Electronic Governance – An Emerging issue for 21st Century India

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Abstract:

Advancement in the technology is playing a pivotal role in improving the quality of life. One of the technologies which really brought revolution in the society is Information Technology and is rightly regarded as the third wave of revolution after agricultural and industrial revolution. The developed and developing countries are trying to use Information and Communication Technology (ICT) for making the government functioning more responsive, efficient and citizen friendly. E-governance becomes more important for country like India with majority rural population, as it can go a long way in ushering rural development. This paper discusses various aspects and issues involved with e-governance. A case study on implementation of e-governance in the State of Kerala is considered to highlight the dimensions of e-governance in India.

Introduction:

The later part of 1990's has seen rapid transformation in the nature of governmental functioning all over the world. These changes can be attributed to technological developments that took place during this period and its adoptability. One of the major developments that had occurred was in the areas of Information and Communication Technology (ICT). The use of ICT has made the delivery of services through internet possible. Various business units and service providers operated privately took lead in implementing these latest technologies. The result of the technology adoption was encouraging and led to the growth of new service industries. These industries were able to deliver better services and quicker response time. This transformation in the private sector created an expectation among the citizens for better delivery of services from the government. Therefore, governments of many countries of the world made efforts to provide services through internet. However, in most of the countries the governmental efforts have concentrated on putting up a web page (Seavey, 1996). In some cases it was more customer focused, serving citizens and trading partners directly by providing services, information and transactions on line via internet. Thus, the provision of services, information and transactions by the governmental agencies using internet as a medium may be termed as electronic governance (e-governance) within the context of governmental services (Statford and Statford, 2000).

2. Defining e-governance through Review of Literature:

In the current literature we find a host of definitions on the concept of e-governance. Some of the definitions are cited here It is government worked through internet (Tapscott, 1996). e -governance is'

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one in which the public service operates "in a one stop and non-stop way", does more for less and power is transferred to people (Lawson-1998).Winner and Traunmuller (Winner and Traunmuller, 2000) has defined e-governance as a "guiding vision towards modern administration and democracy". Aicholzer and Schumtzer (Aicholzer and Schumtzer, 2000) has suggested e-governance shall be considered based on change governance in two fold manner (a) improving service quality delivery, reducing cost and renewing administrative process (b) transformation of governance itself i.e. re-examining democratic practices and processes. According to Sprecher (Sprecher, 2000) electronic governance technology is used to help simplify and automate transactions between governments and its constituents, businesses and other governments.Backus (Backus, 2001) defined it as "delivery of government services and information to public using electronic means". Kofi Annan (Annan, 2003) UN General Secretary has put e-governance as a tool which allows citizens to participate in government decision making process, reflect their true needs and welfare.

Considering the above definitions we may define e-governance as "the use of Information and Communication Technology (ICT) by the government to provide information and improved public services with the participation of the people in the process of governance".

3. Objectives of e-governance:

The European Summits at Lisbon (March 2000) and Fiera (June 2000) specify four objectives (tasks) of E-governance. These are:

- The development of internet based services to improve access to public information and services.
- Improvement of transparency in public administration using internet.
- Full exploitation of information technology within public administration.
- Establishment of E-procurement [Commission of European Communities, e-Europe 2002].

Towards the achievement of these ends or objectives, the European nations have made quite a

good progress. In India also some progress has already been made. The definition and objectives of e-governance clarifies that, e-governance goes much beyond digitalization, computerization or automation of government services. It encompasses improving the quality of government services and provision of information by electronic means, enhancing the participation of the people in the choice and provision of the government service and thereby reinforcing democratic process in the country, and bringing new sections of society under governance sphere (including poor, illiterate, differently able, displaced, migrant and indigenous people).

4. Perspectives of e-governance:

The perspectives of e-governance are based upon the different types of transactions between government and citizens / businesses and within various governmental agencies. Lenk and Traunmuller (Lenk and Traunmuller,) mention five perspectives for e-governance initiative of the government.

