E-GOVERNANCE READINESS OF UPAZILA ADMINISTRATION: A CASE OF TWO SELECTED UPAZILA OF COMILLA DISTRICT

SADEQ AHMAD

FEBRUARY 2013

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Approved as to Style and Contents

By

Shah Mohammad Sanaul Hoque, PhD

Partnership Specialist (Training), Access to Information (a2i) Program

Prime Minister's Office, Dhaka

MASTER OF ARTS IN GOVERNANCE AND DEVELOPMENT

INSTITUTE OF GOVERNANCE STUDIES (IGS)

BRAC UNIVERSITY, DHAKA, BANGLADESH

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Sadeq Ahmad

ID No. 12172019

Dedicated to…

My beloved wife Angor and sons Mahir & Nafis

For their wholehearted attachment and inspiration to my work.

ACKNOWLEDGMENT

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LIST OF ACRONYMS

A2I	Access to Information
CPD	Centre for Policy Dialogue
DC	Deputy Commissioner
DIF	Digital Innovation Fair
BBS	Bangladesh Bureau of Statistics
BTRC	Bangladesh Telecommunication Regulatory Commission
DOI	Digital Opportunity Initiative
EU	European Union
G2B	Government-to-Business
G2C	Government-to-Citizen
UNO	Upazila Nirbahi Officer
UNESCO	United Nations Educational Scientific and Cultural Organization
UNDP	United Nations Development Program
UNDESA	United nations Department of Economics and Social Affairs
UN	United Nations
UISC	Union Information and Service Centre
SPSS	Statistical Packages for Social Sciences
SICT	Support to ICT
PMO	Prime Minister's Office
PC	Personal Computer
NGO	Non-Government Organization
ITU	International Telecommunication Union
ICT	Information and Communication Technology
G2G	Government-to-Government
G2E	Government-to-Employee
IT	Information Technology
LAN	Local Area Network
WAN	Wide Area Network
MAN	Metropolitan Area Network

ABSTRACT

At the edge of globalization and technological advancement, public sector administration has to face an immense pressure. To cope with the mounting pressure the government has to be prompt, responsive, transparent and citizen-centric. It is beyond doubt that ICT backed government can ensure the desired services of the citizens and thus ICT integrated E-Governance has become a fashionable phrase to articulate the citizens' demand to a reality creating values to their life. Keeping this in mind, the study has made an attempt to assess the e-readiness level of Upazila Administration of Comilla as a functional unit of field level bureaucracy from the perspective of both the officials and the beneficiaries. It has also attempted to identify the major factors that hinder the e-readiness initiatives of Upazila Administration of Comilla district.

For the purpose of the study, primary data are collected by using questionnaire survey and interview method. Then the findings from the primary data have been crossed verified with the benchmark of the 'UN Five Stage Model of E-Governance' to have an overall scenario of e-readiness of Upazila Administration of Comilla district. In the study human capital, lack of infrastructure and logistics, web presence and perception of beneficiaries are taken into consideration as independent variables for verifying the dependent variable, E-Governance Readiness. The study reveals that the capability of officials in using computer is not up to the mark and their utilization level of computer facilities at workplace is considerably low, but surprisingly the younger officials tend to have more capability in using computer. Hence, in terms of human capital, the overall readiness level of Upazila Administration of Comilla district is found to be unsatisfactory. In case of infrastructure and logistics, it is found that the offices have reasonable support of infrastructure and logistics and the trend in using computer and internet by the employee is gradually increasing. So, lack of infrastructure and logistics has deemed to be minimal effect on e-readiness at the field level administration right now. As per web presence concerned, the study reveals that every office has website of its own and this website possesses various forms, notice, examination results, application form for MPO, health related information, agriculture related information etc. but it is inconsistent that almost every website is deemed to be static rather than interactive. In context to perception of the beneficiaries, it is observed that most of the beneficiaries or the citizens are aware of the need of use of ICTs in the public administration. Nonetheless, they are found to be not

satisfied in terms e-service delivery. Besides, the comparison between Comilla Sadar and Debidwar Upazila reveals that the Upazila adjacent to the district headquarter is better performing in terms of E-Governance implementation than that of the periphery that leaves room for sensing digital divide between the centre and the periphery. However, the overall level of E-Governance readiness of Upazila Administration of Comilla district is at the transition of two stages 'Enhanced' an 'Interactive' of 'UN Model'. This level of e-readiness implies that the Upazila Administration of Comilla has to strive more with a view to leapfrogging into the ranks of top ICT-ready countries. From the study, it is also evident that due to lack of human capital, lack of infrastructure and logistics and frequent power disruption the E-Governance readiness of Upazila Administration is being retarded. In fine, the study comes up with some recommendations such as development of human capital, increasing of the speed of Internet, introduction of internal monitoring mechanism, strengthening of UISCs and adopting arrangements for narrowing down the digital divide between the centre and the periphery.

CHAPTER ONE

INTRODUCTION

This chapter intends to provide a general background of the study. It also highlights the problem of the study and its illustration, rationale and scope of the study, research objectives, and above all, an organization of the dissertation.

1.1 Background

Like many other countries of the world, the application of Information and Communication Technologies (ICTs) in the field of Public Administration has considered as an effective tool for achieving transparent, responsible, accountable, participatory and connected governance. At present government, more precisely, is expected to be more transparent in its dealings, accountable for its businesses and faster in its responses. This expectation from the government has paved the way to using Information and Communication Technologies (ICTs) in the day-to-day business of the governance. Literally, 'E-Government' is about delivering government services using information technologies, whereas 'E-Governance' is about transforming the relationship between governments and their citizens through the use of information technologies. In addition, E-Governance is a process of modernizing governance through use of ICTs for good governance and democratic governance that requires ensuring greater convenience and better services for all citizens and that ultimately leads to a knowledge-based society.

Further, different organizations define the term E-Governance to suit their own aims and objectives. E-Governance refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions (The World Bank). Furthermore, Governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including

citizens' articulation of their interests and exercise of their legal rights and obligations. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities (The UNESCO). However, E-Governance has become a promising and fundamental issue in the contemporary development debate of developing countries and has changed the way of living, the way of thinking and the way of designing social, political, economic and administrative aspects of the state tremendously. The contribution of information and communication technologies (ICTs) to administration has led to believe that E-Government could bring about the realization of democracy through more direct forms of people's participation and make administration more people and service oriented, transparent and accountable (Jho, 2005:151).

 In course of time ICTs and E-Governance have become integral parts of Bangladesh public administration. To effectively harness the power of ICTs, Bangladesh government has formulated National ICT Policy 2009. Yet Bangladesh has not been able to arrest the power of ICTs for economic and social gains to the extent that other countries of the world have. To materialize this vision, both central and field level bureaucracy needs to be well prepared. Thus, E-Governance readiness of the field level bureaucracy or Upazila administration has got a significant importance to the academics, the practioners as well as the policy makers. It is of utmost importance to understand that E-Governance is not only a means to augment administrative efficiency but also a tool to speed up democracy by ensuring citizens' participation in the policy making process. The E-Governance readiness of a country thus refers to the ability to use information and communication technologies (ICTs) to develop one's economy and to foster one's welfare. Likewise, it comprises social, cultural, psychological, economic and legal aspects along with the most commonly perceived aspect of technology. So, the E-Governance readiness assessment of Upazila administration, an integral part of the field level bureaucracy, would provide important knowledge to policy and decision-makers for E-Government strategic planning and implementation. Hence, this paper attempts to assess the E-Governance readiness of the Upazila Administration of Comilla district and to provide necessary recommendations to be required for future policy implications.

1.2 Statement of the problem

The pervasive usage of ICTs in the public sector of Bangladesh has become evident through the political agenda of 'Digital Bangladesh' that subsequently has got an official fashion as 'perspective plan'. The 'perspective plan' or 'Vision 2021' envisions an expanded and diversified use of ICTs in the public sector to establish a transparent, responsive and accountable government. To translate the vision into reality the role of administration especially the field administration knows no bound. For active participation in the process of E-Governance, the Upazila administration should have a good preparation and that's why it is very crucial at these days to assess the e-readiness level of field administration. Thus, an in-depth analysis of E-Governance readiness of filed administration mainly the Upazila Administration would provide an invaluable insight in the urgency of translating the vision of E-Governance into a reality.

1.3 Illustration of the Problem

At present, it is well recognized that ICTs are providing faster and better services to the citizens. With a view to creating values to public life and to ensure good governance the use of ICT has got a fresh momentum in the government agenda. It is revealed from a study that ICTs has facilitated the globalization of the economy, business, finance and culture (Haque, 2006). Although the government of Bangladesh has made a conspicuous progress in the application of ICTs, it is not enough to be complacent because the other countries of the world are running faster than Bangladesh in this regard.

Despite the government of Bangladesh has taken some initiatives to implement ICTs at the Ministry and field level offices over the years, the insufficiency of ICT logistics, low internet connectivity and unskilled manpower in many government offices have been grave concerns to the researchers. A study of 2008 by SICT (Support to ICT) program found that only 24% of the Departments, Corporations and Commissions have no PCs in their offices. Again the existing rules, regulations and legal framework are not found to be supportive enough in the implementation of E-Governance in the public sector. In absence of central E-Governance coordinating and monitoring entity, the tasks of prioritizing and controlling the quality of the E-Governance projects remained as a challenge in Bangladesh (Hoque, 2009). Morshed argues that E-Governance requires rethinking the standard operating procedure. The existing administrative rethinking mechanism is not aligned with E-Governance activities and plans.

Such lack of coordination between administrative reform and E-Governance is another challenge to fully utilization of E-Governance (Morshed, 2007). Moreover, human resource is an important mover to achieve E-Governance but this is not beyond question. Therefore, assessment E-Governance readiness of Upazila administration is of paramount importance for proper implementation of E-Governance initiatives in the public sector of Bangladesh.

1.4 Rationale of the Study

At the age of globalization, E-Governance is a tool to improve and facilitate governmental functions and activities. Today, government needs to be more effective, responsive, competitive and citizen eccentric. By using E-Governance a substantial change can be brought in the public administration. Not only that, ICT enabled connected governance contributes to avoidance of duplication, reducing transaction costs, simplifying bureaucratic procedures, greater efficiency, enhanced transparency and accountability, security of information management, faster service delivery and greater citizen participation. So, for successful implementation of ICT enabled connected governance, an assessment of E-Governance readiness of Upazila administration has got an utmost importance.

1.5 Research Questions

1. What is the condition of E-Governance readiness of Upazila administration of Bangladesh?
2. What are the major factors that influence the E-Governance readiness?

1.6 Objectives of the Study

The broad objectives of the paper are to study the government's present footing towards E-Governance readiness in the public administration of Bangladesh from the workforce and citizens' perspectives. Thus the overall objectives of the study are:

1. To assess readiness level of Upazila administration in terms of E-Governance.
2. To examine the major factors that affect E-Governance readiness of Upazila administration.

1.7 Scope of the Study

E-Governance readiness is relatively a new concept in the context of public administration of Bangladesh. Till today, there has not been conducted much studies in this area. There are lots

of issues related to E-Governance readiness both in public and private sectors of the country. Beside this, there is hardly any remarkable bench marking reference to assess E-Governance readiness of the public administration of Bangladesh. So, scope remains open to carry on an in-depth study in this field.

1.8 Organization of the Dissertation

The dissertation is organized into five chapters. These are:

Chapter One – Introduction: It intends to present the background of the study, states the research problem and scope of the research. It also specifies the research objectives and focuses on the rationale of the study.

Chapter Two – Review of Literature: This chapter highlights on the background of E-Governance, the concepts and issues related to E-Governance, an overview of E-Governance in Bangladesh, and finally developing an analytical framework.

Chapter Three - Research Methodology: This chapter expresses the methods, tools and techniques of data collection. It also provides the rationale for selection of site and limitation of the study.

Chapter Four – Research Findings and Discussion: This chapter presents the survey data and analyses them in accordance with the research objectives and it also presents appropriate arguments with findings.

Chapter Five – Conclusion and Recommendations: The final chapter summarizes the whole findings of the study by suggesting some recommendations/policy implications on the basis of field observations and finally draws attention to the scope of further research.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter contains three parts. Of which, part-I provides concepts and issues of E-Governance, part-II provides some selected review of literatures and part-III provides an analytical framework.

