E-Governance Initiatives in Bangladesh: How Attend People?'
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Introduction

Applications of Information and Communication Technologies (ICTs), inter alia, in the area of Public Administration in many countries already have confirmed as effective tools for achieving transparent, responsible, accountable, participatory and responsive governance. Innovative applications of ICTs also offer new ways for delivering information and many of public services at citizens' convenience. It has now, therefore, turn into a common point of dialogue as to how new technologies can be integrated into public administration in respect of modernizing existing systems, ensuring good governance and enhancing democratic practices. In that edge, e-governance tools have become trendy, by now around the world.

Background

Efficiency, transparency and accountability in the public sector, citizen-centricity, re-organization, simplification of public forms and procedures and use of modem technology for improved governance -are some of the long-standing areas under discussion in the field of public administration in Bangladesh. Many administrative reports and documents, including the early ones, have been advocating for these features for ensuring a better governance system in the country.

Although, modem information and communication technologies were not in the scene during the Report of the "Administrative and Service Reorganisation Committee", formed in 1972, it had been studied that "Progress in science and technology and the vast amount of new knowledge have made a major impact on the tasks of the Government and on the process of decision-making."' The report suggested for a permanent organization "for the continuous study for the simplification of the forms and procedures with a view

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to removing the hardships the people have to undergo because of the cumbrous forms and complicated procedures."' Report of the Public Administration Efficiency Study, 1989 recommends for modernizing government offices and improving file management system and office operations through introducing computers and through training of the workforce to use new technology.[3] Another report on administrative reform, prepared by four secretaries of the GOB, in 1993, suggests for increased use of modem office equipments including computers for efficiency and transparency in the public sector.' In 2000, Report of the Public Administration Reform Commission specifically suggests for "Electronic Government: Introduction of Modem Technologies and Their Optimal Use in the Government Functioning."[5] It continues saying, "To ensure customer services of a particular department or organisation all information, procedures, list of services obtainable, and requirement for the services can be preserved in the computer at the reception from where a customer can easily get information on the status of the services he/she has sought."[6]

These reports, including many others, attempts to identify the long-standing issues and problems of Bangladesh's public administration, at the same time, offer guidance to address them. Many of those suggestions endorse use of modem technology as a mean for improving governance. By this time, some suggestions of those reports have been implemented that have brought some changes in the structure of the civil service. However, many micro-level problems such as internal procedures, work methods, logistical support have received limited attention.'

Introduction of computer-aided applications in the public sector organizations was started as late as in 1980s in Bangladesh. Those tools, initially, appeared in very few agencies in a few numbers. They remained as islands of PCs and their applications were mostly limited to provide support for management information systems, report generation for higher level, maintenance of payroll, accounts & budget, etc. This corresponds to an 'IT in government' situation, however, not extensively grown. The concept of e-governance that emerged with the advent of the ICTs also comes late in the country

and their innovative use in the public administration not yet detectable by citizens despite existence of an outspolten commitment from the policy level. This status signifies the needs of looking into the features of the various steps towards introducing e-governance in the country.

Present paper is an attempt to study the government's present footings towards e-governance in Bangladesh, particularly, with a view to appraise how the perspectives of citizens' involvement and interests, so far, have been accommodated in those initiatives.

The study is an exploratory one using qualitative and quantitative data that are collected from both primary and secondary sources. Multiple methods have been followed in terms of collection of data. Review of many administrative studies and reports and developments plans was imperative to find out how those ones provide policy guidelines for reforms and changes through integrating modern technologies in the process of governance and development. Content analysis approach is adopted to dig out major trends and features of present e-government management and strategic directions in the country that are not clearly specified, however, embodied in many official letters, circulars, minutes project documents, etc. A small survey has been conducted in 36 ministries and divisions in the Bangladesh Secretariat to collect data for identifying the focus of current e-governance initiatives and to understand how new electronic communication channels are being used to bring citizens closure to the public administration. Besides, websites of 20 selected ministries and divisions are reviewed to study the content and features that they carry and to scrutinize how those websites are able to provide information and services for people.

National context, particularly, the citizens, perspective of e-governance is the core thrust of this work. The points of offering advantages to the people and engaging them in the governance affairs have been examined from the angels of (a) provisions in official policies and strategies, and structural arrangements, (b) focus of existing e-government projects, (c) features and contents

of public websites, and (d) availability and accessibilities of ICTs to the people. Where, the arguments regarding citizens' preparedness, digital divide and some other related issues come under discussion, as well. On the basis of which, the paper finally puts forward the findings. For many reasons, it avoids to include any section for providing recommendations. Considering the limitations, regarding the size of the study area and number of the websites that are reviewed for the purpose of the study, findings of the paper cannot be generalised. However, policy planners -the public sector e-government actors, in particular, are expected to be benefited from this paper through an insight and mapping of present e-governance initiatives in Bangladesh from the view point of citizens' interests.

