of service, these countries see e-government as an effective tool for governance reform.

There is significant intra-governmental competition between government departments that are eager to move forward in implementing e-government. Successes are a source of pride. Some countries have already demonstrated that the best consequence of their experimentation and innovation in this field is competition with developed countries. So, for example, Brazil launched an electronic voting system: they are very proud that it is a better system than that of the United States, and it seems this has become an incentive for countries to catch up with the developed world

Spread of the Internet in the urban areas of many developing countries is starting to create a critical mass, not as considerable as in most developed countries, but large enough to lead the government to deliver online services. In the large and highly urbanized countries of Latin America or Asia, it has thus become possible to deliver e-government services. In many of the places where e-government has been introduced, it has shown that it can work, and it can have a wide impact on government efficiency and effectiveness.

3 Variety of Applications and Delivery Models

Applications of e-government can be categorized according to the constituency that they serve:

- Delivery of services to citizens: Services have been made convenient, and easy to access. Delays have been reduced. The rules governing service can be made transparent, and consistent across different branches of the same department. Certain Government departments have even been able to reduce corruption through e-governmentⁱⁱ.
- Delivery of Services to Business and Industry: Business and industry are concerned with the cost of setting up a business. A significant component of this cost is the administrative permissions and licenses that must be obtained to establish and operate a business. Electronic delivery can lead to quick turnaround of license applications and to an overall reduction in costsⁱⁱⁱ. Additionally, rules can be made transparent and consistent across departments. Corruption, which may form significant part of business start-up costs, can be reduced, making the business more competitive.

- Increased Efficiency of Departments: E-government can lead to lower cost of operations and higher productivity. Governments in Asia are however often unable to realize this benefit, as they are unwilling or unable to cut down the number of employees in their service after the introduction of electronic delivery.

Significant reduction in costs can result from a paperless environment with electronic document flow from workstation to workstation for approval and action^{iv}. Often, the data captured by the electronic system enables tighter monitoring of productivity of employees, easy identification of pressure points for delay and corruption, and accumulation of historical data that can be easily mined for policy analysis. Another significant advantage is the ability to share data across agencies and departments in electronic form.

Countries have used three distinct delivery models:

- Departments going Online: Here, citizens interact with departmental/private operators who access data and information from online terminals located in the premises of the department. If care has been taken to reengineer the back-end processes, significant benefits can be delivered in terms of time, costs, and number of trips to the department. Such a model tends to result in greater departmental ownership, enabling significant re-engineering of processes. However, even though each department becomes more efficient, citizens still need to visit a different departments.
- Conveniently located Government Service Centers in public places: Multiple services are offered at each Government location: payment, issue of licenses and certificates. Such counters can quickly move traffic from departments to service centers (as happened in the case of eSeva in Andhra Pradesh). Building such centers, which must deal with several departments, requires significant coordination and perhaps the setting up a separate agency. Services from municipal, state, and federal governments can however be offered under one roof in this manner. Many countries have outsourced the establishment of these centers to private operators who provide other value-added services^v.
- Self Service through a Portal: Portals are designed to offer a variety of services and an interface organized in a fashion that makes it convenient for business and citizens to access their services (using a lifecycle approach as in UK and Singapore^{vi}). Complete back-end computerization is needed and usually there is a middle ware, which directs requests for access to information from different departmental data bases/web sites is required for this to function. Integration at the back-end is needed for data sharing. There should be policies governing data definitions, structure of data, and the layered architecture of individual departmental applications. Such self-service delivery naturally presumes a high Internet penetration; as well as willingness and ability of citizen to use the portals. This in turn requires security and mutual trust (which builds with each successful outcome). Many projects have experienced a slow build-up of usage. For

example, in eSeva, less than 0.1% of transactions take place through the portal, even though almost all medium and large businesses and 2-3% citizens have access to Internet. Adoption rate has to be driven by conscious actions, including by offering training and other incentives. Building a portal also requires strong centralized leadership for extensive co-ordination. Even then, the goal of coordinated Government, where a particular service requires approvals from many different departments, is difficult to achieve.