2.1 E-Governance: Conceptual Overview

The concept of 'E-Governance' emerges as an application of electronic means in the interaction between government and citizens, government and business, and in the internal governmental operations to simplify and improve various aspects of governance. Two major dimensions of E-Governance such as first, application of E-Governance that fit to the demands and expectations of an emerging information society and second, application of ICTs for facilitating governance functions and activities.

Since long both information and technology were being used by governments in their internal communications, interactions and processing functions. At present, governments are organized around agencies and bureaucracies with little information flow within themselves. The essence of new model of information and communication technologies appeared as a key enabler of today's reinvented government, where the old model of IT moved to a new model of ICTs or E-Governance. The old model was one of the information and technology (IT) automating the internal workings of government by processing data whereas the new model is one of information and communication technologies (ICTs) supporting and transforming the external workings of governance by processing and communicating data. By using ICTs more and more, government has become connected government that is connected within government, with private sector, with civil society, and more importantly with citizens.

The concept 'E-Government' primarily lies in streamlining of the administrative processes with a view to achieving greater efficiency and effectiveness and secondarily on some online services to the citizens (Backus, 2001). E-Governance, however, is a broader term that includes transformation on at least four levels. Such as first, it involves the transformation of the business of government (e-government); secondly, it involves a transformation in the operational definitions of the principles upon which governance is founded, shifting towards increased participation, openness, transparency, and communication (Schiavo-Ocampo &

Sundaram,2001); thirdly, it involves a transformation in the interactions between government and its (internal and external) clients, classified as government-to-citizen (G2C), government-to-business (G2B), government to its internal employee clients (G2E), government to other government institutional clients (G2G), and citizen-to-citizen (C2C); and finally, it involves a transformation of the society itself, though the emergence of connections, as well as relations among NGOs, built and sustained using electronic means (Pablo & Pan,2002). Researchers have a consensus on some of the common areas. Backus (2001) argues that by achieving the concrete objective of supporting and simplifying governance for all parties – government, citizens and businesses through online services and other electronic means, E- Governance uses electronic means to support and stimulate good governance.

2.2 Definition of Key Terms

2.2.1 Demand Side

'Demand side' refers to the beneficiaries/citizens who are the end users of e-government services.

2.2.2 E-Governance

'E-Governance' is modernizing governance through use of ICTs for good governance and democratic governance that requires ensuring greater convenience and better services for all citizens and ultimately leads to a knowledge-based society.

2.2.3 E-Government

'E-Government' refers to a situation where government bodies and agencies are automated and interconnected through ICTs interacting with each other and performing their day-to-day work electronically. In addition to this, it also maintain electronic communication channel to interact with business and citizen.

However, the terms e-government and e-governance are closely associated with each other having different meanings. As these two terms are often used interchangeably, it might not have been possible in the study always to follow a strict boundary line between these terms.

2.2.4 E-Service

'E-Service' refers to any service that is provided by any electronic means e.g. Internet/website, mobile devices. According to Goldkuhl & Persson (2006a), e-service means that an external user (a citizen) interacts through a user interface of a public IT system based on web technology. Rowley (2006) defined e-services as 'deeds, efforts or performances whose delivery is mediated by information technology (including the web, information kiosks and mobile devices).'

2.2.5 E-Readiness

'E-Readiness' means a favorable environment imperative for successful implementation of e-governance. In this context, E-Readiness refers to the readiness of both supply side and demand side.

2.2.6 Supply Side

'Supply Side' refers to the officials (both officers and office assistants) of Public Administration who are the main driving force of E-Governance.

2.3 An Overview of E-Governance in Bangladesh

Bangladesh is a country with a population of about 144.5 million (BBS, 2009). She has started its digital era in the late 1990s and gradually mobile phone captured the market immensely (HSR, 2007). The country has established vast mobile communication network with 54.7 million (38%) mobile phone active subscribers (BTRC, 2010) which is growing each year. Besides, Bangladesh belongs to the top ten economics with the least costly mobile cellular sub-basket prices (ITU, 2009). According to ITU (2009), there are about 450,000 Internet users in Bangladesh during 2007 which is growing rapidly. In 2006 Bangladesh connected to SEA_ME_WE4 submarine cable with data transfer capacity of 14.78 Gbps. Government has also taken further initiatives to install second submarine cable backbone as redundant and alternate path to overcome the disruption in the first one (Rahman,2010). The government has exempted all taxes on computers and peripherals to promote Information and Communication Technology (ICT) (SICT, 2008). National ICT Policy 2002 has been revised and replaced by National ICT Policy 2009 with notable changes in methodological framework in the policy document. In the following discussion an attempt is made to present the evolution of E-Governance in Bangladesh.

2.3.1 Phase I (Late 1990s to 2006): Infrastructure Building

Early efforts started in mid 1990s, when the government automated the railway ticketing system. Another notable project from this period was the e-birth registration project under Rajshahi City Corporation in 2001, which made the process significantly faster and more efficient. The trend of infrastructure building and process automation continued in a more coordinated manner from 2002-03, with the formation of the Support to ICT (SICT) Task Force Project, a publicly funded implementation arm of the National ICT Task Force based at the Planning Commission. Another public entity, the Bangladesh Computer Council (BCC), provided key support with respect to infrastructure development, technical assistance and capacity building for various e-Government initiatives. The first full-fledged ICT policy of Bangladesh, a major milestone in the path to e-Government, was passed in 2002, following the then Prime Minister's declaration of ICT as a 'thrust sector'. Many of the projects initiated by the SICT or the line ministries themselves during this period did not sustain in the long run. In May 2008, a Review Committee formed by the Caretaker Government found that out of the 103 policy directives of 2002, only 8 were fully or largely accomplished, 61 were partially accomplished and 34 remained unaddressed.

2.3.2 Phase II (2006 to 2009): Isolated E-services

Since 2006, with the caretaker government taking over, a gradual shift was noticed in the approach to e-government. The top-down approach to planning was gradually being replaced by more participatory approach within different entities of the government. An entity, which played an important role in this shift, was the Access to Information (A2I) Program at the Prime Minister's Office (PMO). The program was initiated in 2006 with support from UNDP to support the e- government Cell at the PMO. Although A2I was not directly in charge of implementing e-government projects, it took significant initiatives to generate internal bureaucratic demand for e-government, such as the series of workshops which led to 53 e-citizen services being committed to by the secretaries of various ministries and divisions in June 2008. Similarly, 64 e-citizen services were later identified by Deputy Commissioners (DCs) for implementation. The focal points for e-government at the ministries were all at the Joint Secretary level, with relatively little decision making power, and insufficient incentives for initiating e-government projects since they get transferred recurrently.

2.3.3 Phase III (2010 and onward): Beyond the Concept of Isolated Services

The government, after the above efforts to provide e-services in an isolated manner, has realized the trends that E-Governance is not only about providing e-services to citizens; it is a holistic approach and implies to more integrated governance. Recent developments in the field of E-Governance demonstrate that e-government in Bangladesh is moving to the next phase that is away from isolated e-services towards more integrated, connected and transactional e-services. The present government came to power with the pledge of building a "Digital Bangladesh", and has tried to keep consistent focus on this promise so far. This has resulted in a political climate highly supportive of and conducive to e-government projects. A recent initiative (in 2010), the Digital Innovation Fair, born out of the A2I program at the PMO, took this opportunity and showcased the various ongoing projects have undertaken by the Ministries, effectively putting government agencies in a competitive environment and giving citizens an unprecedented opportunity to witness what services the Government is providing, thereby creating a demand for these services. Most ministries have undergone extensive internal process automation and infrastructure development projects, which are usually the most resource consuming, and most of these projects have been completed. There have also been demonstrated successes in the creation and deployment of e-services. All this sets the stage for integrating the front-end services with automated backend processes, through holistic planning, and improving the quality and efficiency of e-services.

Moreover, the present government of Bangladesh has taken some spectacular initiatives to introduce ICT to all ministries and divisions. It took a good number of initiatives to introduce E-Governance in the country. Some of them are providing greater access to government information, promoting civic engagement by enabling the public to interact with government more accountable by making its operations more transparent and thus reducing the opportunities for corruption, poverty and providing development opportunities, especially benefiting rural and traditionally underserved communities (Alam et al, 2008). By this time, most of the ministries have their own websites, and the offices are equipped with sufficient logistic support such as computers, printers, scanners and other tools. Most of the offices have Internet connected with broadband or dial-up connections. LAN, WAN & MAN connections are available in some of the ministries and providing web-based services to the citizens. Beside these, almost every Union Parished of Bangladesh has brought under the umbrella of Union Information Service Centre (UISC).Two entrepreneurs (one male and one

female) are engaged in providing e-services to the local people. They are trying to make the centre as a business centre. They are also involved in training the local people in the field of computer. In addition, the government of Bangladesh has taken substantial initiatives to practice e-governance under the concept of Digital Bangladesh such as automation of internal processes (in banking sector), electronic birth registration system, financial management system, online Hajj Web Site, MIS for project management, personnel database railway ticketing, e-tendering, online submission of application for admission at the public and private universities, publishing HSC, SSC, JSC, PSC, BCS and other competitive examination results and so forth . Furthermore, introducing e-voting in the electoral process is a new phenomenal development in the recent development of E-Governance in Bangladesh.

Despite some ground-breaking initiatives and successes, Bangladesh has to face some formidable challenges in E-Governance Readiness. The top level administration as well as field administration should need to have well-equipped with knowledge and skills of ICTs. To ensure the e-service delivery to the citizens at the grassroots level, it is of immense importance to have a good preparedness in E-Governance at the Upazila Administration because the Upazila Administration is the only coordinating wing between the central and the local government institutes.

2.4 E-Governance Relationship Model

E-Governance has four major relationship components and these are:

G2C (Governance-to-Citizen): This model involves interaction of individual citizen with the government. It provides citizens greater access to government information through making available online laws, regulations, forms and data. It also promotes civic engagement by enabling the public to interact more easily with government officials for obtaining license, certificates, filing tax return etc. Moreover, it allows customers to access government information and services promptly and more conveniently from anywhere else of the country.

G2B (Governance-to-Business): It involves interaction of business entities with the government. In this model government serves as an enabler of economic activities, a customer of commercial goods and services, and as the regulator of both domestic and international trade and commerce, for instance, e-procurement and development of an electronic market place.

G2G (Government-to-Government): This model defines the relationship between government offices and its other branches, and also involves interaction with the governments of other countries. Governments depend on other levels of government within the country to effectively deliver services and to allocate responsibilities. Beside, the governments want to engage in ongoing interactions with foreign states and international organizations for further political and economic goals.