- e-business Perspective.
- Citizens Perspective.
- Knowledge Perspective.
- Process Perspective.
- Telecommunication Perspective.

These perspectives can be explained as following:

a) e-Business Perspective-The business perspective considers the use and deployment of information and communication technology to enhance functioning of the government (Schubert and Housler, 2001). The impact of e-business on public sector is the transformation of the government towards electronic governance. The deployment of e-commerce technologies can serve to successfully increase citizens' access to information and improve the functioning of the government (Csetenyt, 2000). This makes e-governance to become e-commerce within government framework.

b) Citizens Perspective- The success of any e-governance depends on the acceptance of the initiative by the people because people are the ultimate users of it. So it becomes the duty of the government to provide a safe, easy and accessible mode of transaction. The citizens perspective thus discuss the

delivery mode and giving access to electronic services (Lenk and Traunmuller, 2000).

c) **Knowledge Perspective-** This dimension emphasizes the utilization of workers' knowledge in their respective roles. While redesigning the governmental transactions through information technology, due regards must be put on the knowledge of the workers in their respective functions. If it is not done, it will lead to knowledge loss, which has accumulated over a period of time (Lenk, Traumuller, 2000). Traunmuller and Winner discussed the issue in managing knowledge in the public sector exemplifying aspects of knowledge with respect to administrative process and citizens' access to the authorities (Winner and Traumuller, 2000).

d) **Process Perspective-** The process perspective is mainly concerned with the use of information technology to improve service delivery efficiency (Krammer and Dedrick, 1997). In redesigning organisations, processes have been aided by Work Flow Management System (WFMS). However, WFMS plays a less important role in the higher echelons such as in a ministry. Redesigning the process will lead to a rethinking of the government and its working. Lenk and Traunmuller (Lenk and Traunmuller,2000) pointed out that the challenge lie in the ability to fundamentally redesign the interaction between public administration and citizens (including commercial firms) which is coupled with a reorganization of business processes within the public administration.

e) **Telecommunication Perspectives-** The Telecommunication perspective deals with the interaction of various agencies and trading partners involved in the work process. This perspective has a lot of importance for a government or public sector because the success of e-governance project needs computer mediated cooperation between various agencies of the government (Csetenyt-2000). The telecommunication perspective results in the convergence of services from several agencies to single interface and results in the creation of better service organisation (Rocheleau-2000). On the other hand the absence of cooperation of various agencies will lead to inefficient provision of services.

5. Stages of e-governance:

The development of e-governance can be considered in three stages. The first stage of e-governance consists of creation of web sites that will enable internet users to gather information on legal procedures and down load forms. The second stage relates to interactive communication from business to administrative authorities via internet. The government of Austria has implemented this since 2001. This requires several legal rules and provisions to be laid down by the government. In the third stage official communications will include broader issues. This includes procedures at civil courts and procedures for projects that affect environment or a large number of citizens-for instance, the construction of a power station etc.

6. Current Uses of e-governance -A Report on EU Countries:

For furnishing of the current issues concerning e-governance, we give a report of Chartie and Wraight (Chartie and Wraight , 2000) on the activities concerning e-governance in 15 countries of European Union. However the major defect of Chartie and Wraight is that these reports are the reports of the respective governments. Self reports of this nature may not fully be correct because self reports highlight the strengths and belittle the weaknesses.

The current state of affairs concerning e-governance along with the trigger events in 15 different countries of Europe are shown in Appendix. Trigger events are those events, which caused e-governance to commence. In a way, the trigger events created the necessary foundation and climate as well as infrastructure for the commencement of e-governance. "In most countries of European Union (EU) the significant development in the telecommunication seems to have aroused awareness of the potential usefulness of new technology in particular as well as the leading role of the government as the customer and the provider "(Strejeck and Theil, 2002).

The second column of Appendix under the heading "Trigger" shows, in Germany and partly in France, the problem of unemployment seems to be the major reason for engaging in this initiative. In Belgium, the development seems to be driven mainly

by local interests of two main sections of the population that considered electronic communication as an instrument to express their positions more effectively. The last column shows use of e-governance encompassing the areas like administration, education, infrastructure and economy.