4 Some Examples of Successful Projects from India and Other Asian Countries

In many developing countries, a very large number of Government departments publish information on Web sites. By and large, these sites are *poorly designed, not updated, and do not take responsibility* for the quality of information. Initially, this effort was targeted at information sharing to attract foreign investments, but as Internet penetration grows in urban areas, many sites now increasingly focus on delivering information and services to businesses and citizens.

The table below analyzes documented case studies of e-government applications from different developing countries. The table lists the countries where such applications have been developed and identifies a few benefits that have been realized. These applications represent *the low hanging fruit*; applications that deliver significant benefits and yet are not difficult to implement:

Application	Examples	Social and Economic Impact
1. Delivering Citizen Services		
Payment of property taxes, Issue of Land titles	CARD in AP, Karnataka, Maharashtra, BHOOMI in Karnataka	Transparency, faster processing for citizens, reduced corruption, increased productivity for offices
Income tax on-line	Singapore, Brazil, Jordan, Chile, Mexico	Convenient, quicker refunds, Better compliance, cost savings, Convenience of filing tax returns/ quicker refunds
Issuance of driving licenses, motor vehicle registration, passport, birth certificates, and social security and collection of fines	Citizen Service Center (Mobile and in-shopping Malls) Bahia (Brazil), FAST in Hyderabad, Gujarat, Karnataka (India)	Cut delays, combined several services under one roof, reduced corruption, reduction of intermediaries
On-line issuance/payment of electricity, phones, and water bills, and fines	E-Seva in Hyderabad, FRIENDS in Kerala	Convenient locations, quicker processing time, customer does many tasks in one visit
2. Delivery of Services to Business and Industry		
E-procurement	Mexico, Philippines, Bulgaria, Brazil and Chile	Reduced advertisement costs, lowered costs due to better prices, transparency
New business registration	Jordan, Jamaica, China	Cut down time and number of visits
Tax collection (Sales Tax, VAT, and Corporate Income Tax)	Gujarat check post, Cameroon, Chile, Singapore and Mauritius	Cut down time and number of visits, Convenience on filing tax returns/quicker refunds, Increase in revenue collection for Government

Application	Examples	Social and Economic Impact
Customs on-line	A total of 70 countries such as India, Jamaica Philippines, Tunisia, and Mauritius	Quicker clearance, less corruption
Trade facilitation	Dubai, Yemen, Tunisia, Mauritius, and Singapore	Quick turnaround of ships in ports
Municipal services	OPEN Seoul Municipalities in India, and Latin American countries	Quick permissions and issuance of licenses, access and permissions
3. Internal Efficiency: E-mail and Electronic Workflow in Government		
Use of email and video conferencing	Many government offices	Faster communication, less travel
Document management and work flow for paperless operations	SmartGov in AP	Speed of file disposal, traceability of actions, greater accountability

Electronic delivery of services to citizens and businesses attracts investors to start new business ventures. New ventures in service sectors go to places where it is easy to attract high caliber employees. Employees are attracted to places where citizen services are efficient and convenient. E-delivery of services such as business registration, property registration, land titling, tax payment, e-procurement, and getting municipal permissions and licenses, reduce the cost of starting and running a business by 10—20%. Hyderabad in India became a favored destination for the software industry and attracted a variety of institutions because of its image of an efficiently administered city where a large number of these services are delivered electronically. The eSeva application of AP is a one stop shop where 150 services from Municipal, State, Central Government and private sector are offered electronically. Business and citizens can avail of these services from any of the 40 service centers, special counters in several Banks, ATMs, specially designated cyber cafes, and from homes via the Internet. Nearly 1.6 million citizens and businessmen use its services every month.