G2E (Government-to-Employee): This model involves interaction between the government and its employees. It provides employees the opportunity to assess information regarding compensation and benefit policies, training and learning opportunities, civil rights, laws etc. G2E also refers to strategic and tactical mechanisms for encouraging the implementation of government goals and programs as well as human resource management, budgeting and accounting. Source: (Taifur, 2006 and Valentina, 2004)
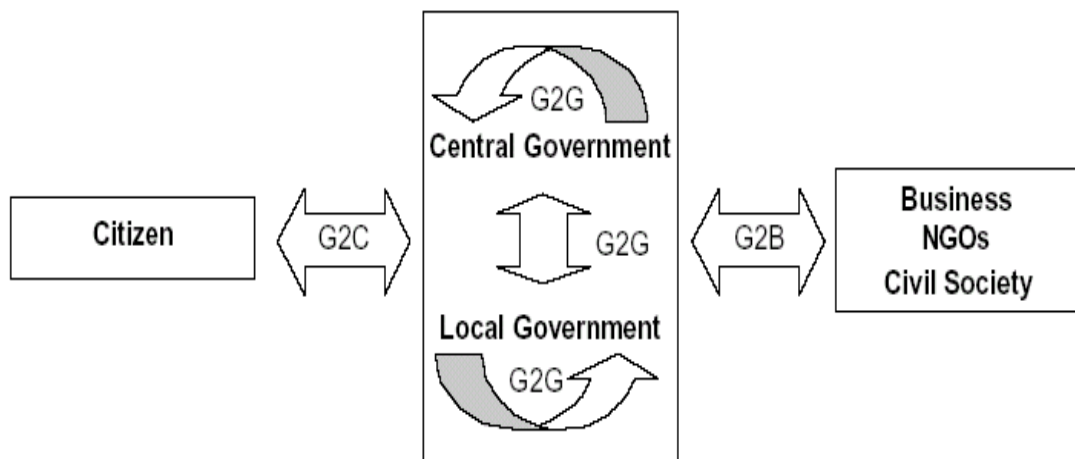
Figure 2.1: Components of E-Governance (Source: Micheal Backus)

Further, Zhiyuan Fang developed a broad schematic system of E-Government Model that encompasses G2G, G2C, G2B, G2E and G2N.
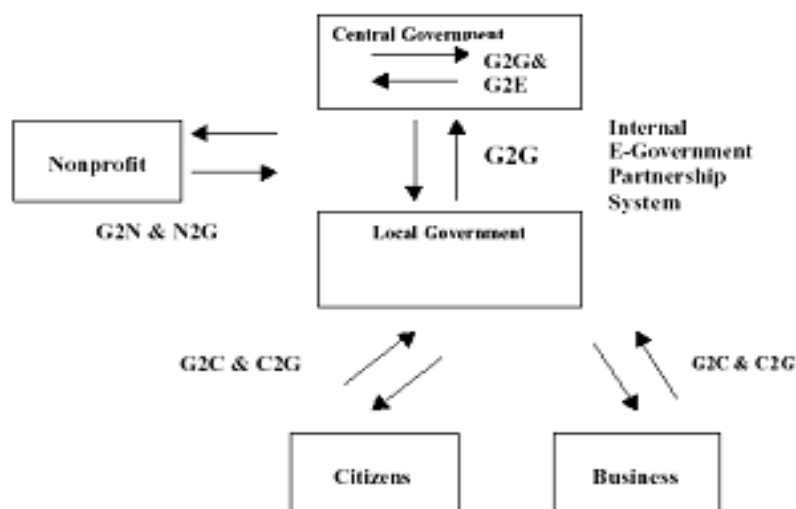
Figure 2.2: A Broad Schematic System for E-Government Models

Source : Zhiyuan Fang, "E-Government in Digital Era: Concept, Practice, and Development".

The details of these components are Government to Citizen (G2C), Citizen to Government (C2G), Government to Business (G2B), Business to Government (B2G), Government to Employee (G2E), Government to Government (G2G), Government to Non-profit (G2N) and Non-profit to Government (N2G). Eight categories of above stated e-government partnerships are further summed up into five consumers to government relationships: Citizens to Government, Business to Government, Government to Non-profit, Government to Government and Government to Employee.

However, these e-governance relationship aspects can be expressed under three broad categories such as G2G, G2B and G2C. G2G defines relationships between different levels and branches of government, government and employees and foreign countries and international agencies; G2B defines relationships between government and markets and with the private sector; and G2C defines relationships between government and citizens, NGOs and the civil society. These three relationships have their corresponding interfaces in the governance system relationship.

2.5 Stages of E-Governance

The United Nations Organization has conducted a survey on E-Governance readiness entitled as 'Global E-Government Readiness Report 2004' and suggested a 'five stages model' of E-Governance readiness, which are as follows:

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Stage I-Emerging: A government's online presence is primarily comprised of a website and on that web page some archived information such as the head of the states' message or a document such as the constitution of the country may be available. In this stage, most of the information remains static with the fewest options for citizens.

Stage II-Enhanced: Governments provide more information, whether it is current or archived information, on public policies, laws and regulations, reports or any other downloadable databases. At this stage, the users can search for a document and there a helpline and a site map are provided for convenient usages of the website.

Stage III-Interactive: At this stage, governments deliver online services such as downloadable forms for tax payments and applications for license renewal. Beside this, an interactive web portal with services is furnished here to enhance the convenience of citizens.

Stage IV-Transactional: At this stage, governments introduce a two-way interaction between citizen and government. It includes options for paying taxes, applying for ID cards, birth certificates, passports, debit card, credit card and license renewal and such other services. It also allows the citizens to access these services online 24 hours 7 days.

Stage V-Connected: At this stage, governments transform themselves into a connected entity that responds to the needs of its citizens by developing an integrated back office infrastructure. This is the most sophisticated level of online E-Government initiatives and is characterized by:

    a) Horizontal connections (among government agencies)

    b) Vertical connections (central and local government agencies)

    c) Infrastructure connections (interoperability)

    d) Connections between governments and citizens

    e) Connections among stakeholders (government, private sector, NGOs and civil society).
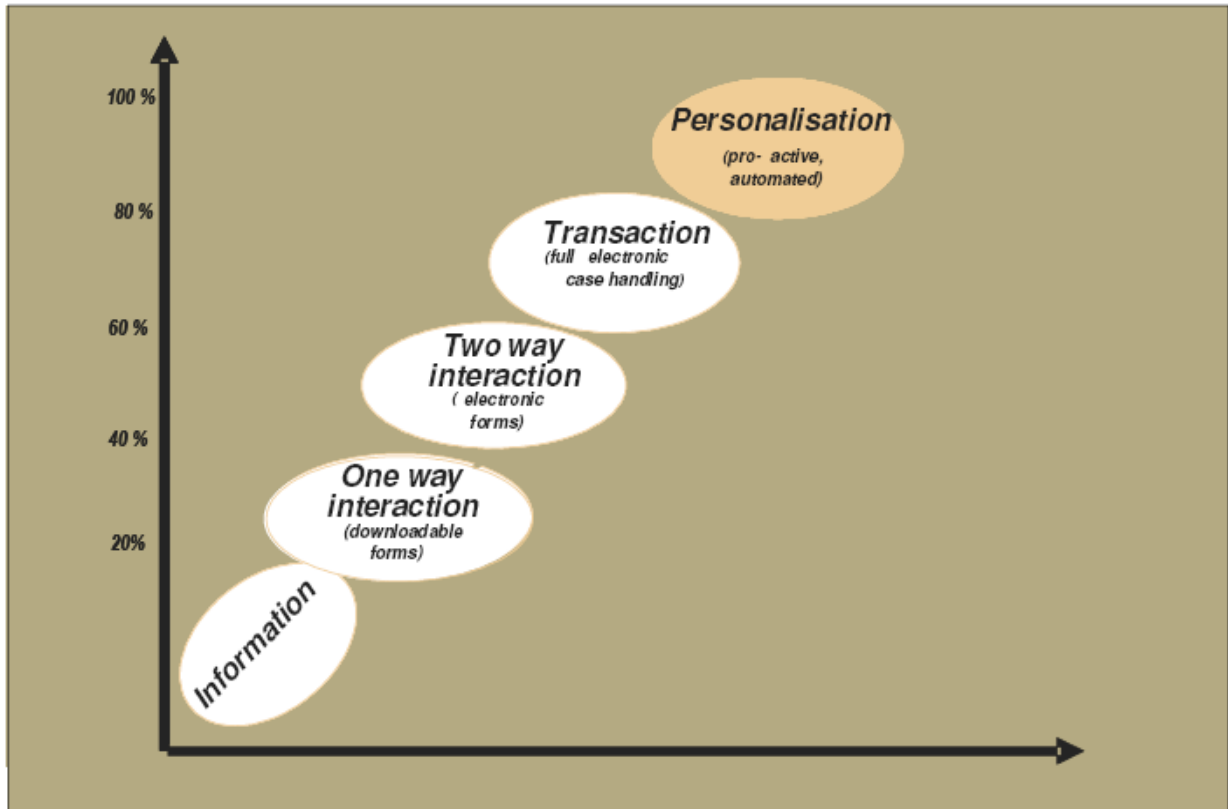
Figure 2.5: Stages of E-Governance (E-Government Fifth Level sophistication)
Source: As suggested by European Union (EU)

This five stage model is also known as 'maturity levels' of E-Governance that will be used as a basis for assessment of E-Governance.

Beside this, Gatner (2000) has developed a four-phase model of E-Governance:

1. **Information-Presence:** E-governance means being present on the web, providing the public with relevant information.

2. **Interaction- Intake processes:** The interaction between the government and the public is stimulated by various applications.

3. **Transaction-Complete transactions:** The complexity of technology is increasing, but customer value is also higher. Complete transactions can be done without going to an office e.g., online services for income tax, property tax, renewal of licenses, visa and passports and online voting.

4. **Transformation- Integration and exchange:** All information systems are integrated and the public can get services at one virtual counter (Hossain, 2005: 9-10).

2.6 E-Readiness Measures: Theory for the Present Study

Many institutes develop different measuring indices of E-Governance readiness throughout the world. Some of the used measures are presented below.

(A) Since 2001 the United Nations Department of Economic and Social Affairs (UN-DESA) has been conducting surveys on the global state of E-Government development on the basis of following composite indices:

    a) Web measure index

    b) Telecommunication infrastructure index

    c) Human capital index.

(B) Brown University Assessment is a global survey covers the largest number of countries and the following set of measuring indices:

    a) Online information

    b) Electronic services

    c) Privacy and security

    d) Disability access

    e) Foreign language access

    f) User fees and premium fees

    g) Public outreach.

(C) Accenture develops a set of E-Governance readiness indices and these are:

    a) Citizen-centered interactions

    b) Cross-government service interactions

    c) Multi-channel service delivery

    d) Proactive communication and education

    e) Citizen voice scores.

Layne and Lee (2001), a practitioner of institutions e.g. United Nations, 2008 & European Union, 2009 developed a model that is used to benchmark the progress of e-services, which is in other words, known as 'EU model'. In this model 20 common services are considered for comparison where 12 services are directly citizen-oriented and the rest 8 services are business oriented. On the other hand, UN has developed a composite index of web measure index, telecommunication infrastructure index, human capital index, and uses five stages viz. 'Emerging', 'Enhanced', 'Interactive', 'Transactional' and 'Connected'. The UN model focuses on only citizen-oriented e-services while the EU model focuses on e-services for both

citizens and business. Not only has that EU model reflected how businesses and citizens can interact with public authorities (Capgemini, 2009). The present study focuses on only E-Governance readiness in terms of public e-services. So, the UN model is considered as the best choice for this study.

2.7 A Selected Review of Literature

Albeit E-Governance is comparatively a new concept, by this time, some nations already have stepped ahead in this arena. Countries like Bangladesh have just started moving. Thus, in Bangladesh context, the field remains almost a virgin one to be explored into where substantial knowledge gap exists. Though few government, business or technical reports or articles are currently available, but mostly from public administration's perspective there is hardly any academic research in this field, so far the documents found. In this regard, Internet is the reliable medium for exploring relevant references.

A global survey on E-Government entitled as 'Benchmarking E-Government: A Global Perspective- Assessing the Progress of the UN Member States' (2002) ranks 169 member countries according to an index that has been developed to capture the capacity of countries to sustain e-government development. As per the survey, the average score for the world e-government capacity was calculated as 1.62 by the index. By region, North America (2.60), Europe (2.01), South America (1.79) and the Middle East (1.76) all registered an index above the global mean. Asia (1.38), the Caribbean (1.34) Central America (1.28) and Africa (0.84) fell below the global index. Among individual countries, USA ranked first having index value 3.11 and among the SAARC countries, Bangladesh, Nepal and Maldives fall in the stage of enhanced presence stage, whereas India, Pakistan and Sri Lanka are with interactive presence.

On the basis of E-Government Readiness Index, which is a composite index comprising the Web Measure Index, the Telecommunication Infrastructure Index and the Human Capital Index, the UN Global E-government Survey 2004 provides comparative rankings of the countries in the world. Out of 191 member states, the UN survey covers 178 countries - 13 countries had not online facilities. According to the survey, the USA (0.913) was the world leader followed by Denmark (0.904), the UK (0.885) and Sweden (0.874). Among the top 25 e-ready courtiers, 22 countries were from high income developed economies identical to the

survey of 2003. The Global index value shown in the survey is 0.413, whereas the value for Bangladesh is 0.1788 securing the previous year's (2003) 159th position.

According to the UN E-Government Survey 2010, top 20 countries were respectively Republic of Korea (0.8785), United States (0.8510), Canada (0.8448), United Kingdom (0.8147), Netherlands (0.8097), Norway (0.8020), Denmark (0.7872), Australia (0.7863), Spain (0.7516), France (0.7510), Singapore (0.7476), Sweden (0.7474), Bahrain (0.7363), Newlands (0.7311), Germany (0.7309), Belgium (0.7225), Japan (0.7152), Switzerland (0.7136), Finland (0.6967) and Estonia 0.6965). Data shows that the top ranked country in 2010 is Korean Republic with an index value of 0.8785, whereas the United States and Canada closely follow it securing the position of 2nd and 3rd respectively.