7. Challenges in e-governance Implementation:

The implementation of e-governance is a challenging task. Various governments involved in e-governance solution face three basic problems (The Audit Office of New South Wales, 2001). The first problem is how to select and entrust a solution provider to deliver any part of e-governance. In the market there are several system providers but it is unlikely that a single provider will provide the entire system. The second problem is to ensure that each solution from different partners should integrate seamlessly. This problem arises because each solution provider may use its own technology, data schema and standards, which make the integration difficult. The third problem relates to work for the development of a replicable solution that can be used by other agencies. The replication is important as it is expected that businesses around 85% of the processes are same across the companies within the same industry. It is therefore expected that 85% of the processes should be similar across different governments too. Reusing e-government processes across different governments will substantially bring down the cost of governance.

The other hurdles which are faced while implementing e-governance include, the approaches which are followed for development of e-governance.. The approaches of e-governance may be top down or bottom up. The top down approach may not bring fruitful results as it is feared that higher-level people may not approach at middle or lower level. There are instances where solutions given by top level could not move down and were failures (Ramani et al, 2003). The bottom up approach has the problem that it requires involvement of people and knitting them as a team to achieve the objective which will be quite difficult. Still another challenge relates to e-governance economics. A simple implementation involving 3 to 4 team members for over a period of 3 months by a medium sized organization will cost about Rs.20-25 lakhs. For total solution the cost will run into few cores. This makes e-governance solution for most of the small

and medium scale organizations unaffordable. Besides, the lack of vision about the benefits of IT like information is power and that IT can bring immense benefits to the organizations are not easily believed by people. The current state of things bedeviled by manual work processes, excessive manpower, monotony of work environment, social problems like strike and corruption leaves little scope for the implementation of e-governance. Further, poor budget for IT has often become a major constraint for the adoption of e-governance.

8. Requirement of Strong Legal Framework:

The success of e-governance depends upon suitable and strong legal framework. The legal rules and procedures relating to e-governance must be amended or new rules must be framed to avoid the misuse of internet technology. In a study conducted by Coutorie (Coutorie, 1995) observed that digital communication is expected to be the top target for future criminal acts. Even today credit card fraud is one of the major issues in internet crimes. Further, the existing legal procedures must be amended so as to make the leaders and administrators more accountable to people and this has got great significance for a democratic nation. The following steps should be taken to provide a strong legal framework for the working of e-governance.

- The rules against Internet crimes should be made more stringent.
- There should be the creation of single regulatory authority with autonomous power to implement the rules and regulations concerning e-governance. This will avoid overlapping of authority.
- The issue of democratic legitimating and accountability which e-governance brings in its wake requires new provisions prior to technical implementation.
- Real and effective e-governance requires suitable legal provisions to establish the basic rights of citizens to communicate via E media with authorities.

9. Development of e-governance in India:

Development of e-governance in India can be broadly divided into two phases. The first phase

started from 1960s/70s and continued up to late 1990s. During this period, e-governance effort mainly concerned the use of IT for in house requirements of the central government activities such as defense, research, economic monitoring and planning and certain data intensive functions related to elections, conducting national census and tax administration (GOI, 1985). However, in this phase the use of IT in the administrative activities of the central government was extremely limited. It did not result in the automation of departmental activities of the Central Government.

The second phase which started in late 1990s saw a paradigm shift in the e-government policies of the government. The e-government policies in this phase involved the use of IT for wider range of sectoral applications reaching out to large number of people in the rural and urban areas with greater inputs of NGOs and private sector organisations in providing services to the public (GOI, 2000).