5 How to build successful e-government applications?

- *Significant Process Reengineering is required:* Successful implementation of projects requires that there be a *clear focus on the purpose for which the application is being built*. The intended beneficiaries of the application must be identified, and the benefits that will accrue to the stakeholders concretized. For successful reforms, existing methods and procedures need to be mapped and *significantly reengineered*.^{vii} An important aspect of initiating e-government is to document the existing procedures, and simplify them in a manner that tasks can be completed in as few steps as possible without compromising their basic purpose. Often, the original purpose of carrying out certain tasks has been lost or forgotten. A process of simplification of documents, workflow, points of approval, and audits is required. Most e-government applications which have

proved successful in reducing total processing time and costs have done so through substantial process reengineering.

- Introduction of technology means changes in the way work is done. All of this produces considerable resistance from the lower levels of civil servants. A great challenge in implementing e-government is to overcome this resistance through education and training. E-government projects have to consciously strive to provide benefits to civil servants, as they are the ones that tend to lose power and authority over citizens when electronic delivery of service is introduced. E-government projects need to focus on making the entire process of decision-making more transparent. This takes away the power of patronage. On the other hand, inability to stall work can be noticed easily because both the public and the supervisors now have the capacity to track information and its application, as they move from workstation to workstation.
- E-government does not however mean that all the steps in the delivery of a service should be handled electronically. Significant benefits can still be derived by handling just a few of the critical components electronically. In Chile, for instance, the e-procurement system announces the requirements of the government on a web site, but handles the bids in a manual mode. However, registered suppliers for the needed product/service are sent an email to broaden the choice of suppliers. Once the bids have been processed manually, the results are announced electronically on a website. Significant costs have been saved in Chile because of expanded supplier choice and the making of the whole process of selection of suppliers more transparent. Yet the core process of bidding continues to be manual^{viii}. There are many examples where some components of an electronic service delivery continue to be handled manually^{ix}. Yet, in all of these examples, significant benefits have been delivered to the users in terms of reduced time and corruption.
- Successful implementation of projects requires that there be a *clear focus on the purpose for which the application is being built*. The intended beneficiaries of the application are identified, and benefits that will accrue to the stakeholders are concretized. In fact, specific benefits like a reduction in time or in the number of trips to an office need to be targeted and made public. It is only then that the process of reengineering can work.
- *Strong Project Management* skills are needed. Project managers need to clearly identify the goals and benefits of their e-government initiative in concrete terms. It should be noted that this task is often vast, and thus unmanageable within the resources that are internally available to a Government department. Adoption of established standards and protocols can minimize customization. If off-the-shelf software is available it should be used instead of reinventing the wheel^x. While systems analysis, which provides the necessary cues for reengineering, should be done internally, design, software development, data preparation, training, etc. can be easily outsourced.

- *Training* expenses should not be minimized. Successful projects typically spend about 10% of their budget on training^{xi}. Awareness about benefits of e-government has to be created amongst senior civil servants and political executives. Training is required for Project leaders who need to define project deliverables, deal/negotiate with consultants and vendors, and manage an outsourced development process. Clerical staff needs to be trained in specific applications. Supervisors and managers also need to be trained in using information. Moreover, citizens need to be made aware of online services and how to transact business through portals

- One of the important steps in preparation for e-government is the building of capacity to manage its implementation. States like Andhra Pradesh in India, which is considered a pioneer in implementation of e-government in South Asia, have invested heavily in the training of chief information officers. Andhra Pradesh trained nearly 120 handpicked officers at the middle and senior levels in 3-4 month intensive residential programs. These trainees were expected to take leadership positions for implementing e-government across 70 departments. The training provided an exposure to technology so that the trainees could comfortably deal with private sector partners in procuring various products and services. Analysis and design of systems, management of projects, reengineering of administrative processes, and management of change are the other important topics covered in these training programs.

