

The Socio-Economic Impact of e-governance: Indian Scenario

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Abstract: Today Information Communication Technology (ICT) constitutes the fastest growing component of the global economy and the revenue generated by the interactive information industry may have reached \$3.5 trillion. Recently, the Indian Government has set the target of delivering at least 25 percent of its dealings and services electronically. In this regard, the Indian Government's major policy measures have been defined in terms of computer density, connectivity, content, cost and cyber laws. E-Government can advance the agenda on governance and economic reform, transparency, anti-corruption, empowerment and poverty reduction. In conclusion, one needs to understand that after two decades of e-commerce, e-governance and e-citizen, India remains one of the poorest countries in the world with 44.3 percent adult literacy rate, 25 percent people without health services, 71 percent without access to sanitation, 35 percent living below the poverty line, \$100 billion external debt and 128th rank in the recent Human Development Index. E-governance must show more than this dismal scenario of human conditions in India. But it is yet to be seen whether e-governance can eradicate poverty, reduce inequality and satisfy basic human needs in a poor country like India.

Keywords: Socio- Economic impact. E-governance, Indian Scenario.

1. Introduction

Given the number of cyberspace initiative recently announced by the Central and State Governments of India, it almost seems as if "e-government" will be as important a mantra in India as "e-commerce" in the first few years of the new millennium (MMRao, 2003). By many measures, the problem of poverty is no more severe anywhere else than it is in India, which still has the world's largest number of poor people in a single country. Thirty five percent of its billion plus population lives on less than US\$ 1 per day and around 86 percent of Indians, more than 900 million people, manage to survive on incomes of less than US\$ 2 a day. Although the much-heralded economic reforms of recent years have led to impressive levels of economic prosperity and the creation of a middle class, the distribution of wealth in India continues to be highly uneven. Further-more, despite reductions in India's poverty level during the 1970s and 1980s when farmers prospered, poverty reduction efforts stagnated during the 1990s, along-with declines in agricultural growth, a slowing of growth in agricultural incomes and price rises of basic food staples. The causes of these set-backs, according to the World Bank, lie in the nation's fiscal crisis, which reduced the ability of the Government to underwrite technological change for agriculture and development of non-farm economy, and in over-regulation of agriculture, forestry products, agro-industry, and the non-farm economy, which benefits neither farmers nor the poor. Others point to high rates of illiteracy, enduring social exclusion, population growth rates that exceed economic growth and protectionist policies that inhibited foreign investment (Roger Harish & Rejesh Rajora, 2006).

Social Environment

The social environment of each of the projects in the study is made up of the local factors that comprise the intended beneficiaries, their social make up and condition, both before and after the project was implemented, as well as any influence there has been on the relationships within the community. For example, one often-quoted impact of rural Information Communication Technologies (ICTs) is on the relationship between farmers and traders, whereby the negotiating power of middlemen, which is based on their monopoly over trade information, becomes balanced more in favor of the farmers who can use Information Communication Technologies (ICTs) to obtain the same information that the traders previously with held Information Communication Technologies (ICTs) impacts in rural projects are often sought in gender relations, advancing women's equality, and in increased incomes, directly reducing income poverty (Senthilkumaran, S. and Arunachalam, Subbaiah, 2003).

E-Governments Service

Attention must also focus on grass-roots reaction to and utilization of e-government services, and A Ram, Chief Sub-Editor at The Hindu Newspaper. There is apprehension among some Government employees the e-government may involve reduction of government jobs; and those who actually do launch e-government initiatives must be responsive to e-mail queries and not-just be content with publishing reams of Government statistics online. Good case studies and success stories of e-government must be documented, urged A Ram. For instance, the Gujarat Road Transport Department's computerized check-post project has eliminated corruption posts on the state's borders, and increased revenue from Rs.60 crore in 1998-99 to Rs.250 crore in 1999-2000 (44 rupees = 1 USD; 1 crore = 10 million).