Again, the UN E-Government Survey 2012 explored that top 20 countries comprises high income developed economies. Of the 20, 14 countries were in Northern America and Europe, 3 in East Asia (Republic of Korea, Singapore and Japan), 2 in Oceania (Australia and New Zealand), and 1 in Western Asia (Israel). The Republic of Korea (0.9283) maintains its position as achieving the greatest e-government development in 2012 and it is followed by three European countries namely Netherlands with an index value 0.9125 and the United Kingdom of Great Britain and Northern Ireland having an index value 0.8960 becoming the 2nd and 3rd leading e-ready governments in the world. Denmark (0.8889), the United States of America (0.8687), France (0.8635) and Sweden (0.8599) follow close behind among the global leaders.

Apart from the survey of 2002, 2003 and 2004, both the survey of 2010 and 2012 showed that the Korean Republic holds its previous position (i.e.2010's rank) as no.1 ranked leading country in the world, whereas the position of the United States slightly declined. It is remarkable here that the world ranking countries are mainly from higher economies and there is an evident digital gap remains till now.

The Survey 2010 also revealed that the position of the south Asian countries are respectively Maldives 92th having an index value 0.4392, Iran (0.4234) 102th, Sri Lanka (0.3995) 111th, India (0.3567) 119th, Bangladesh (0.3028) 134th, Pakistan (0.2755) 146th, Bhutan (0.2598) 152th and Nepal (0.2568) 153th. In this survey, it is seen that Maldives scored the highest with a global rank of 92th lagging behind Iran, Sri Lanka, India and Bangladesh. In addition to that, the UN E-Government Survey 2012 showed almost identical result in terms of southern

Asian countries. In the report 2012 Maldives with an index value of 0.4994 stands the highest position in the region having a global rank of 95th. Other countries of this region show almost same result such as Iran (0.4876) 100th, Sri Lanka (0.4357) 115th, India (0.3567) 125th, Bangladesh (0.2991) 150th, Bhutan (0.2942) 152th, Pakistan (0.2755) 156th and Nepal (0.2064) 153th respectively. Although the global ranking of Bangladesh slightly declines in 2012 to 2010, the overall ranking in the southern Asian countries remains same.

The UN E-Government Survey Reports of 2005, 2008, 2010 and 2012 also explored that Bangladesh ranks 162nd, 142nd, 134th and 162nd respectively in the corresponding years and with some exception in the year of 2012 Bangladesh has shown a positive trend in E-Governance readiness. This information provides a striking feature that in both the reporting years of 2010 and 2012 Bangladesh is ahead of Pakistan, Bhutan and Nepal in the South Asian countries but she is still lagging behind other neighboring countries in terms of E-Governance Readiness. This information also suggests that albeit Bangladesh is getting better in E-Governance preparedness, it should have to improve fast otherwise it could not keep pace with other countries of South Asia.

The UN E-Government Survey 2012 revealed another fascinating feature that Malaysia and Saudi Arabia having index values 0.6703 and o.6658 respectively have come out as 'Emerging leader' in Southern Asian countries in E-Governance development. This finding provides sufficient room for policy makers to take more initiatives in the development of E-Governance.

USAID, Bangladesh (2002) conducted a study entitled "Information Technology Enabled Services (ITES) –Bangladesh. The study focuses on some common areas like ICT education, legal environment, connectivity preparedness etc.

The World Economic Forum (WEF)-INSEAD prepared 'Global Information Technology Report (GITR) 2009-2010 where they reviewed the placement of Bangladesh on three ICT indicators such as environment, readiness and usage. Bangladesh is unprepared in terms of education, staff training, research and investment and infrastructure having a rank of 100th, whereas India ranks highest at 22nd, followed by Sri Lanka 44th and Pakistan 59th in the South Asian countries.

Hoque (2005) observed that practice of electronic correspondence, by ministries and divisions in the Bangladesh Secretariat. He argued that e-mail correspondences by the ministries or divisions hardly happen among counterpart ministries and departments or it happens frequently with NGOs and civil society. More than 72% ministries or divisions never communicate with general people through e-mail. He also mentioned that mere 15% of the 20 websites, to some extent, use Bangla content together with English; while 85% are created in English only. In his study it is noticed that neither the government nor the citizens of Bangladesh are ready enough to adopt technology-based E-Governance.

Hoque (2005) also found that despite some epoch-making initiatives, Bangladesh still has to face a lot of challenges in domain of E-Governance. About the preparedness of E-Governance, he observed both the demand and supply side. In case of demand side's preparation his observation is '…about half of the officials working in the Secretariat do not have formal training on IT and among 'IT literates', again half of them show 'low' level of IT aptitude - presently in the Secretariat, 77.3% Class I officers have needs for IT training'. On the other hand, about supply side he argues that '… neither electronic services are ready nor are the citizens prepared for e-governance. Even they are not conscious about many traditional government services or their rights to public services'.

Mahbubul (2007) found that the regulatory framework in Bangladesh has not yet been modernization to accommodate the growing needs of the electronic world. He also referred to a study conducted by Planning Division covering 303 government institutions throughout Bangladesh covering a total of 35,658 officers and 1,03,126 staffs that the Personal Computer (PC) to Employee ratio was 0.09, whereas PC to Officer ratio was 0.35, both of which clearly indicated the very poor condition of PC use in government offices. Although Bangladesh has taken various initiatives in E-Governance, it has to face some challenges. Alom argued that being a developing country, it was always challenge for the country to finance capital intensive endeavors like access backbones and communication infrastructure (Alom et al, 2008). One of the most vital reasons for e-governance being less effective is the problem of citizens' access to available information sources such as the internet (Haque, 2002:244). Another study reveals that there is no doubt about the goal of e-governance. A coordinated effort by political leaders, bureaucrats and private entrepreneurs is critical to facilitate the growth of the ICT sector, and hence, the socioeconomic development of Bangladesh (Hasan, 2009).

Bangladesh Enterprise Institute (BEI) conducted two surveys regarding E-Governance development. Of these 'Study of e-Government in Bangladesh' was carried out in 2004 and 'Realizing the Vision of Digital Bangladesh through e-Government' was conducted in July 2010.The latter one puts some light on E-Governance initiatives taken in Bangladesh since mid 1990s. The second study also reveals some qualitative information about E-Governance development in Bangladesh. However, the major finding of the study is Bangladesh is advancing in E-Governance implementation (BEI, 2010).

At the ahead of the 2001's general election in the country Centre for Policy Dialogue (CPD) presented the Policy Briefs for Information and Communication Technology 'to focus the attention of the principal political parties on policy agendas that addressing the well-being of people and economic development as a whole'. It is a very important work on the ICTs sector in Bangladesh suggesting for a universal National Information Infrastructure. The report underlines ICTs as key enabler for good governance.

In 2001, the Digital Opportunity Initiative (DOI) published a report entitled as 'Creating a Development Dynamic' on the impact of ICTs on achieving specific social and economic development goals. It provides some examples of success stories of some countries including Bangladesh. But the report does not have any significant discussion on governance side nor does it have country-context an over-all ICT related analysis with particular reference to Bangladesh.

Jackson, P. (2000) in his article "Electronic Government in Bangladesh: Prospects and Approaches" deals with the definitions and issues of e-government, strategies, drivers and barriers. The paper is mainly engaged with the theoretical discussions on e-government, in general, having very few words about the situation of Bangladesh, in particular.

In 2000, Bangladesh Computer Society (BCS) in association with the Asia Foundation conducted a 'Base Line Survey on IT Sector of Bangladesh'. It presents a snapshot of the scenario of the IT sector of Bangladesh, which can be considered as a benchmark analysis on this area. This study covers four major parts namely: Hardware, Software, IT Education and Training and Internet Service Provider.

Hasan (2011) observed that both the officials and the citizens are agreed upon the overall low preparedness bureaucracy in terms of E-Governance. In his study it is also revealed that the technical skill level of the officials working at the office of the Deputy Commissioner, Dhaka is reasonably low. They do not have enough training and orientation of ICT and relevant matters; neither personally nor institutionally.

Therefore, the area of e-governance in the Public Administration of Bangladesh still requires in-depth cross-reference studies in the context of its preparedness, missing links and significant knowledge gap.

2.8 Analytical Framework

On the basis of the above concepts and issues related to E-Governance, an attempt is made to develop an analytical framework. In developing the analytical framework, the relevant concepts are considered in line with the literature review and tried to relate these concepts with this research work.

The over view of the concept of E-Governance provides a solid foundation of the theoretical concepts. In accordance with the 'UN model' and various E-Governance Measuring Indices provided by UN-DESA, the only dependent variable is E-Governance readiness. And the assumed independent variables are human capital, infrastructure and logistic support, Web presence, perception of the citizens that may have influential effects on the dependent variable E-Governance readiness.

Therefore, the effects of independent variables on E-Governance readiness, the dependent variable, in the context of Public Administration of Bangladesh are verified herewith as these all variables are derived from the given sets of E-Readiness measuring indices and relevant concepts.

2.8.1   An analytical framework for the purpose of this research has been developed in the following way (Figure 2.8.1).

Independent Variables   Dependant Variable
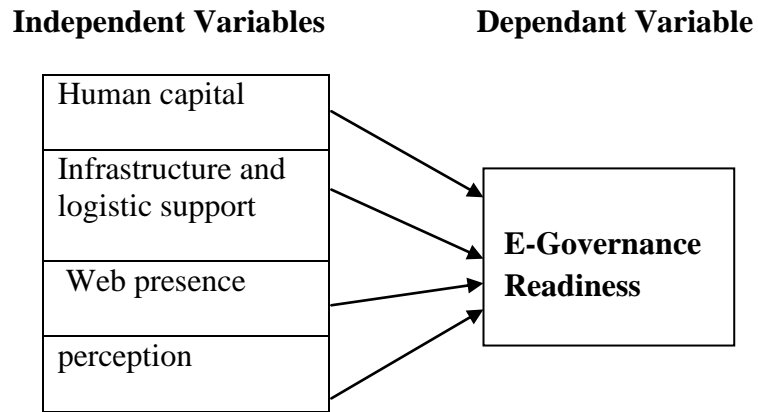
Figure 2.8.1: Analytical Framework

2.8.2 Measureable Indicators for Independent Variables (Table-2.8.2)

SL	Independent Variables	Indicators	Source of Data*	Category

1.	Human capital	• Competency
		• Accessibility to ICTs
		• Usability
		   i. Personal e-mail
		   ii. Official e-mail
			Q
			Q
			Q
			Q
			Q
				Supply Side

2.	Infrastructure and Logistic Support	• Computer accessories at workplace • Power situation • Internet connection at workplace • Internet connectivity speed at workplace	Q Q Q Q	
3.	Web presence	• Availability of e- services • Affordability of e- services	Q Q	

4.	Perception	• Citizen's perception about ICTs
		• Accessibility to ICTs
		   i. Ownership of computer
		   ii. Shared access
		   iii. Others(Cyber cafe)
			I
			I
			I
			I
			I
				Demand Side

** **Indicators for the Independent Variables (*Question,*Interview)**

CHAPTER THREE

RESEARCH METHODOLOGY

In general, research methodology is the way of achieving the research objectives. It primarily focuses on the methods, tools and techniques of data collection. The instruments for gathering data also fall within the definition of methodology of a research (Aminuzzaman: 1991). This chapter provides the methods and techniques of collecting data along with the rationale of selection of the study area.

3.1 Selection of the Study Area

For the purpose of this study, the two Upazila of Comilla out of sixteen viz. Comilla Sadar and Debidwar have been selected. It is worth mentioning that Comilla is one of the pioneer districts in terms of E-Governance implementation, and thus it is valid to choose Comilla for assessment of E-Governance readiness.

3.2 Methods

Assessment of E-Governance Readiness and identifying its influencing factors is an exploratory one using both qualitative and quantitative data. In other words, for drawing some inferences on the findings, it is necessary to analyze the collected data quantitatively. So, a combination of qualitative and quantitative approach is applied here to achieve the objectives of this study. In this research, the following methods are used:

  I.   Content Analysis
 II.   Interview (Face-to-Face Interview)
III.   Questionnaire Survey

Content Analysis: Content Analysis includes collecting data from all relevant books, documents, articles, journals, published and unpublished research works and online articles that are found to be available.