3. Policy Initiatives

3.1. The ICT Policy
Persuasion of e-governance is manifested in policy agenda in Bangladesh. The National ICT Policy 2002 declares, "The Government shall use IT system within the public administration to improve efficiency, reduce the wastage of resources — enhance planning and raise the quality of services." The ICT Policy extends particular attention to and provides specific guidelines for introducing e-governance in the country.[8] The Policy sets an ambitious goal for building an IT-driven nation comprising of knowledge-based society by the year 2010. It also promises to develop a countrywide IT infrastructure to ensure access to information by every citizen to facilitate empowerment of people and enhance democratic values and norms for sustainable economic development. Such goals and promises, laid down in the ICT Policy, yet to be accompanied by any specific strategies or action plan that could assemble enduring benefits for the broader mass. Presently move for preparing a national e-governance strategy is noticeable.

3.2. Poverty Reduction Strategy Paper (PRSP)
The impact of ICT for good governance, economic growth, people's empowerment and poverty reduction is acknowledged in

the National Strategy for Accelerated Poverty Reduction. The Strategy recognizes that ICT "has capabilities to overcome barriers of social, economic and geographical isolation, increase access to information and education, and enable poor people to participate in more of the decisions that affect their lives." It is essential to convert the vast population into human resources trained in ICT, both in rural and urban areas, supported by adequate and efficient ICT infrastructure facilities connecting the rural and urban men and women to the global village - the Strategy emphasizes.[9]

3.3 Official Internet Connection and Usage Policy

To comply with the applications of the Internet in the public administration, government has adopted the Official Internet Connection and Usage Policy, 2004. The Policy offers provisions for using the Internet facilities in government offices and determines the management and financial aspects in this regard, such as entitlement, approval procedures, cost-limit, etc. Operational aspects, i.e., codes for effective use of the Internet are not imparted in this Policy; therefore, unable to provide any guideline in respect of connecting, serving and engaging citizens through assorted use of new communication channels. Survey result of this study shows that practice of electronic correspondences, by the ministries and divisions in the Bangladesh Secretariat, has not yet become trendy, in general.

Table 1. E-Mail Communication by the Ministries and Divisions

n=32

E-Mail Occurs with	Only	Mostly	Sometimes	Rarely	Not at all	Score
Own departments/agencies	0.0	0.0	0.0	50.0	50.0	50.0
Other ministries/divisions	0.0	0.0	3.1	40.6	56.3	46.8
Foreign missions and organizations	12.5	50.0	31.3	6.3	0.0	268.9
NGOs and civil society .	0.0	0.0	21.9	50.0	28.1	93.8
General people	0.0	0.0	0.0	16.7	72.2	16.7

Notes: Scores calculated by giving values for the categories as: Only=4, Mostly=3, Sometimes=2, Rarely=1, Not at all=0.

As the Table 1 shows, e-mail correspondences by the ministries/divisions hardly happen among counterpart ministries

and departments or it happens infrequently with NGOs and civil society. E-mail communications mostly happen with the foreign organizations only. More than 72%'ministries/divisions, so far, never communicate with general people through e-mail.

It is evident that many studies on administrative reform and public policies acknowledge the needs for integrating ICTs in the processes of administrative and development activities. Yet, those are deficient in manifesting any inclusive solution towards use of modern technologies in public administration or in development activities with a view to create new facilities for citizens, -given the fact that those were prepared or carried out from universal and conventional perspectives. Supplementary efforts are required to map the specific routes for incorporating ICTs, particularly, in the area of public administration.

4. National Commitment for Strengthening the ICT Sector

Nevertheless, government has declared the ICT as a thrust sector for economic development, also, identified applications of ICTs as important tools for achieving public administration goals, in Bangladesh. The Ministry of Science and Technology is restructured as the Ministry of Science and Information & Communication Technology (MoSICT) by a declaration by the Prime Minister in 2002 to facilitate the wider linkage of Bangladesh with the advancement of ICT throughout the world. Import duty and tax on computers and accessories are removed with a view to facilitate affordability and to amplify the diffusion and adoption of ICTs in the country. Hence, an outspoken commitment for developing the ICT sector is very much existent that can be considered as one of the basic strengths for introducing e-governance in Bangladesh.

5. E-Governance Initiatives

5.1. Management Structures

Government has initiated practical efforts towards e-governance as well. The National ICT Task Force (NTF), headed by the Prime Minister, is the highest body that provides guidelines for, and

closely oversees the development of the ICT sector at the national level. The Executive Committee on ICT is next to the National ICT Task Force. To strengthen the ICT sector towards the ultimate goal of national development, government has formed the Executive Committee on 21.3.2002, which has also been engineering e-governance in Bangladesh since its inception. Besides, Focal Points/Committees for e-governance are created in every ministry and these focal points are now actively involved in preparing 'roadmaps' for introducing e-governance in their respective sectors. Except these management bodies, e-governance strategic directions can be found to generate from some other key ministries and specialized agencies too.