At present, different types of e-government projects are implemented in India as displayed in the website of World Bank funded e-government centre located at Indian Institute of Management, Ahmedabad in the state of Gujarat (Centre for Electronic Governance, 2001). Some projects aim to introduce IT automation in individual government departments. There are other types of projects, which aim at improving transparency and accountability within government by introducing electronic file handling and public grievance systems. It has been introduced where it is required to deal with a range of high volume of routine transactions like payment of bills and tax dues to the government. As a part of e-governance effort of the government, the government has helped establishing "telecentres" normally owned by private entrepreneurs. These centres apart from providing a range of services have become the hub of entrepreneurial activities.

In spite of development in e-government in different forms digital divide persists in the country. So far the development of e-governance has been uneven, inequitable and lop-sided. While in the states like Kerala, Gujarat, Tamilnadu and Pondicherry the development is substantial, in the states like Orissa, Jharkhand, Chattisgarh, Bihar etc. little development has taken place. Within the states we find the urban

areas benefiting more from e-governance whereas hardly any development has taken place in the rural areas. Again, the large industries have benefited immensely from the use of ICT, but the small-scale and cottage industries as well as agriculture and allied activities have made only marginal gains.

India is one of many developing countries currently launching major e-governance projects aiming to improve government processes, connect government to citizens and promote socio - economic development (Madon, 2004). To accomplish these objectives ICT should reach all areas, transcend all activities and make it accessible to people of all walks. This requires micro level application of e-governance and this will facilitate providing of government services, promote socio economic development and strengthen democratic institutions by making the administration more accountable and transparent.

In the following we show how through e-governance with a focus on micro level implementation the state government of Kerala attempts to improve governance activities and foster socio economic development.

10. E-governance Activity in Kerala: A Case of Micro Level Implementation:

There has been increased expectation in Kerala that ICT could act as an enabler of region's economic development and as a growth engine to provide solutions to some of its most important problems like high unemployment and low income generating capacity (Subramaniam and Abdul, 2000). Before 1999 the use of ICT was confined to few selected sections of the society (KSITM, 2002). But, in 1999 the government of Kerala took the major step in making the use of ICT all pervasive in the state.

In the year 1999, the government of Kerala set up the Information Technology (IT) Mission Group to selectively induct IT in sectors of the economy and departments of the government where there could be immediate and tangible benefits to citizens. In order to achieve this objective it was required to make substantial changes in administrative processes and procedures. For example, the Administrative Reform Committee of the government found that a single file would have to be handled by 60 persons before a

decision was taken. In this situation simple automation of existing processes was not therefore deemed to be effective solution and it was recognised that what needed was a complete overhaul of the administrative procedures and information flows. Therefore, the government decided to adopt a two pronged strategy - a long term strategy to reform administration, partly necessary because of devolution of power to local governments and a medium term strategy involving high visibility people oriented projects.

Long- Term Strategy: The long-term strategy of the government aimed at introduction of modern management practices and an improved information system in 1000 gram panchayats (governments at local level1) through Information Kerala Mission (IKM) project, which will improve the quality of public services offered at the grass root level. The IKM pilot system is now running in Vellanad district before being rolled out to other districts.

Medium Term Strategy: The medium term strategy of the government has been introduced in the rural as well as urban areas. In the urban area the project is christened as "FRIENDS" and in the rural areas as "AKSHYA". The basic function of FRIENDS is to provide single window, IT enabled counter to citizens for the payment of bills of various government departments rather than having to personally visit individual department payment counters located at different parts of the city. At present around 1 000 different types of bills are paid by citizens on the production of demand notice from utility companies and many new services are being planned such as issuing of licences for electrical installations, passenger reservations for railways, long distance road transport tickets and other services (Madon, 2003). The queries of citizens to the individual departments are also made through these centres. Thus, the FRIENDS centres swiftly execute the payment of bills in a hassle free manner to citizens. The project is now running in all the 14 districts of Kerala.In the rural areas the government has helped the development of telecentres under the project AKSHYA. For this purpose, the district of Malappuram is chosen on a pilot basis and 555 telecentres at panchayat level have been established. These centres apart from providing IT knowledge to rural people, have also become the hub for IT enabled agriculture, health, education and literacy offering help to people

in filling forms and making applications to the government for assistance under social welfare schemes. So to speak, the telecentres have become the hub for socio economic development in the rural areas.