Interview: The Face-to-Face Interview is conducted for the beneficiaries or service seekers. The service seekers are the general people of the society and their demand for services are naïve and plain. The perception of the researcher is that they should deal with utmost care in acquiring information from them and that's why the face to face interview method with semi-structured oral interview is considered suitable for this purpose. Thus the main objective of

the interview method is to collect information about the perception of the citizens or beneficiaries regarding E-Governance Readiness of Upazila Administration.

Questionnaire Survey: The semi-structured questionnaire survey method is conducted in this research with an intention to collect primary data about E-Governance Readiness in the Upazila Administration of Bangladesh and also to find out the probable impediments that hinder the e-readiness at field level.

3.3 Sources of Data

The data are collected for this study from both primary and secondary sources. Secondary data are gathered from the existing literatures such as books, newspaper reports, previous research works, seminar papers, reports etc.

Primary data are collected through interview and questionnaire survey. The officers' class one and office assistants/ computer operators are brought under the questionnaire survey and the citizen/beneficiaries are brought under the interview method for drawing primary information.

3.4 Data collection Technique

Data are collected through interview and questionnaire survey method. In-depth interview has been conducted through semi-structured questionnaire. Two sets of questionnaire have been used to collect primary data, one for the officials and the other for the beneficiaries.

3.5 Sampling

Due to resource and time constraints all the employees working in the offices of the Upazila Administration of Comilla Sadar and Debidwar could not bring under the research work. This study is limited to only five leading departments of Upazila Administration such as UNO office, Upazila Secondary Education Office (USEO), Upazila Education Office (UEO)(Primary), Upazila Health Office(UHO)   and Upazila Agriculture Office(UAO). The random sampling is being used to choose the respondents for the purpose of the questionnaire survey. Three strata have been chosen from each of the study areas namely class one gazetted officers, office assistants/ computer operators and some beneficiaries of both offices.

3.6 Sample Size

A total 40 (forty) respondents has been selected from the three strata. The composition of the respondents is as follows (Table-3.6.1):

Study Area(s)	Stratum	No. of Respondents
Office of the Upazila Administration of Comilla Sadar and Debidwar	Class one Gazetted Officers	10(5+5)
	Office Assistants/Computer Operators	10 (5+5)
	Beneficiaries/ Service seekers	20 (10+10)
Total		40

Table 3.6.1: Composition of the Respondents

The class one gazetted officers are actively involved in the process of decision making and the office assistants/ computer operators are actively involved in initiating the files that are directly related to communications. So they comprise a significant part of the sample. On the other hand, the citizens/ service seekers are the heart of the E-Governance, and thus they also comprise a dominating part of the sample.

3.7 Data Validation

The collected data have been validated through cross checking with each other and with the secondary data sources.

3.8 Data Analysis Technique

The data are collected from both primary and secondary sources. The collected data are then consolidated, processed and analyzed by using various statistical tools and techniques. In this study Statistical Packages for the Social Sciences (SPSS), MS-Word and MS-Excel are mainly used to process and analyze the data.

3.9 Limitation of the Study

The study is limited to only class one gazetted officers, office assistants /computer operators of some five major departments/offices such as UNO, UHO, UEO, USEO and UAO of two Upazila Administration viz. Comilla Sadar and Debidwar, and some 20 beneficiaries of those Upazila due to time constraint and manageability of the researcher. As an individual

researcher it is very hard to collect and manage data from all Upazila of Bangladesh within a short span of time. Not only that, it is next to impossible to collect data from all offices of the same Upazila Administration in the same fashion. So, only leading offices of both the Upazila are being selected for this study.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

In this chapter primary data are processed and analyzed systematically to reach the overall findings in terms of E-Governance readiness and to identify the major barriers that hinder the e-readiness process. The data are processed and analyzed from two perspectives such as supply side (i.e. the officers and the office assistants/computer operators) and demand side (i.e. the beneficiaries/ citizens). This chapter highlights on presentation of data obtained from both officials and beneficiaries/service seekers, comparison of the findings obtained from both the Upazila and finally an attempt is made to draw a brief conclusion of the discussion.

4.1 Data obtained from Officials (Questionnaire-1)

4.1.1 Distribution of Respondents by Age

The distribution of respondents such as the officers and the office assistants/computer operators are consolidated below according to age.

Age group	Frequency	Percentage (%)
30-40	8	40%
40-50	10	50%
50-60	2	10%

Table 4.1: Distribution of Respondents by Age (n=20)

From the above table it is shown that half (50%) of total respondents fall in the age group of (40-50) years and 40% of them represents comparatively less age group(30-40 years) and the rest 2% fall in the age group of (50-60) years.

4.1.2 Ownership of Computer at Home and Office

Name of the Office	Yes	NO
UNO Office	Yes	-
Upazila Agriculture Office	Yes	-
Upazila Health Office	Yes	-
Upazila Education Office (Primary)	Yes	-
Upazila Education Office (Secondary)	Yes	-

Table 4.2: Ownership of Computer at Office (n=5*2=10)

From the above table it is evident that all the studied offices have computer facilities, but in case of personal ownership of computer by officers and office assistants/computer operators it is shown that only 65% of the respondents have computer facilities at their home, whereas the rest 35% do not have any computer facilities. The data are furnished by the following figure.
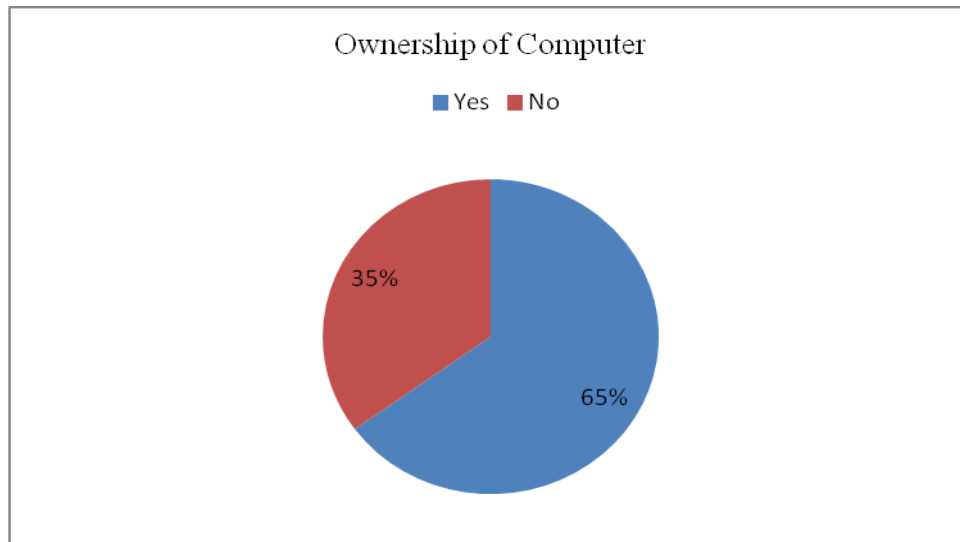

Figure 4.1: Ownership of Computer at Home (n=20)

4.1.3 Capability in Computer Usages
During the assessment of the respondents themselves about their capability in using computer, mixed information is revealed.
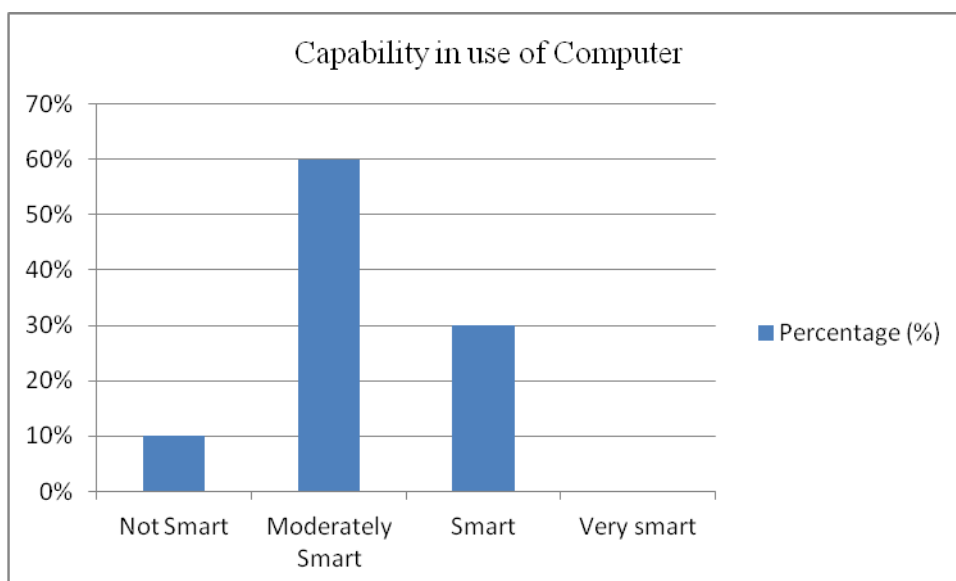

Figure 4.2: Capability in Use of Computer (n=20)

From the figure it is observed that large number of respondents (60%) rank themselves as 'Moderately Smart' and 30% rank them as 'Smart' in using computer and it is also observed that there is no 'Very Smart' computer user found in the study.

Capability in Computer Use/Age Group	30-40	40-50	50-60
Not Smart	-	1	1
Moderately Smart	5	6	1
Smart	3(37.5%)	3(30%)	-
Very Smart	-	-	-
Total	8	10	2

Table 4.3: Capability in Computer Usage vs. Age Group Matrix (n=20)

The above table reveals a fascinating observation and that is 37.5% of the low age group (30-40 years) officials who are comparatively young are 'Smart' in using computer, and this implies that comparatively young officials tend to have more capability in using computer.
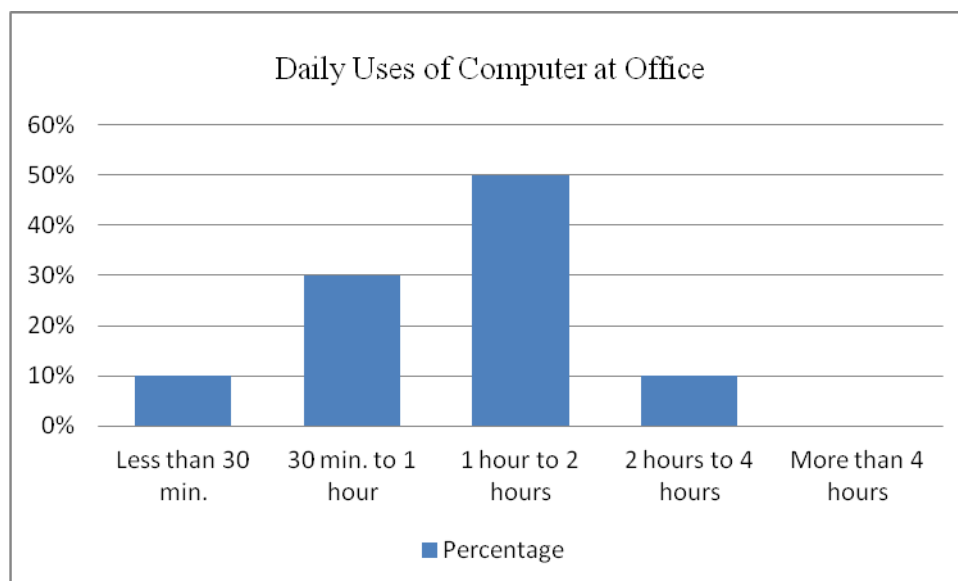
4.1.4 Daily Computer Usages at Office

Figure 4.3: Daily Computer Usages at Office (n=20)

From the above figure it is seen that 50% of the respondents use computer for 1 hour to 2 hours and another greater percentage i.e. 30% of the respondent use computer for 30 min. to 1 hour, and there are no employees found who use computer more than 4 hours at their offices. However, the use of computer in terms of hours indicates positive trend of the employees.