Figure 1: E-Government Management Structure in Bangladesh
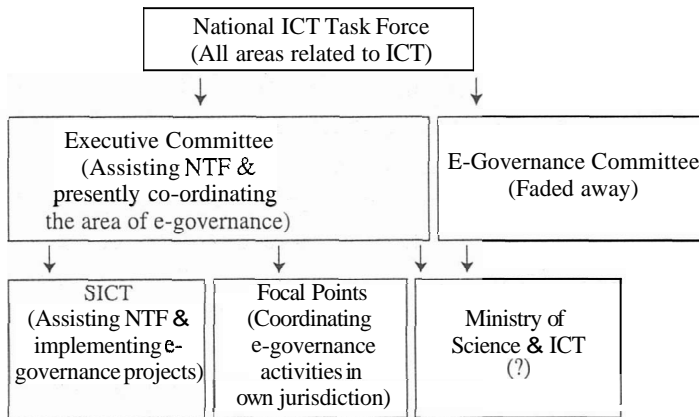
5.2. Strategic Directions for E-Governance

Government is yet to formulate an integrated national strategy to implement e-governance in Bangladesh, however, has a visible move in this connection. The National Task Force 'and the Executive Committee on ICT provide, among others, the overall guidelines and directions for implementing e-governance in Bangladesh. The very first meeting of the National Task Force was eager to find out the vision and mission statements for IT sector in Bangladesh, and in this relation a committee was formed under the leadership of the Minister of the then Ministry of Science and 'Technology. The meeting also appreciated the need for developing

the human resource in this sector and another committee was formed for identifying targets and formulation of an action plan. Still, all of these initiatives were derived from a perspective of commercial growth of the IT sector in Bangladesh; where the governance perspective was yet to come under consideration. However, the third meeting of the NTF held on 8.8.2002 that offered particular attention on the issues of connectivity, regulatory environment and e-governance. The fifth meeting of the NTF had particular agenda on e-governance having specific discussions that included: ministries/divisions could start by identifying specific initial e-governance services and gradually mature through outsourcing, and to expedite regulatory actions for standardization of Bangla Key Board to introduce e-governance in the country.

On the other hand, major efforts taken by the Executive Committee, so far, include: launching an umbrella project on e-governance, formation of E-Governance Focal Points in different ministries/divisions, arranging preparation of a draft ICT Act, amendment of the Copyright Act, etc. Besides, in accordance with a decision of the NTF, the Principal Secretary to the Prime Minister, who'is the Chairperson of the Executive Committee, requested all the ministries/ divisions to take measures, under respective Focal Points/Teams, for formulating integrated 'roadmaps' that could be implemented by the concerned ministries/divisions and their respective agencies and departments. In line with the direction, the Focal Points of the ministries/divisions are now on action to formulate and finalize 'e-governance roadmaps' for their respective sectors. Following table presents a list of official directions issued by different authorities that carry strategic value for introducing e-governance in Bangladesh:

Table 2. Government's Orders/Circulars that Provide Guidelines for E-Governance

Issuing authority, No. & Issue Date	Contents	Focus
Ministry of Science and ICT No: Secretary-1/2001/442, dated: 7.1.02	Country wide expansion of IT education, IT professionals, IT institutes; Changes of laws Assistance from Non-Resident Bangladeshis, private sector and NGOs.	Preparatory(HRD) Preparatory (Legal framework) Public-private partnership
Ministry of Science and ICT No: Sec-13/IT-47/2002 (Part-2)/117, dated: 29.3.03	To carry survey on existing facilities, resources, websites including problems & needs;	Preparatory
Ministry of Science and ICT No: Sec-13/computer-7/97/273, dated: 12.7.2003	Standardization of public websites, Website Functional Design Parameters for public websites Regular updating of websites	Standardization of websites G2G, G2B, G2C G2G, G2B, G2C
Prime Minister's Office No: 33.34.07.00.03.01.2003-75, dated 20.4.2004	Importance and government's commitment Enhancing efficiency & citizen services; IT training for employees; Creation of Focal Point/Team Short & long term actions: training & HRD, connectivity, cyber law, citizen interface, etc; Some examples of activities for online publication; One-stop service for paying utility bills.	GOB's commitment G2G & G2C Preparatory (Capacity building) Preparatory (Sectoral key players) Preparatory (Sectoral roadmap & priority areas) G2C (Web content & priority)G2C (One-stop service)
Ministry of Establishment. No: MOE(PACC)-e-mail/2001-108, dated: 26.5.2004	Use of c-mail in governmental communications	G2G (No specific suggestion to communicate with businesses and citizens)
Ministry of Establishment No: MOE(PACC)-E-Governance -20312004-148, dated: 5.5.2005	Guidelines for short-term and long-term actions to be taken by all ministries and divisions Developing and updating of websites Connectivity infrastructure for the Secretariat and Internet connections in all district level offices Training for civil servants E-Governance roadmap Introducing Bengali in Internet Public-private partnership, open source policy Extending ICT education	Preparatory guidelines G2G, G2B, G2C Connectivity Preparing workforce Strategic guideline User-friendly web presence Strategic option Preparing citizens