The initiative of the Kerala government is thus an attempt to reform administrative procedures, bringing citizens closer to the government and promote socio economic development.

Although e-initiatives have been taken by states like Andhra Pradesh and others, yet, use of ICT in a comprehensive manner covering all aspects has not been introduced in these states. Therefore, other states should take cue from Kerala in their effort to use ICT for socio economic development and administrative reform.

In July 2004, the central government in collaboration with the state governments, NASSCOM, UNDP and host of NGOs have proposed to set up multipurpose resource centres in all the six lakh villages in the country by 2007 (Times of India, 2005). The basic aim of these centres will be to help eradicate poverty and improve the lives of rural people through the application and usage of ICT. Each knowledge centre will cater to knowledge based livelihood and create income avenues for poor people of the society.

11. Critique to e-governance:

The main refrain against e-governance in India is that it has failed to address the problem of unemployment in the country. The common perception is that implementation of e-governance will displace labour and accentuate the problem of unemployment in the country. Past experiences show e-governance and the growth of IT industry as a sequel has contributed too little for employment generation in the country. As a matter of fact, the magnitude of labour displaced due to e-governance is too high as compared to jobs created in the IT industries. Further, jobs created in the IT sector are elitist in nature, which fails to address the unemployment problem facing the common man in India. The IT industries can generate 400000 jobs a year whereas we need 10 million jobs per year (Pitroda, 2004).

In the past some years the Indian industry

has been growing at a higher rate and the growth of the IT sector has a major contribution to it. But, so far we are using the Indian talents to solve the problem of the West and Indian expertise in ICT is sparingly utilised to solve the burning issues of unemployment and poverty afflicting the nation. This has created an ironical situation of jobless growth in the Indian economy. Population rich country like India needs job led growth and not jobless growth. The challenge now lies in enlisting the technology as an ally in our pursuit of attaining higher economic growth, generating more employment and achieving economic equity. These objectives can be achieved by equitable spread of information. We need to develop local application and local contents (Pitroda, 2004). This can be possible by taking ICT to the rural areas through broadband. Generic information on health, education, agriculture, fishery, meteorology, market, prices, small scale industries etc. which have socio economic importance should be converted to information specific to location with the help of computer aided and internet connected technology. Dissemination of information on these issues will make agriculture and allied activities as well as small scale and cottage industries more productive generating employment in a huge way.

12. Conclusion:

In the past technological developments had become the potent force for the ensuing of industrial and agricultural revolution in Europe in the 19th century. Similarly in the 21st century the new technology in the form of information and communication technology holds great potentials to bring about social and economic developments. This aspect has special significance for a developing country like India afflicted by poverty, unemployment and a host of other socio economic problems. In such a scenario, ICT can be effectively used to solve the basic problems being faced by our country. For that the task is to take ICT to the grass root level so that it reaches the un-reached of the society. Properly implemented e-governance projects can be highly cost effective, easy to access and allow transactions both within the government and between the government and other agencies. All this can lead to a balanced social development bridging the gap between various classes of society. The paper focused on various aspects of e-governance and development of e-governance in India. A case study of Kerala- a state in India is considered to highlight the e-governance endeavour in India.