4.1.5 Speed of Office Internet and Usages of Internet& E-mail

From the figure below (Figure 4.4) presents the speed of the office internet.
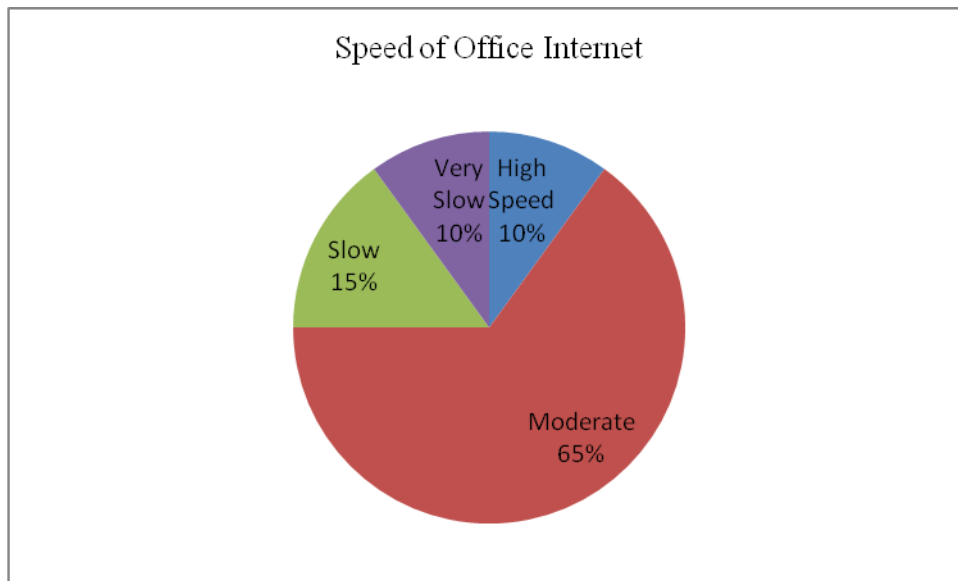
Figure 4.4: Speed of the Office Internet(n=20)

From the figure it is seen that the maximum 65% of the respondents opines that the speed of the office internet is 'Moderate', whereas 10% respondents expresses their views as 'Very Slow' and conversly equal 10% says as 'High Speed'. However, the overall speed of internet seems to be more or less satisfactory.

Again, the primary data are presented in the figure below(Figure 4.5) depicts the frequency of usages of internet at workplaces.
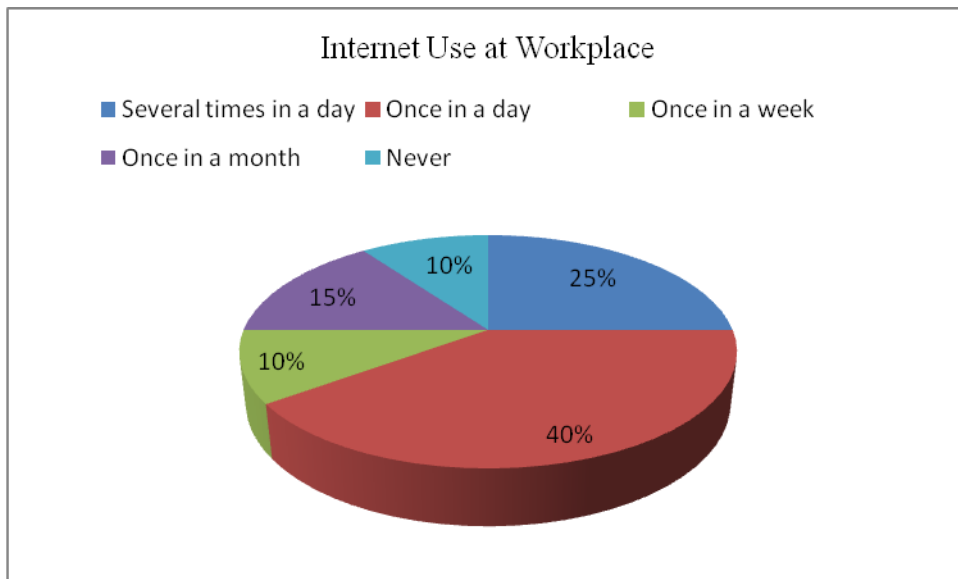
Figure 4.5: Usage of Internet at workplace (n=20)

During assessment of internet speed, it is found to be satisfactory, while the usage of internet at workplace explores mixed information. Of total respondents, only 25% uses internet at workplace several times in a day; while 40%, the highest portion, uses internet once in a day and 10% of the employee never uses the internet. On an average, it is imperative that almost 90% of the employee more or less uses internet in official works.

Furthermore, the usages of e-mail by the respondents are expressed in the figure below (Figure 4.6).

Figure 4.6: Use of e-mail at Workplace (n=20)

The figure indicates that only 15% of the respondents use e-mail several times a day and 25% use it once in a day. On the other hand, the large number of the respondents, 35% do not use e-mail at their workplace that bears a negative implication for the policy makers.

4.1.6 Level of ICT Training

The data are presented in the figure below (Figure 4.7) indicate the level of ICT training of the officials of both strata (officers and office assistants).
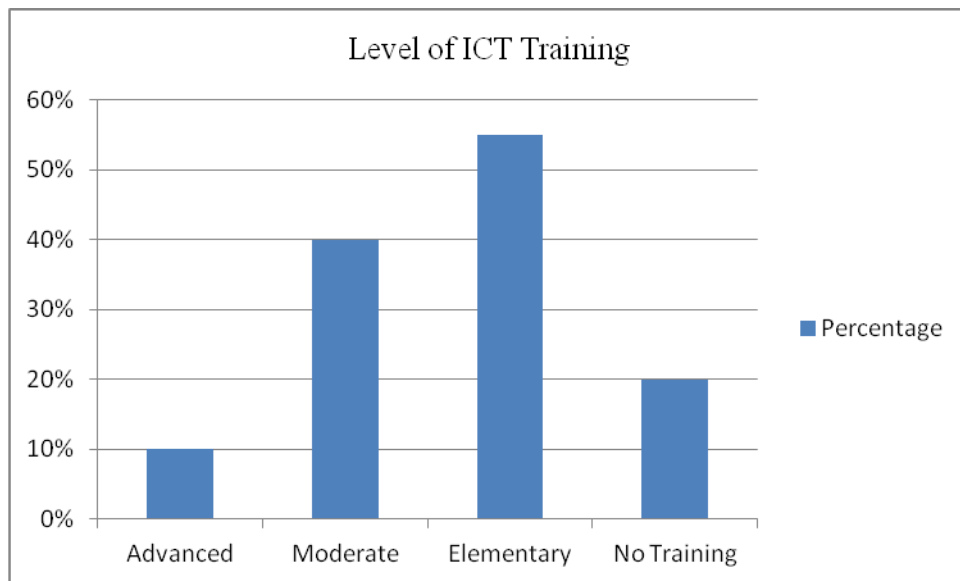
Figure 4.7: Level of ICT Training (n=20)

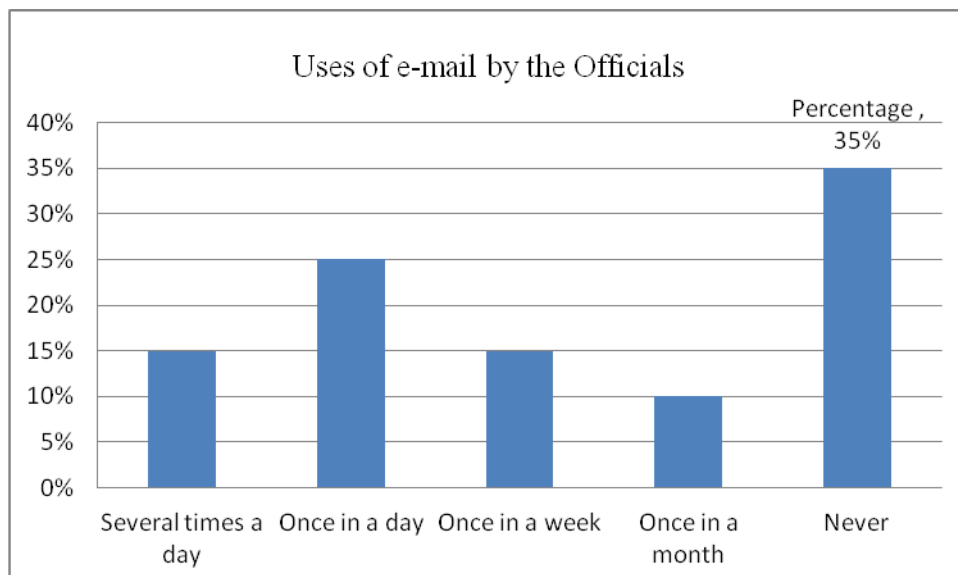From the above figure it is revealed that 20% of the total respondents do not have any ICT training and out of 80% of the respondents only 10% have 'Advanced Level', 40% have 'Moderate Level' and the rest 55% have 'Elementary Level' of ICT related training. From the information it is clear that the largest number of respondents (55%=11) exposed to 'Elementary Level' of ICT training which deems to be very rudimental and leaves rooms for the policy makers to ponder over the matter.

4.1.7 Web Presence and Services

In this context three things are considered together such as presence of website, the services provided by official website and the utilization level of the existing ICT facilities at workplace. It is found to interesting that by this time each of the study office have entitled with official website. It is also observed that the maximum websites are found to be static rather than interactive or transactional. Only some sorts of web-information such as notices (tender notice, notice for meeting etc.), resolutions, complaints, various forms (downloadable

form), examination schedule and results, telemedicine, reports are usually provided by the websites. All of the respondents told that they provide services through websites, but when they are asked to mention the categories of the services they mentioned only the name of notice, report & return, resolution, various forms etc. Again, the fact is justified by the perception of the respondents in terms of utilization level of the existing ICT facilities. The data found during the study are furnished in the figure 4.8.
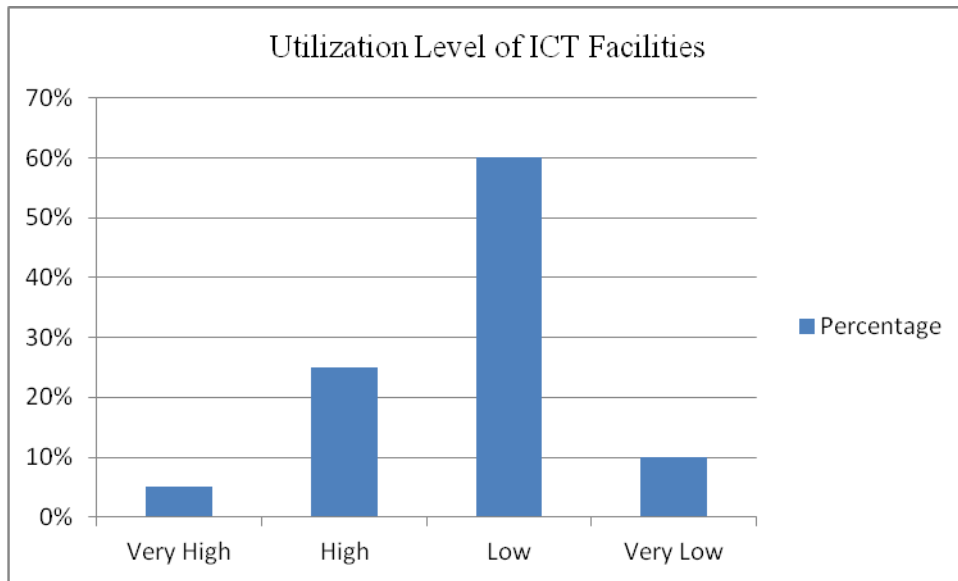
Figure 4.8: Utilization Level of ICT Facilities at Workplace

The above figure shows that 60% of the respondents view that the utilization level of ICT facilities at workplace is 'Low', whereas 25% told it as 'High' and only 5% told it is 'Very High'. It can be that the capacity of the government officials in terms of utilization of ICT facilities at workplace is still not at satisfactory level.