Non-state Actors

E-government also has a role for the private sector, academic institutes, the news media, and NGOs. Companies active in e-government services in other parts of the world – such as IBM, EDS and NCR – are stepping up operations in India as well. “ Our kiosk solutions offer e-government services like payment of traffic fines, utility bills, land and income taxes, and provident fund payments in Singapore. Our partners in Southeast Asia include Singapore’s DBS Bank and Malaysia Airlines, “ said Srinivasa Rao, business head for self-service solutions at NCR India. NCR’s business clients for kiosks solutions, cash dispensers, ticketing machines, check clearance, barcode scanning and data ware housing include leading airlines, telecom providers and retailers; it also provides government services in Brazil and Egypt. Large International Companies like NIIT and Aptech are playing a big role in skill building and software solutions for e-government ; but this leaves out many of the smaller Information Technology (IT) players who cannot tap into these government contracts, complained Hari Padmanabhan of Unitech Computers. In addition to offering services like examination results online, academic institutes must gear up for re-orienting their syllabus towards new media, said Leela Rao, Academic Director at Manipal Institute of Communication. Indian Universities also need to create databases of their academic publications like journals and dissertations, an area where academic publishing in India considerably lags behind its counterparts in the West.

IT Triangle

While the “IT Triangle “ of the cities Bangalore, Chennai and Hyderabad is showing good progress in e-government, other areas need to catch up fast. Today, most State Governments in India have some degree of departmental computerization under way; many have basic informational websites, and some even have **IT Secretaries and IT Parks**. Tamil Nadu is making notable progress in online citizen services in Tamil and English, especially Web-based information about land records, birth/death certificates, subsidy schemes, GIS systems, college admission forms, and examination results. “ One must not under-estimate the cultural problems involved in creating such team spirit and open sharing of knowledge, “ warned Anandkrishnan. In addition to “ pushing “ information from government to citizens, the Internet can also open up a channel for citizens to communicate their grievances directly to Government, said P.Subramaniam, a World Bank consultant on e-government. Such public grievances can be aired online for electricity cuts, water supply, phone connections, ration cards, sanitation facilities, and transport services.

Analysis of Social and Economic Impact

The scope of e-government as it is implemented today is not wide enough to have generated a macro level impact which is discernible through studies of macro indicators. Investments in e-government are relatively small to have created such a macro impact. Tables had presented a number of applications that have demonstrated a variety of economic impacts both direct and indirect, and short term and long term. The following

types of economic impacts have been demonstrated: increase in revenue collections in government, increasing attractiveness for investors, improving service delivery to business, improving transparency and reducing costs in government procurement, and improved financial management in Government.

The following Table also catalogued applications that have demonstrated a social impact in different countries. The following types of social impact has been demonstrated: poverty alleviation, empowerment of citizens, increased transparency, and lowered corruption in service delivery ten of the applications that demonstrate a social or economic impact have been included as a one page case study in this report in section. These cases will help the reader to understand the context of the application. The table below conceptualizes how E-Government applications help in achieving the social and economic impacts. Remaining part of this section then analyzes the What and How of economic and social impact of E-Government on the basis of the ten applications presented as case studies.

Social Impact

a) Increased Transparency and Reduced Corruption

Although few Governments have explicitly stated transparency as a goal, some transparency gains have been achieved through e-applications. The website received favourable attention in the press and enabled transparency. While there has been initial success. The system allowed the public to track the process from beginning to end. The success of the system is attributed to the commitment from the Mayor, who led the initiative. Another success factor was the re-engineering, greater access to information, improved communication with citizens, which led to greater transparency overall. In the case of CARD the land property registration system in A.P., reducing corruption was deliberately never a stated goal of the project because it was feared any project with explicit goal to curb corruption would encounter greater resistance from employees. In A.P’s case, corruption was reduced as a result of reducing the number of intermediaries.

b) Increasing Efficiency and Effectiveness of Service Delivery.

Many projects have boasted impressive efficiency gains in terms of cutting the number of steps involved, cutting the timeframe, and reducing the number of agencies that need to be consulted. These gains have been achieved because processes get automated requiring less time. Some of the efficiency benefits reported by different applications are:

- Faster processing, shorter wait, and shorter queues
- Less number of trips to Government offices: saves transport cost and avoids wage loss.
- More accurate and legible documents, easy recovery from errors, better reception areas.
- Lesser corruption and more transparency
- Improved access to offices (delivery points are closer and sometimes available 24 X7).

There are fewer intermediaries.

The table below presents several examples from e-government applications.