This situation refers to a very initial stage of e-governance in Bangladesh, where specific management structure is yet to be expressively defined by the government. As a result, strategic directions for e-governance are coming out from different authorities. Analysis on the strategic directions also indicates to an initial status of e-governance in the country having mostly

concentrated with simple preparatory guidelines. However, those preparatory guidelines are yet to adequately cover the citizen-centric aspect of e-governance.

5.3 E-Governance Projects: Where they Focus?

By this time, some specific projects for e-governance have already started rolling out in the country. Currently, in the Bangladesh Secretariat 38.9% ministries/divisions have one or more projects that are either direct result of e-governance initiatives or outcome(s) of such projects will somehow facilitate their future e-governance efforts. On the other hand, 16.7% ministries/divisions are currently active on launching their e-governance projects, and 44.4% have responded negatively in respect of owning any e-governance related project. Except one, there is no ministry, which has completed any e-governance project, so far, in the Bangladesh Secretariat. As responses of fourteen[10] ministries and divisions in the Bangladesh Secretariat show, current e-governance drives are mainly concentrated around preparing plan and strategy, creating connectivity and infrastructure, procurement of technology, and creating websites. As illustrated in the Table 3, better use of available technology and preparing human resources get hold of an average amount of focus. Conversely, the less focused areas are: preparing regulatory environment, organizational changes and process re-engineering, citizen services, and building awareness for of e-governance.

Table 3: Focus of Current E-Governance Initiatives

(n=14)

Focus Areas	Most Focus	More Focus	Some Focus	Little Focus	Not at All	Score
Preparing plan and strategy	35.7	28.6	28.6	7.1	0.0	292.9
Identify project/program	0.0	0.0	21.4	42.9	35.7	85.7
Connectivity and infrastructure building	35.7	28.6	28.6	7.1	0.0	292.9
Procuring technology	14.3	50.0	21.4	14.3	0.0	264.3
Use of available technology	14.3	35.7	35.7	7.1	7.1	242.8
Preparing rules and regulations	0.0	14.3	28.6	14.3	42.9	114.4
Creating website	14.3	50.0	28.6	7.1	0.0	271.5
Human resource development	7.1	35.7	35.7	21.4	0.0	228.3
Business process reengineering (BPR)	0.0	0.0	14.3	21.4	64.3	50.0
Preparing services for citizen	0.0	7.1	21.4	35.7	35.7	99.8
Raising awareness	0.0	7.1	21.4	50.0	21.4	114.1

Notes : Scores calculated by giving values for: Most focus=4, More focus=3, Some focus=2, Little focus=1, Not at all=0.

6. Web Initiatives

To prepare and empower citizens, it is more important to bring them close to the planning and decision making processes by providing information and soliciting their opinion. "Most industrial and developing countries now regularly consult concerned citizen groups. In the UK, for example, the Government informs the people of proposed policies through series of official 'white' or 'green' papers. In the US, before Congress starts formal consideration of the budget, the proposals are made public several months ahead of the fiscal year."" This practice has now become easier and more comprehensive through accruing the advantages of the Internet and the Web. Government can publish information and connect people through websites. These websites make governmental information and services available for overall population; also offer an effective way to interact with government from their convenient place and time. Bangladesh government, as well, trying to reach e-governance by taking initiatives to provide information and services online. A review[12] of these websites, presented below, would provide so the ideas in respect of standards and quality of the websites, as well as, nature and extent of information and services provided through the websites that would ultimately reflect as to how they are able to bring people closure to the public administration.

6.1 Web Initiatives of the Ministries/Divisions

It is found that out of total 50 ministries and divisions" of the government, 28 have already gone for web initiatives. Two of them have launched websites that simply display blank homepages saying "Under Construction" or "Under Development". However, the survey is concentrated only on the 36 subject ministries1 divisions that are located within the premise of the Bangladesh secretariat. It is noted that out of these 36 ministries/divisions, 20 (55.6%) have websites, including "Under Construction" 1. Rest 16 (44.4%) yet to start with web initiatives.