4.1.8 Overall Power Situation

The data obtained in terms of overall power situation (electricity) at workplace are depicted by the graph below.
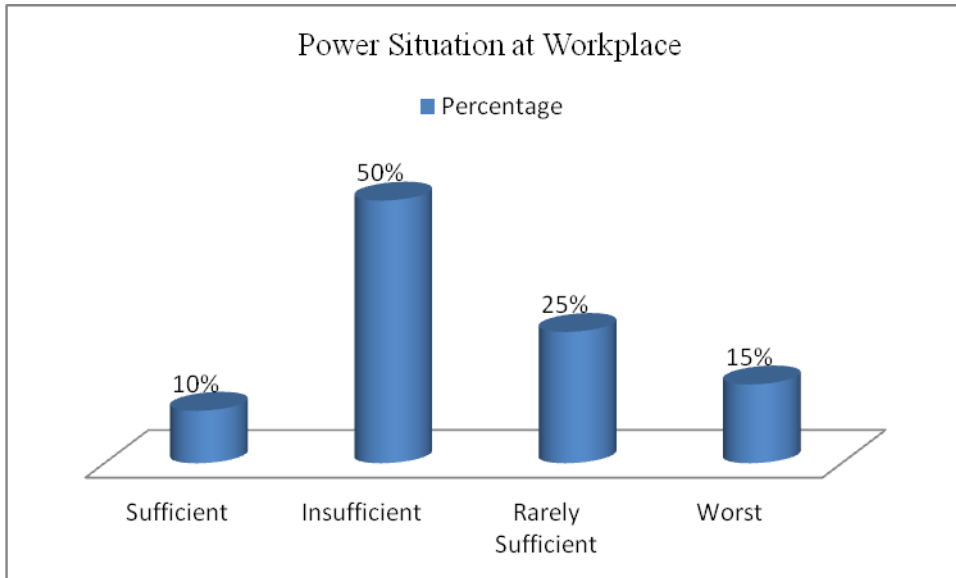
Figure 4.9: Overall power(electricity) situation at workplace

From the above figure it is obsreved that majority of the respondents (50%) mentioned that the overall power situation is 'Insufficient', whereas only 10% said it is to be 'Sufficient'.

4.1.9 Evaluation about E-Governance Readiness

The data found during the study indicate scores of E-Governance Readiness of the study areas. The score is calculated on the basis of 0-5 scale which is presented by the graph below.

	1	2	3	4	5	6
No. of Respondents	1	3	7	9	0	0
Score	0	1	2	3	4	5
Percentage	5%	15%	35%	45%	0%	0%
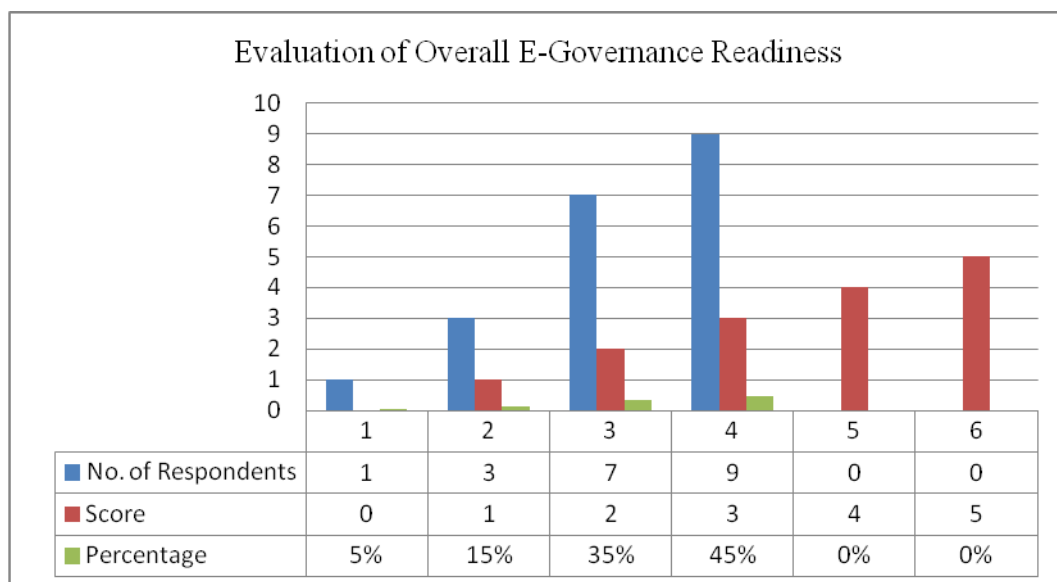
Figure 4.10: Evaluation of E-Governance Readiness by Officials (n=20)

The above figure indicates the evaluation of E-Governance Readiness of Comilla Sadar and Debidwar Upazila. This evaluation is mainly focuses on the supply side's readiness. The respondents ranked on a scale from 0 to 5 (shown in the figure 6.7). Most of the respondents

(55%) ranked on scale 3(out of 5) and next 25% ranked on scale 2(out of 5) which indicate that the E-governance Readiness of Upazila Administration is neither 'Completely Ready' nor 'Completely Unready', rather is deemed to be on the 'Half-way' of preparation having an average score 3.33[Conversion of Score (Out of 5) = (10*5)/15=3.33].

4.1.10 Impediments to E-Governance Readiness

The respondents provided their opinion in terms of impediments to E-Governance Readiness is presented below.
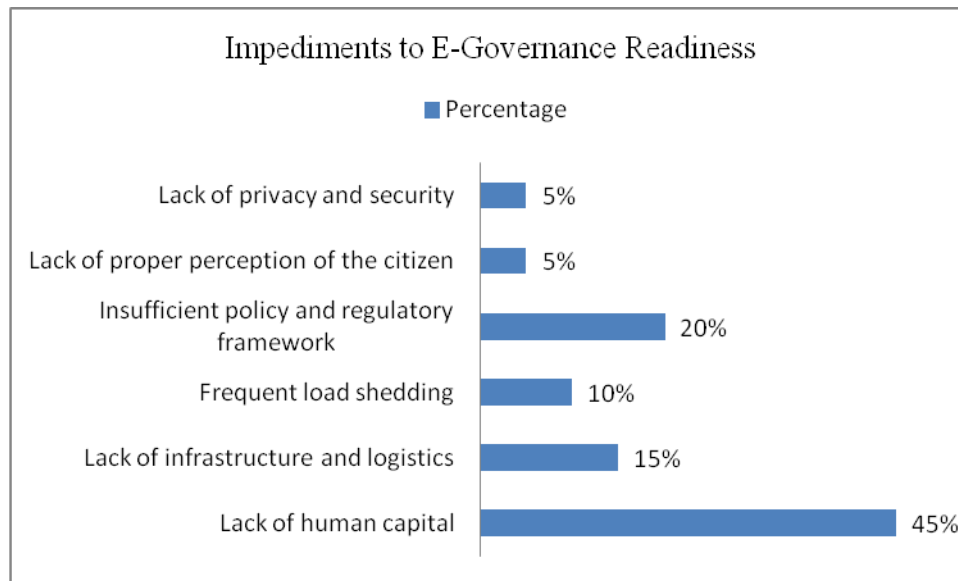
Figure 4.11: Impediments to E-Governance Readiness (n=20)

The figure shows that majority of the respondents (45%) ranks 'Lack of human capital' as the most alarming barrier to E-Governance Readiness to Upazila Administration. The next to lack of human capital is insufficient policy and regulatory framework which is viewed by 20% of the respondents. Beside these, frequent load shedding (10%) and lack of infrastructure and logistics (15%) are exponential impediments to E-Governance readiness to Upazila Administration of Bangladesh.

4.2 Data Obtained from Beneficiaries (Questionnaire 2)

A total 20 beneficiaries/citizens are surveyed with the questionnaire 2 to obtain their perceptions about E-Governance Readiness of the Upazila Administration. The distribution of the respondents by age is given below.

Age group	Frequency	Percentage
20-30	5	25%
30-40	9	45%
40-50	4	20%
50-60	2	10%

Table 4.4: Distribution of beneficiaries by Age (n=20)

From the above table it is seen that majority of the respondents (45%) fall in the age group of 30-40 years.

4.2.1 Beneficiaries' Perception about ICT related Services

During study it is found that almost identical services are sought by the service seekers/ beneficiaries. These are collection of various forms, examination results, agriculture related services, birth registration, health related services, complaints, tender information, settlement of khasland and various allowances (e.g. freedom fighters' allowance, old age allowance etc.). Out of 20 respondents, only 9 have ideas about ICT and the rest 11 do not have any idea about this, which is depicted by the following graph.
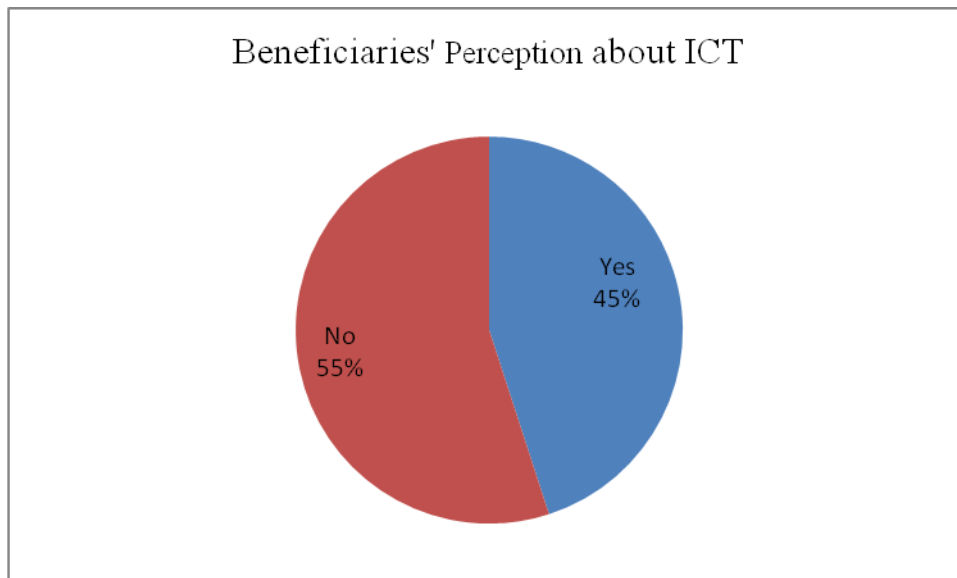
Figure 4.12: Beneficiaries' Perception about ICT (n=20)

From the figure is seen that only 45% of the respondents have ideas of ICT and the rest 55% do not have any idea in this regard.

Further, out 45% (9 out of 20) those who have ideas about ICT, only 66.66%(6 out of 20) knows that the government offices provide E-Services to people and the rest 33.34% still do not have any knowledge about it.

Again, 83.33% of 66.66% of the respondents opine that they have come to know about the government offices are providing E-Services to the citizens through UNO Office (30%), Union Parished (15%) and UISCs (55%).
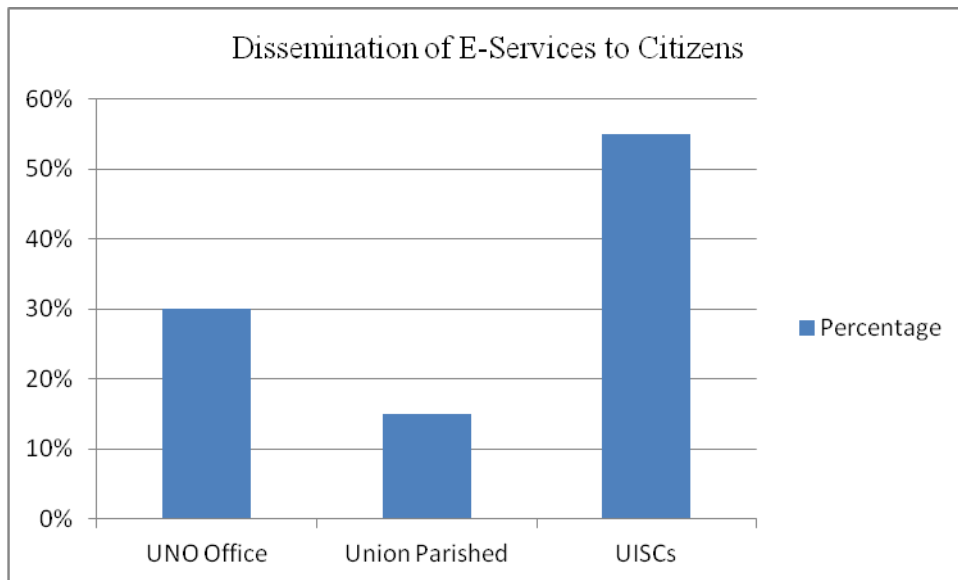
Figure 4.13: Dissemination of E-Services to Citizens (n=20)

From the above figure it is also known that the citizens are becoming aware mainly in three ways such as UNO Office, Union Parished and UISCs. Of these, UISCs are playing significant roles in making aware and feeding messages of E-Services to the citizens.