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Appendix

Uses of E-governance in Different EU Countries

Country	Start	Authority	Trigger	Current main issue(s)
Austria	1994	Chancellor, Minister	Telecommunication (High Telephone costs, Lack of Competition)	Administration (Common Information platform for all Administrative Authorities, Electronic Library, Land Register), Education (Internet Access for pupils and Teachers, Training), E-business (Liberalized Telecommunication Market, cheap and easy access to the Internet job search on the Internet), legal issues (land Register, Commerce Register Online; Signature Law), Culture (Electronic portal for all Museums and Cultural Institutions).
Belgium	1994	Council of Minister Local (Flanders, Walloon Region).	Inactive to Promote Multimedia in Flanders	Administration (Electronic Signature, Electronic Public Services), e-commerce (Balance between Business opportunities and Consumers Rights), Regions (Flemish & Walloon Initiative).
Denmark	1994	Minister	Telecommunication (Advanced Tele-communication In-frastructure but missing "High Tech" Culture.	Infrastructure (Wireless Subscription Network Mobile Telecommunication) Education (Virtual University Students Infrastructure but Home Pages), Administration (Electronic Access to Public Authorities by all Citizens).
Finland	1995	Minister	Telecommunication (Advanced Tech-nology, but Missing Acceptance in the Society).	Education (Public funding of Training) Infra-structure (Development of new Technologies, Regional distribution Internet Access), Legislation Regulation, consumer Rights), Prevention of Alienation (Reduction of Regional Disparities, Additional help for Disabled and other Groups).
France	1994	Prime Minister	Telecommunication (Social and Regional inequality) Tele working and Tele services to Reduce Unemployment	Infrastructure (Local Employment Agencies over the Internet, Public Libraries youth Information Centre) Employment (Additional Jobs as Multi-media Trainers, Training for Unemployed) Education (Internet and Multimedia Grade, Internet Access for all Students).
Germany	1996	Minister	Unemployment (Create Jobs Develop Skills)	Infrastructure (Increase of Internet Access of all Social Groups) Consumer Protection (Develop ment of Legal Frame work). Education (Moder-nization of Equipments, Training for Teachers, Research and Development) Employment (Innovative forms of work and work organi-zation) Administration (Provide Information and facilitate Communication Between Individuals, Companies Administrators).

Country	Start	Authority	Trigger	Current main issue(s)
Ireland	1997	Information Society Steering Comity	Lack in Information Infrastructure (low Awareness, Insufficient Training and Skills	Administration (Awareness Campaign), Legislation (electronic Contracts), Infrastructure (Bandwidth through privatisation).
Italy	1995	Information Society Forum	Lagging Telecommunication Market (High prices, Companies unwilling or unable to engage in E-business).	Human capital (Equipment and Training for Schools and University, Exchange between University and Firms), Administration (Online Applications, Identity Cards, Digital Signature), E-commerce (Payment System, Stimulate Markets)
Luxembourg	1995	Info 2000 committee	Legislation (Not in time with EU directives concerning liberalization and mobile Telephony).	Infrastructure (Internet Available for all citizens Reduced Acess Cost), Administration (Internal and external Tele procedures), Legislation (Facilitate licensing and Establishment, Consumer protection)
Netherland	1994	Minister(s)	Telecommunication Market (Excellent Infrastructure and skilled workforce to Attract Investments)	Education (Linking Schools, Libraries, Museums, Education online), Administration (Modernized process and policy, Reliability of personal data, websites for all Administrative Institutions, Remote Voting).
Portugal	1996	Minister	Lagging Telecommunication Market (slow in Liberalization)	Education (training and certification), Infrastructure (Tax incentives to purchase PC's, Facilitate Access), Administration (Online Information)
Spain	1998	Iterministerial Commission	Lack in Information Infrastructure (Network, PC's in Business and house holds)	Education (Infrastructure and Equipment, Education Portals, New Training Technique), Employment ("IT Alphabetization, "Tele Working"), Administration (Digital Signature, Automation of Administrative Procedures)
Sweden	1996	Prime Minister	Telecommunication Market (Excellent Infrastructure and skilled work Force to attract Investment).	Security (Secure and stable Internet, electronic Signature), Education (IT Competence Enchace ment in Schools, University, Training and Assistance for SMEs), Infrastructure (Finding for Regional line Connection, Networking for Disabled).
UK	1996	Department of trade and Industry	Telecommunication Market (Excellent Environment but many Firms Reluctant to engage in E-business)	Electronic Trading (Remove Regulatory and legal Barriers, Assistance for SMSs). Infrastructure (Improve access to Internet). Administration (Improve customers from end, Join up back office Systems, E-Procurement, e-tendering).