6.1.1 Appearance and Contents of the Websites

Government has adopted an official web design parameter as early

as on July 2003 that provides guidelines in relation to appearance, menu and contents for public websites of Bangladesh. In respect of graphical appearance, ministries and divisions are found to follow disorganized preferences to design their websites, although the official guideline underlines specific instructions in this respect. As a result, the websites appear with dissimilar "look and feel" in one hand, and make themselves difficult to access and browse, on the other. Observations on the contents of the websites are depicted in the following table:

Table 4: Menu/Contents of the Websites

Item	Exists	Not Exists	Comment on Existing ones
About Us	60.0	40.0	-
Contact Us	50.0	50.0	Under construction 10%. .
News	20.0	80.0	Blank 25%, under construction 25%.
Public Notices	35.0	65.0	Outdated notice 28.6%, blank 28.6%.
Public Forms	20.0	80.0	Very few in number.
Rules and Regulations	45.0	55.0	Very few in numbers.
Public Documents/Reports	45.0	55.0	Very few in numbers.
Publications	25.0	75.0	Blank 20%, list only 20%.
List of Projects	40.0	60.0	Blank 12.5%.
Presence of Bengali language	15.0	85.0	-
E-mail address	50.0	50.0	-
E-mail shortcut	40.0	60.0	-
Search facility	5.0	95.0	Simple search.
Links to Attached Departments/Offices	45.0	55.0	-
Links to other sites	55.0	45.0	-
Privacy Policy	5.0	95.0	-
Copyright	45.0	55.0	-
Hit count	15.0	85.0	The lowest and highest visits are observed as 1648 and 30495 respectively.

It is studied that there are cases, where websites display some of the items, however, do not carry any content or hold outdated contents. Regarding publications, reports, regulations and public documents, such features are found to carry either mere list of some documents or to offer a very few of those. Only 4 (20%) ministries/divisions offer public forms in their websites, however, do not provide plenty of those that could enhance benefits for citizens and attract a larger audience.

Present study notes that mere 15% of the 20 websites, to some extent, use Bangla content together with English; while 85% are created in English only. E-mail address of the respective ministry or division is displayed in 50% websites, where 40% show the e-mail address with shortcut or hyperlink. Only one (5%) website provide a simple search facility. It is further noted that in isolation with links with own departments/agencies, 55% carry links to other sites, 5% display privacy policy and 45% show copyright declaration. Three (15%) websites have hit counters that provide the number of visits to the site. As the hit counters displayed, during the review, the lowest and highest visits among the 3 websites, are observed as 1648 and 30495 respectively that correspondence to a poor audience.

6.1.2 Interactive Functions

For interactive functions, the official guideline suggests to include three options for citizens' use, such as: queries/complaints, comments/suggestions/ complements and statistical queries with pull-down menu. Out of the 20 ministries and divisions, only one (5%) demonstrates Frequently Asked Question (FAQ) option that can meet some pre-specified queries of a user. Four (20%) provide comment or feedback box for users. None has the option of statistical query or pull-down menu. Hence, existing websites almost do not have any interactive feature, so far.

Table 5: Interactive Functions of the Websites

(n=20)

Options	Exists	Not Exists	Comment on Existing Ones
Queries/Complaints	95.0	5.0	**As FAQ** only.
Comments/Suggestions/Compliments	80.0	20.0	
Statistical Queries: Pull-down Menu	100.0	0.0	

6.1.3 Purpose and Benefits of the Websites

With the above-mentioned observations, it is evident that present web initiatives narrowly serve any purpose for public administration or scarcely bring any benefit for businesses or citizens. Following table reveal that they are yet to grow with appealing features that could attract a large audience, in general-

and the businesses and citizens, in particular. As much as 20% websites are in a status of almost no presence or mere presence, 35% limit their presence only around organizational information. Despite the fact that rest 45% also goes to the category of simple informative websites, however, very few of those hold a thin flavour of peoples' benefit.

Table 6: Purpose and Benefits of the Websites

From an overall consideration, public websites in Bangladesh do not show. any 'common look and feel' regarding their appearances. On the other hand, contents of the websites do not fulfil the requirements that are suggested by the guideline of the government. Public information and forms are not adequately available, and electronic services are not prepared or offered by the existing

Status, Purpose or Benefit	Number	Percent	Comment
Under construction	1	5.0	-
Mere presence	3	15.0	-
Organizational information only	7	35.0	Informative
Tender noticeldocuments for business sector and organizational information	3	15.0	Informative; also carry, in a very
	4	20.0	limited sense, G2B aspect. However, 2 sites found to carry outdated notices.
Some useful information, documents or rules -regulations for citizens including organizational information			Informative, and have a nominal G2C purpose.
Few useful forms for citizens and organizational information	2	10.0	Informative, and have a nominal G2C purpose.

websites. In view of that, they hardly provide any value related to needs and choices of people. Besides, desired interactive functions are not yet present, consequently the websites become unable to earn a wide range of active users. Rather, these websites are mostly confined with detailed information on respective organizational structure, hierarchy, activities, achievements, top personnel, etc. that tend to continue with posing the legacy of traditional governance. Fresh thoughts and sensible efforts are required to bring the web initiatives closure to the concepts of engaging citizens and serving people through innovative use of the Internet.