- *Partnership with the private sector* can be useful as the private sector has significant experience in developing IT applications. Several types of partnership arrangements can be used. For smaller countries, it may be possible to find a single partner for the entire e-government effort (not just a specific project), including for producing the guidelines for design, process reengineering, software development and procurement, and providing training. Otherwise, multiple partners may be used for different tasks. The choice of partners can include multinational management consultants, IT vendors, and local companies. The tasks of partners can be defined in many ways. Partners may be asked to build; or to build and operate; or to build operate and transfer. Whatever the partnering arrangement, it must lead to building of local capacity. If private sector partners are involved, contracts should be drawn up in a way that is fair and equitable for both parties — i.e., the Government and the private sector. The private sector is entitled to reasonable profits through its involvement in e-government initiatives.

6 E-government Readiness: Role of Governments

There are several dimensions to e-government readiness.

One aspect of readiness is the maturity of technical infrastructure and back office use in various departments. For example, use of email across Government departments would be indicative of advanced readiness. Readiness also depends on the attitudinal make-up of the civil service. Willingness to reengineer, share more information, and treat the citizen as a customer, indicate high readiness.^{xiii} A final aspect of readiness is an aware and demanding citizenry, which understands its rights, is willing to express them, and is willing to fight for them in case of laxity and inefficiency. By publishing performance data and citizen charters, e-government can be an effective instrument for promoting citizen awareness.

Delivering e-government services requires a high penetration of Internet in homes or presence of a large number of public Internet kiosks. Handling e-payment and building trust between citizens and government in doing transactions over long distances also requires an enabling legal framework.

The role that governments play in enhancing the readiness for electronic delivery of services encompasses a “doer” role (delivering government services electronically) and an “enabler” role (encouraging the private sector to deliver electronic services). Governments need to develop a vision and strategy, create an organization to support and catalyze e-government, build human capacity, and enact policies that will attract private investment in infrastructure and application development.

Developing a vision and strategy: Governments wishing to move forward with e-government should choose application areas where electronic service delivery will be promoted. For the purposes of promoting investment and economic growth, governments should identify those services where contacts with business are frequent. Often, departments that are known to be corrupt are also high priority. The reform priorities should be linked with the overall political objectives of the Government – whether to attract investment, to tackle corruption, or to increase revenues from tax collection. Piloting of e-government through a few “quick strike” projects is important, as the benefits need to be demonstrated to citizens and civil servants. Such pilots also help in understanding the importance of reengineering processes and managing change.

E-government can be built in stages after “the big picture” is in place. First, online service delivery should be provided within a set of chosen departments. Later many of these services are delivered online, under one roof, at conveniently located centers. Then, all the services are web-enabled and offered through a single portal. An assessment of the networking infrastructure and Internet penetration is necessary to determine the kind of delivery models that are viable. Building e-government through these stages requires a great deal of coordination amongst departments. Ministerial level co-ordination committees need to be formed.

No Government is completely ready on all the above dimensions. Some governments therefore hesitate to make a beginning. The experience of some countries suggests that organization and coordination can be overemphasized at the expense of action in

implementation^{xiii}. This lack of balance between planning and action can result in demoralization amongst the champions.

Departmental ownership of e-government is vital because no external agency fully can drive the kind of change that is needed to implement e-government. Furthermore, long term sustainability can only be ensured if the innovation is not championed by just one individual administrator but is owned by the entire department. However, if the implementation of e-government is left entirely to a department, then resources get wasted, and data-sharing may be hampered. This would make it difficult to deliver those services where a large amount of documents and data must be shared across departments. Also, each and every department may not have the capacity to use the correct methods and latest design techniques for developing the required application. E-government efforts should therefore be supported by a central agency, which can provide necessary guidance in the use of the correct methodology.

For countries where a central e-government support agency needs to be created, the role, mandate, and size of the central support agency needs to be defined. Its appropriate home has to be established. Some of the tasks to be performed by a central agency are: assessing and enhancing preparedness; developing a strategy and implementation plan; building shared infrastructure; finding resources for re-engineering, application development and change management; developing guidelines, standards, and best practices; developing public private partnerships; identifying departmental champions; monitoring progress and impact; and overseeing a few “quick strike” projects.