Examples of Efficiency Gains

Country	Type of Application	Number of days to process before application	Number of days to process after application
Citizen's Service centre, Bahia, Brazil xvii	Registration of 29 Documents	Several days	20-30 minutes per document, 1 day for business licenses.
Chilean Tax System on-line xviii	Filling taxes on-line	25 days	12 hours
CARD, A.P., India	Valuation of property	Few days	5 minutes
CARD, A.P., India	Land Registration	7-15 days	2-3 hours
Bhoomi, India, Karnataka	Updating Land Registration	1-2 years	30 days for approval, request completed on demand.
Bhoomi, India, Karnataka	Obtaining land title certificate	3-30 days	5-30 minutes
Interstate check posts, Gujarat xix	Collect fines for over loading	30 minutes	2 minutes

C) Combating Corruption through E-government

E-Government applications reduce corruption in the public sector:

- Introduce transparency in data, decisions/actions, rules, procedures and performance of Government agencies.
- Automates processes to take away discretion from civil servants to delay and deny a service.
- Provide a convenient entry point for simplification of rules and re-engineering processes. Almost all applications have done partial re-engineering.
- Make decisions traceable so that action can be taken in case of a complaint.
- Builds accountability by providing greater access to information through web publishing to civil society groups.
- Provides documentation to citizens for follow up action in case they wish to file a complaint.
- Modularizes tasks making outsourcing possible.
- Introduces competition amongst electronic delivery channels and departmental counters that provide a service.
- Standardization of comments/objections on petitions and applications of citizens leads to effective supervision.
- Centralizes data becomes available for better audit and analysis. This feature is being used effectively by e-tax applications. Integration of data across applications-provides improved intelligence. Enables unbiased sampling for audit purposes.

d) Empowerment of Rural Communities

The following conclusions can be drawn from the successes and failures among the pilot rural tele-center projects:

- Rural populations are willing to pay a fee for systems that have very clear business or personal uses.

- Villagers are not enamored of electronic delivery. The uptake depends on whether significant value is being delivered in comparison with the existing ways of receiving information and services.
- Intermediaries are often needed to respond to the specific information needs of rural citizens and to interpret and disseminate the knowledge from public documents.

Economic Impacts

a) Cost Reduction in Service Delivery

Although many applications in developing countries have shown significant benefits, in general, cost reduction has not taken place. In most cases E-Government becomes an additional channel to offer services. Even in developed countries where Internet penetration is high, the proportion of citizens using portal for services is low. Until this proportion reaches a level that there can be some cut back in the number of personnel employed in delivering services through the traditional departmental channel or telephone, there will be little reduction in costs. In fact initially the costs will rise on account of investments in organizing electronic delivery. In the developed countries, privacy and security issues seem to be holding the citizens back. In the developing countries the Internet penetrations are very low.

b) Control of Government Expenditure

Many countries have implemented integrate financial management systems to track and control payments made out of Government treasuries. For example the state of Karnataka has connected all its 215 treasuries through a satellite based net. Every payment is now centrally authenticated to ensure that a budget provision exists for the payment and that it is not exceeded. Such systems focus on expenditure control, not exploiting the full potential of the system to combat corruption and improve service delivery. Experience suggests that it is

difficult to implement IFIMIS as they are complex and need to be comprehensive in their scope to deliver concrete benefits. Another strategy to control expenditure is to introduce paper less offices in large Government departments (see eSAT in Mexico, SmartGov in Andhra Pradesh). A few of such applications have been implemented.

c) Growth of tax Revenue

The inefficient collection of taxes in many developing countries has led to cash-strapped governments that are incapable of enforcing tax payments. Moreover, corruption in

the collection process leads to less money going to the government and lack of public confidence in the system. Modernizing Tax Systems through E-Government applications has been a priority for many countries. Through online tax filing and processing system, governments aim to reduce the corruption and enhance transparency to create more public trust. Computerized interstate check posts in Gujarat, India, have resulted in three-fold increase in tax collection over 2 years. Revenue increased from \$12 million to \$50 million, paying back the total project costs of \$34 million in just 6 months (Vijayalaxmi & Padma, 2003).

Details of the application and Socio-Economic Impact (Bhatnagar, S.2003)

1. Delivering Citizen Services

Application	Examples	Social and Economic Impact
Payment of property taxes, issue of land titles	CARD in A.P., Karnataka, Maharashtra, BHOOMI in Karnataka.	Transparency, faster processing for citizens, reduced corruption, increased product income.
Tax online	Singapore, Brazil, Jordan, Chile, Mexico.	Activity for offices convenient quicker refunds, better compliance, cost savings cut delays, several services under one roof, reduced corruption, and reduction of intermediaries.
Issue of driving license, Motor registration, passport, Birth certificates, Social security and collection of fines	Citizen service centre (Mobile and in-shopping malls) Bahia, Brazil, FAST in Hyderabad, Gujarat, and Karnataka.	
On-line issue/payment of electricity, phones and water bills and fines.	E-seva in Hyderabad, FRIENDS in Kerala	Convenient locations, quicker processing time, customer tasks in one visit.