7. Availability of Technology and Connectivity: A State of Inventory

As a result of specific measures and steps taken by the government, in recent years, technology and connectivity status shows a visible growth in Bangladesh. Private sector is being encouraged through waiving up taxes for an intended diffusion of computers and Internet in the country. Regarding telecommunications, government has specific plans and ongoing projects for upgrading core infrastructure, including digitizing telephone switches, installing fibre optic and radio technologies and expanding national networks to rural areas. Step for privatizing the telecommunication sector can be treated as a remarkable move, in this connection. Linkage with submarine cable network is also underway to facilitate international connectivity and better transmission speed. Still, current overall status of ICTs is far behind to cover a wide range of geography and population, particularly, when referring to the rural areas and the rural people of the country.

7.1 Teledensity

Statistics show that as on March 2005, fixed phones are available among 1.007 million people in Bangladesh. However, with a rapid growth of mobile phones, total (fixed and mobile) telephone subscribers stand at 6.42 million. With this estimate, teledensity of fixed phones only, per 100 persons stands at 0.72 and teledensity of total (fixed and mobile) phones stand at 4.6 per 100 persons. Fixed telephones are mostly urban oriented. A newspaper report on May 2003 shows that out of 8,95,000 fixed telephones installed by BTTB, 7,70,000 lines are in urban areas where Dhaka alone had 4,56,000 lines.[14] Grameen mobile phone maintains a countrywide network that has earned global reputation for covering rural people, particularly the rural women. Mobile telephony has been growing at a rate of 35-40% per year,[15] and "the number of connections is projected to increase more than 200% over the next few years."[16] However, most of the mobile phones that are currently in the hands of people only have a mobile-to-mobile accessibility.

Recently, BTTB has reduced nation-wide and international tariff

charges for fixed phone. Its tariff on recently introduced mobile phone calls is also comparatively low; however, the private sectors' mobile phones are under criticism for their high charges.

7.2 PC Penetration

As prices fall and awareness gets high, personal computers started going popular among individuals and in organizations since early 1990s. Sales of PCs climbed up rapidly from 1998 because of exemption of taxes on computeis and accessories. Everyday, on an average, 250 computers are sold in Bangladesh." Annual growth rate of PCs is estimated about 32.88%, comparing the years 1999 and 2000, in the study jointly conducted by Bangladesh Computer Council (BCC) and Bangladesh Bureau of Statistics (BBS).[18] As per ITU estimate, PC per 100 population in the year of 2003 stands at 0.78 only.[19] "Bangladesh has experienced an increase of 35% in PC imports and currently it is reported that the number of PC's (PCs) in the country stands at 1.5 million."[20] With this figure, currently PC per 100 population can be estimated as 1.07. However, rate of computer penetration in Bangladesh remains far behind from any acceptable standard. On the other hand, most of those computers are concentrated in the urban areas, - particularly in Dhaka. The BCC & BBS's survey result shows that Dhaka division has the highest concentration (72.76%) of IT involvement, followed by Chittagong (11.14%), Rajshahi (7.39%), Khulna (4%), Sylhet (2.8%) and Barisal (1.3%)[21] that indicates an existing digital divide within the country.

7.3 Internet Penetration

In 1999, there were about 22,000 account holders with 10 ISPs (8 in Dhaka and 2 in Chittagong) and the total number of users was ranged around 0.1 million, while in 2000, there were about 50 ISPs providing Internet services to more than 0.35 million Internet users."

BTTB has s t a r t t p Internet services in all of the districts and about half of the upazilas (sub-district) with a plan to extend the facilities to rest of the upazilas as early as possible. Internet users per 100 population was 0.18 in 2003, as per ITU's

estimate .[23] Presently total Internet subscriber stands at nearly two lakh and multiplying by the users of cyber cafes, academic institutions, libraries, etc. total number of users assumed to reach nearly one million. With this estimate, Internet users per 100 population can be calculated as 0.71.