Governments also need to create an incentive system so that departments can take the lead in proposing and implementing electronic service delivery initiatives. Policies need to be defined which enable departments to charge a user fee when the quality of delivery is significantly upgraded. If the departments are allowed to retain the user fee and make investments to build new delivery systems, this can serve as a strong incentive for e-government applications.

Systematic evaluation studies need to be conducted to measure benefits during and after implementation. So far, the benefits of e-government have been largely anecdotal. Evaluation studies should be carried out by independent agencies, and stakeholders must be asked to indicate the benefits that have been delivered and problems that continue to be faced. Serious evaluations can provide feedback for a national strategy, as well as for the design and implementation of subsequent individual projects. Some of the projects that were deemed to be successful (and were awarded prizes by international organizations) have started faltering. Even in India, which is generally viewed as a leader in e-governance, a World Bank sponsored evaluation of four projects in India indicates that two projects are moving towards a failure^{xiv}.

In conclusion, e-government can advance the agenda on Governance and fiscal reform, transparency, anti- corruption, empowerment and poverty reduction. Its potential is recognized but its implementation is difficult. Pioneers in several countries have shown that gains can be real and projects can be implemented successfully.

ⁱ For a comprehensive definition of e-government and examples of cases where these benefits were delivered, see World Bank web site on e-government <www1.worldbank.org/publicsector/egov>.

ⁱⁱ 2 See the OPEN case study in Seoul where corruption has been lessened in the issuance of licenses by the municipal corporation by enabling on-line tracking of application status combined with several other measures. <<http://www1.worldbank.org/publicsector/egov/seoulcs.htm>> Also see the BHOOMI case in Karnataka, India, which illustrates reduction in corruption in the issuance of land title certificates to millions of farmers http://www1.worldbank.org/publicsector/egov/bhoomi_cs.htm.

ⁱⁱⁱ See the examples of business registration in China

<http://www1.worldbank.org/publicsector/egov/zhongguancun_cs.htm> , where the processing time has been cut significantly.

^{iv} See the example of SmartGov in the Andhra Pradesh Secretaria, in India.

^v For a detailed description of private operators running service centers in Andhra Pradesh, see the description of the e-Seva centers in the city of Hyderabad, India <<http://www.ap-it.com/eseva.html>>.

^{vi} The UK Government online portal is organized so that a citizen can access services in multiple ways. In the case of Singapore, services and information are categorized into 15 e-towns, which cater to various essential touch-points in life -including Business. For details, see www.ukonline.gov.uk and www.ecitizen.gov.sg.

^{vii} ^{vii} See the examples of business registration in China

<http://www1.worldbank.org/publicsector/egov/zhongguancun_cs.htm> , where the processing time has been cut significantly.

^{viii} For more details on the Chilean e-procurement system and the site operated by a private sector company, please see <http://www1.worldbank.org/publicsector/egov/eprocurement_chile.htm>.

^{ix} For most of the applications documented by the World Bank site, payment is made in the traditional manner. For example, radio frequency auctions in Canada and the US are done online in a multi-staged process, but the final payment by the successful bidder still comes in as a check <www1.worldbank.org/publicsector/egov>.

^x For example, many countries have implemented software called ASYCUDA developed by UNCTAD for implementing online customs clearance. <www.asycuda.org/default.asp>

^{xi} The case study on Computer Aided Registration of Deeds (CARDS) on the World Bank web site provides details of expenditure on various facets of implementation. <www1.worldbank.org/publicsector/egov/cardcs.htm>.

^{xii} Attitudinal changes are difficult to bring about, unless there is a champion at the political level and strong leadership within the department. Departmental champions need to be identified and co-ordination committees created at departmental levels.

^{xiii} This observation is based on e-government mission work carried out in these countries by the author on behalf of the World Bank and the Commonwealth Secretariat.

^{xiv} See the evaluation reports at <http://www1.worldbank.org/publicsector/bnpp/gksp1.htm>.