2. Delivery of services to business and industry

Application	Examples	Social and Economic Impact
E-procurement	Mexico, Philippines, Bulgaria, Brazil and Chile.	Reduce advertisement costs lower costs due to better prices, transparency.
New business registration	Jordan, Jamaica, China.	Cut down time and number of visits, convenience on filing tax returns/quicker refunds.
Tax collection(sales tax, VAT and corporate income tax)	Gujarat check post, Cameron, Chile, Singapore and Mauritius.	Cut down time and number of visits, convenience on filing tax returns/quicker refunds, Increase in revenue collection for Government.
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 issue of licenses, access and permissions.

3. Internal efficiency: E- mail and electronic workflow in Government

Application	Examples	Social and Economic Impact
Use of E-mail and video conferencing	Many Government offices	Usage is low, faster communication, less travel.
Document management and workflow for paper less operations	Smart Government in A.P.,	Speed of file disposal, traceably of actions, greater accountability.

4. Empowering citizens through access to information.

Application	Examples	Social and Economic Impact
Publishing budgets central and Municipal level	Argentina, India and Turkey	Greater transparency.
Publish project -wise expenditure	Panchayat web sites in Karnataka	Transparency and lower corruption.
Executing agency services through rural kiosks market information, application forms, complaints and E- commerce	1000 kiosks in dozen pilots in India, pilots in Latin America and Africa	Save travel time, lessen corruption, better negotiating power, Increased accountability and access to markets.

Details of the socio-economic impact of E-Government (Bhatnagar, 2003)

Social Impact goals	How E-Government can help?
Increasing Transparency	<ol style="list-style-type: none"> 1. Dissemination of Government rules and procedures, citizen's charter, government performance to a wider audience. 2. Disclosure of public assets, government budget, and procurement information. 3. Making decisions and actions of civil servants transparent.
Reducing Administrative Corruption	<ol style="list-style-type: none"> 1. Putting procedures online so that transactions can be easily monitored. 2. Reduce the gatekeeper role of civil servants through automated procedures that reduce discretionary powers. 3. Eliminate the need for intermediaries.
Improving Service Delivery	<ol style="list-style-type: none"> 1. Less time in completing transactions. 2. Reduce costs associated with travel for citizens to interact with government. 3. Improve government ability to deliver service to larger segment of population.
Empowerment	<ol style="list-style-type: none"> 1. Provide un-served communities (limited access to government) with a new channel to receive government services and information. 2. Reduce the brokerage power of intermediaries.

Economic Impact Goals

Social Impact goals	How E-Government can help?
Streamlining administrative process	<ol style="list-style-type: none"> 1. Increase ability of managers to monitor task completion rates of civil servants. 2. Improve efficiency of civil servants by automating tedious work. 3. Integration of databases, reducing inaccuracies caused by the presence of redundant, duplicate databases. 4. Increase speed and efficiency of inter-and intra-agency workflow and data exchange.
Reducing Administrative burdens for business	<ol style="list-style-type: none"> 1. Faster access to government and less time needed to interact with government. 2. Reduction of interlocutors between government and individual.
Increasing Revenue	<ol style="list-style-type: none"> 1. Make it convenient to pay taxes. 2. Improved audit to identify defaulters. 3. Plug leakage by reducing corruption.
Cost Reduction and Budget savings	<ol style="list-style-type: none"> 1. Reduce cost of transactions for government processes. 2. Provide better control of expenditure

Conclusions

No developing country is likely to be fully ready to embrace a comprehensive program of E-Government. Making e-government widespread entails bridging the digital divide which involves providing access to the Internet to rural areas and setting up of information. A few political leaders and civil servants, who believe in the idea of reform and have initiated

innovative applications. The vast majority, however, is yet to awaken to the potential of e-government for reform. A major task is to build institutional capacity for governance reform. The overall social and economic impact of e-government in developing countries may at best be marginal because the investments that have been made so far are small. It is therefore difficult to make a recommendation that investment in e-government should be stepped up to a certain level. The challenge is to promote widespread use.

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