In the early years of Internet in Bangladesh, the bandwidth was limited and expensive because of high cost of VSAT. The deregulation of VSAT has made available the increased bandwidth at lower rates. More than two hundred licenses are provided for ISPs; however, nearly 50% of those are yet to start or fully go on operation. ISPs have grown in Bangladesh at a 65% per year[24]. These are also mostly concentrated around Dhaka city. Beyond Dhaka, there are 8 ISPs in Chittagong, 6 in Sylhet, 2 in Rajshahi, and 1 each in Khulna, Kustia and Bogra.[25]

Cost for Internet access at individual level varies from Taka 15 to 30 per hour and for unlimited use Taka 1000 to 3000 per month. For 64 Kbps to 512 Kbps broadband connection monthly fee varies from Taka 10,000 to 90,000. Annual license fee for private VSAT is US$ 3500. At the same time, "an average Bangladeshi ISP pays (as of late 2002) Tk. 290 (or US dollar 5) per month per Kbps for their international bandwidth. This translates into a monthly fee of U.S. dollar 5,000.00 per Mbps on an average. In neighboring India and China, the corresponding monthly prices are US Dollar 2500 and USD 1800."[26]

8. A Digital Divide is Evident

So, a divide between Bangladesh and other countries is already evident and closure of what is unlikely to happen in an immediate future. Within the country, there are further divides between various sections of people and between geographic regions too. There are divides between rich and poor, male and female, advantaged and disadvantaged, rural and urban, etc in respects of availability, connectivity and affordability of technologies. Besides, "A dependable information system has not yet been developed for the management of large volume data/information transactions in the public/private sectors."'' From cross-sectional citizens'

perspective, therefore, challenges lye with making technology available around the grassroots also planning and building of a common network infrastructure throughout the country and make it accessible, available and affordable for every citizen.

9. Human Development and Awareness Building

The most vital component of human development is empowering people with knowledge and skill.[28] Realizing the need for 'widespread introduction of IT education as a prerequisite for producing skilled human capital'[29] the National ICT Policy declares that facilities shall be built to promote IT education and computer aided education in all levels.[30] The policy also identifies the shortage of trained and qualified teachers and trainers for ICT education and training as an impediment to the HRD plan.

Initiatives were taken about 13 years back to introduce computers in schools and colleges in Bangladesh.[31] Course curricula for secondary and higher secondary levels have been developed and these are taught in schools and colleges as optional subjects. Under a plan of distributing computers in the educational institutions, by June 2004, the Ministry of Education has distributed more than 12,000 PCs and provided IT training for 6000 teachers.[32] By the same date, Bangladesh Computer Council has distributed 725 computers in educational institutes and arranged training for 838 teachers. There are some other efforts from public and private sector and from NGOs in relation to distributing computers in educational institutes and providing training for teachers. Besides, private sector educational institutes have their own efforts, in these respects. Distribution of computers in schools and colleges has a secondary impact on creating awareness and making people familiar with new technologies. However, the question of optimum or proper use of the computers, placed under secondary and higher secondary level educational institutes, particularly, which are located in rural areas, is not beyond debate. Major problems, in this area, are related to the issues of availability of power, place, trained teachers, motivation and awareness, etc. Nevertheless, government has a further plan to introduce ICT as a mainstream subject at secondary and higher level education.

In a period of four years, Bangladesh has experienced a growth of 300% in ICT training institutes.'',About 1500 ICT training institutions in private sector are presently functioning in the country. These training institutes have enormous potentials in respect of extending IT literacy also to elevate awareness among the mass people. But many of those are running with lack of standard syllabus and technical qualities that lead to a discrepancy between market demand and the ICT training courses. Bangladesh Computer Council has initiated a program to evaluate and rank existing training institutes to ensure a standard for ICT training courses offered by the private training institutes. Young generation is becoming increasingly interested for ICT training as an additional skill of present days. Some government agencies, such as: Department of Youth, Department of Women Affairs, BCC, etc. too have own programs for providing ICT training for citizens. Some of those organizations have facilities for providing training in divisional and district level, although not adequate in numbers.

10. Citizens' Preparedness

It is noteworthy that preparing citizens for e-governance is not heavily linked with a higher level or extent of ICT education, particularly in respect of enjoying services by mass people. However, it often speaks about preparedness of the human resource of a country and indicates vis-a-vis notion, alertness and trend of the society, as well as, awareness about new technologies. When referring to e-governance, the question of preparing citizens categorically relates to enabling people to become nearer to the public administration and making them aware and capable of enjoying government services that are offered through electronic channels. With that note, despite several positive efforts, currently neither electronic services are ready nor the citizens are prepared in Bangladesh; even they are not conscious about many traditional government services or their rights to government services. "The vast majority of people in Bangladesh are severely handicapped in their dealings with the bureaucracy by their illiteracy and lack of knowledge of their rights as citizens. ... In short, ordinary taxpayers in Bangladesh have no sense of a right to services, or, indeed, of ownership of the government for which they pay."[34]

This situation demands government's interventions that would include sincere efforts for identifying and implementation of specific public programs, partnerships with private sector and collaboration with NGOs. Attention needed in the areas of malting people aware of government services, their rights to services and citizen-government relationship, introducing technology throughout the country, connecting people with the help of ICTs, attracting them towards government services in innovative ways, etc. Campaigning, publicity and literacy programs generally help building awareness and empowering people. Besides, among many other attempts, distribution of computers in educational institutes has a secondary impact on making rural people familiar with new technologies and making them aware of their use.

11. Major Findings

It is comprehensible that government is enthusiastic to introduce e-governance in the country. Already, some visible footsteps are in existence. A UN report observes, "… there are nations who are finding the resources and the expertise to make e-government happen. Bangladesh, ... for example recognize the importance of the role technology plays in development and have embarked on e-government programs representative of their respective development agendas."[35] However, such efforts are not being able to be assembled with adequacy, as well as, not being supported by an integrated strategy or a "whole approach". Besides, it is also observable that current e-governance initiatives are mainly travels around the region of modernization of governance. Designing e-governance in aid of citizens' benefits and convenience through providing improved governance and democratic values would require to obtain and to follow a holistic approach. However, major findings of the study are provided below:

a. National commitment for strengthening the ICT sector, particularly, persuasion for introducing e-governance is evident in many of the governmental policies and activities in Bangladesh.

b. Studies on administrative reform and government's mid term

and long term plans and strategies for development acknowledge the needs for integrating ICTs in the processes of administrative and development activities. Yet, those are deficient in manifesting any inclusive solution towards use of modem technologies in public administration or in development activities with a view to create new facilities for citizens, -given the fact that those were prepared or carried out from universal and conventional perspectives. Supplementary efforts are required to map the specific routes for incorporating ICTs, particularly, in the area of public administration.

c. Specific management structure for e-governance is yet to be expressively defined by the government. As a result, strategic directions for e-governance originate from different authorities. Existing directions are mostly concentrated around preparatory guidelines and have less focus on the citizen-centric aspects of e-governance.

d. Present e-governance drives by the ministries and divisions are mainly focused around preparing plan and strategy, creating connectivity, procuring technologies and creating websites. Conversely, less focused areas include: preparing regulatory environment; organizational changes, citizen services, building awareness for e-governance.

e. As a consequence, current e-governance initiatives are mainly travels around the region of modernization of government.

f. The culture and practice of official e-mail communications are yet to flourish. E-mail communication to and from public is not in the scene, hitherto.

g. Public websites represent unselective phenomena and contents of the websites rather represent the traditional governance than e-governance. Both the concepts of engaging citizens and serving people through innovative uses of ICTs are not yet portrayed in the web initiatives.

h. So far, neither electronic services are ready nor the citizens are

prepared; even people are not conscious about many traditional government services or their rights to public services.

i. Technologies, particularly, telephone, computer and Internet highly tend to grow around urban areas that indicate an increasing digital divide within the country.

j. Absence of Bangla computing platform has been a major constraint in respect of popularizing technology in one hand, and ensuring extroverted use of it, on the other.

k. Government has moves for preparing citizens through human development. However, the awareness raising aspect is yet to be a general part of the e-governance initiatives.

l. Computers in rural school has a secondary impact on malting rural people familiar with new technologies and making them aware of their use and applications.

12. Conclusion

National commitment for strengthening the ICT sector, particularly, persuasion for introducing e-governance is evident in many of the governmental policies and activities in Bangladesh. E-governance management structures are emerging and strategic directions are coming up from many public decisions and documents. Government has specific moves for upgrading core infrastructures and facilitating diffusion of ICTs. As a result, growth of technology and connectivity is visible; however they are yet to reach the mass. Reforming the public administration has been explored since independence, although very little has been achieved, practically. Very few e-government projects are currently in existence with less focus on preparing and delivering services for general people. In fact, current e-governance initiatives in the country tend to hang around technological workouts rather than expose with organizational highlights on preparing citizen services. This situation shows implications on the web initiatives, as well. Websites of the surveyed ministries/divisions represent unselectivy phenomena as regard to their appearance and arrangements.

Contents of the websites rather represent the traditional governance than e-governance. They hardly carry any feature that could provide real benefit for citizens, hence, unable to tag people with public administration. On the other hand, people are not yet either aware or capable of enjoying electronic services.

When the central obligation of e-governance is to ensure citizens' satisfaction, the fundamental challenge for introducing e-governance in Bangladesh ultimately rests on: how to connect and serve the mass people, who are poor, rural and illiterate.

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[9] GOB, Unlocking the Potential: National Strategy for Accelerated Poverty Reduction (Preliminary Draft) (Dhaka: Planning Commission, 2004), pp. 106-110.

[10] In respect of focus of e-governance initiatives, majority of the contact persons of the sample ministries/divisions were reluctant or decline to response arguing that their status of e-governance drive had been too immature to determine the focus areas or they had had no knowledge, in this regard. This part of the questionnaire could be filled up by only 14 ministries/divisions.

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[13]   Including President's Office, Prime Minister's Office, Parliament Secretariat, Election Commission, etc.

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