4.2.2 Web presence of Services
In response to a query whether the expected services to citizens such as various forms, documents, notice, examination results etc. are available on website or not, an interesting result revealed.
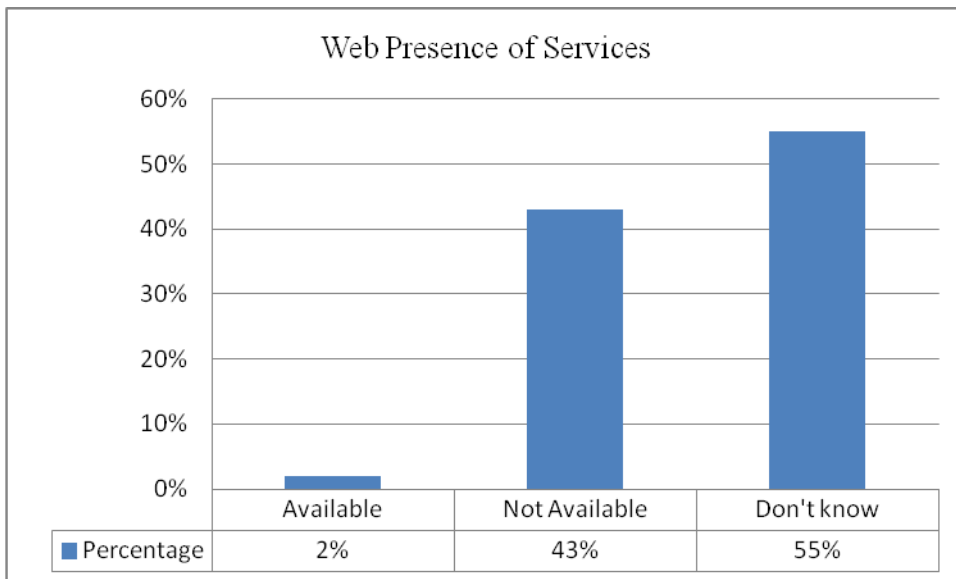
Figure 4.14: Web Presence of E-Services (n=20)

The above figure indicates that although the government offices provide multiple of services but it is rarely available (2%) on the websites of Upazila Offices. It is surprising that large number of respondents (55%) 'Don't know' about the web presence of the Services and 43% of the respondents opined that E-Services are 'Not Available' on the website.

4.2.3 How E-Services are obtained by the Citizens

In a query it is found that almost 90% of the respondents (n=20) do not have any computer facilities at home but they share either other's computers or visit computer shop or cyber café, or get the services from nearby UISCs. It is interesting that the main source of most of the E-Services received by the citizens is 'Mobile Phone'. The scenario is described by the figure below (4.15).
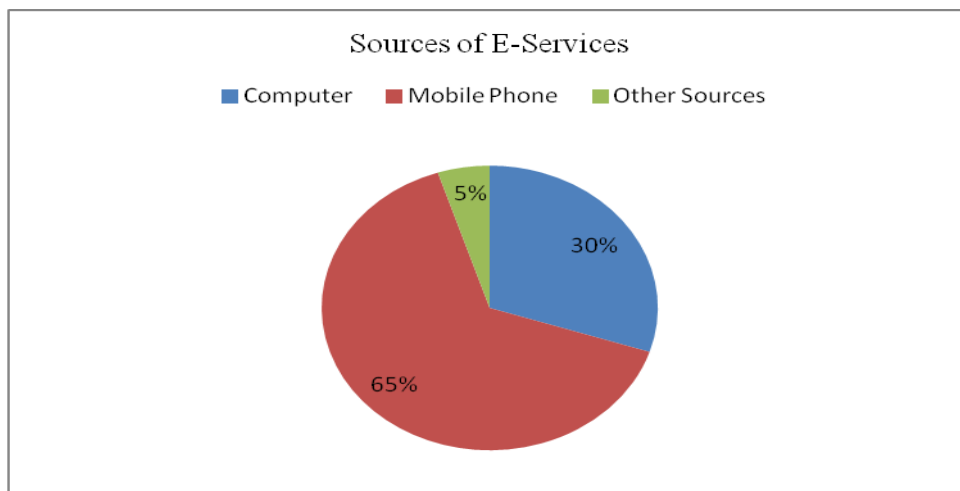
Figure 4.15: Sources of E-Services (n=20)

From the above diagram it is evident that 65% of the respondents (n=20) obtained E-Services by using 'Mobile Phone', whereas 30% of them received E-Services by using 'Computers' which implies that still 'Mobile Phone' is the convenient source of receiving E-services to citizens.

In another query almost 90% of the respondents (18 out of 20) told that they are 'Not satisfied' with the present service delivery system, and 100% of them want it to be improved which is depicted by the figure below(4.16).

Figure 4.16: Level of Satisfection with Present E-Services (n=20)

4.2.4 Evaluation of Overall E-Governance Readiness (n=20)

To evaluate the overall E-Governance Readiness, the beneficiaries/ service seekers are asked to grade on a scale from 0 to 5. The overall scenario of E-Governance Readiness from the perspective of the beneficiaries/ service seekers is presented by the figure (6.14) below.

	1	2	3	4	5	6
■ No. of Respondents	1	5	11	2	1	0
■ Score	0	1	2	3	4	5
■ Percentage	5%	25%	55%	10%	5%	0%
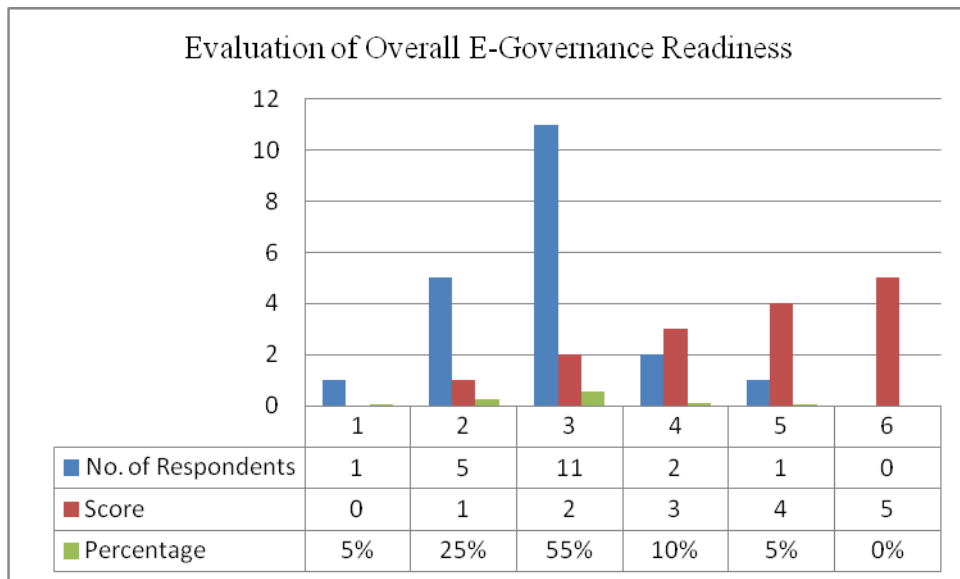
Figure 4.17: Evaluation of E-Governance Readiness by Beneficiaries(n=20)

From the above figure it is seen that most of the respondents (55%) scored 2 and 30% of the respondents scored 1and only 5% respondents scored 3resulting an average score of 2.00(Out of 5). This evaluation is based on 0 -5 scale, and it focuses on demand side's perception of E-Governance Readiness.

4.3 Comparison of Results of both the Upazila (Comilla Sadar & Debidwar)

The result obtained in the above analysis in terms of E-Governance readiness revealed the average score of both the Upazila. The comparison of the results is presented by the figures below (Figure 4.18 and 4.19).
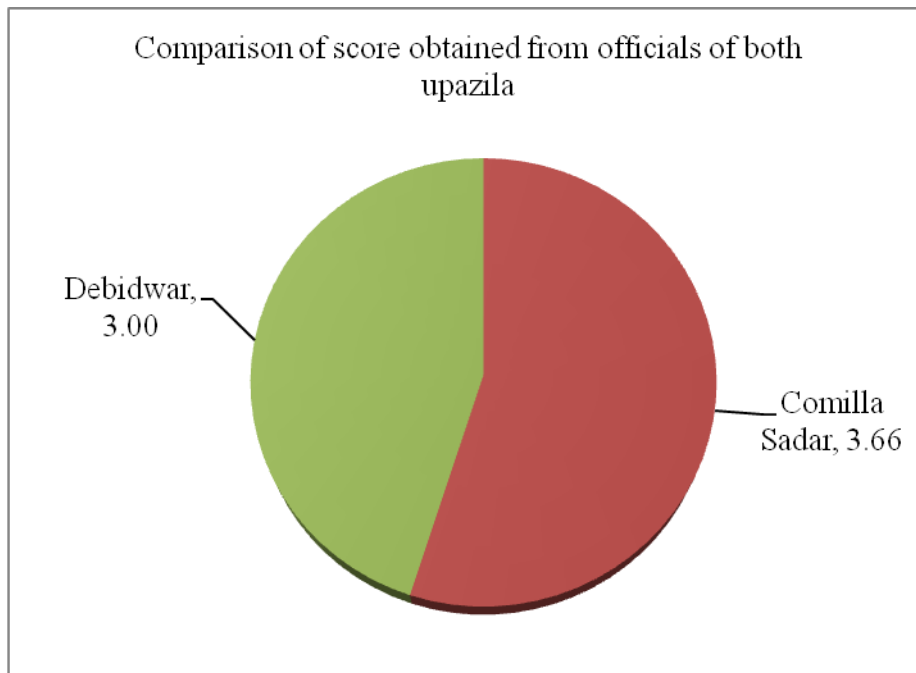
Figure 4.18: Comparison of Score obtained from Officials of both Upazila (n=20)

The above figure indicates that the average score of Comilla Sadar is 3.66 while it is 3.00 Debidwar Upazila. The opinions are derived from the officers and office assistants who are the implementing agents of E-Governance initiatives. In this case Comilla Sadar is well ahead of Debidwar. The cause may be the digital gap between the centre and the periphery. But due to lack of data it could not be conclusively said.
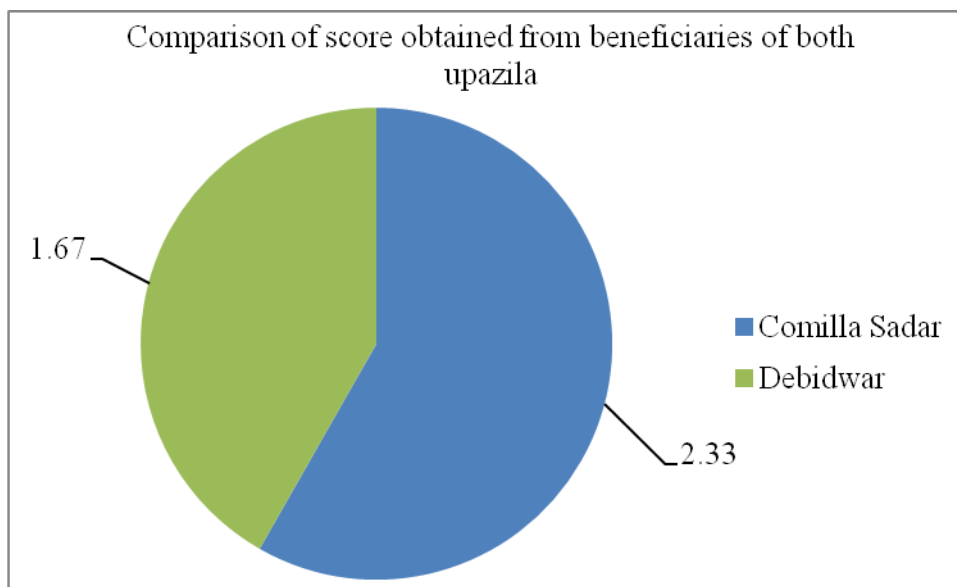
Figure 4.19: Comparison of Score obtained from beneficiaries of both Upazila (n=20)

The above figure exhibits the comparison of scores obtained from the beneficiaries of the both Upazila. From the figure it is seen that the score of Comilla Sadar is 2.33 while it is 1.67

for Debidwar Upazila. In the eye to demand side the Debidwar Upazila is also lagging behind in this regard.

4.4 Discussion

In the above findings there are some useful observations are revealed which are validated by 'UN Five Stage Model of E-Governance Maturity' to have an assessment of E-Governance readiness of the field level administration in general and the study area in particular. First and foremost, it is observed that offices of both the study area (Comilla Sadar and Debidwar Upazila) have web presence with their official websites, for instance, the official website of the UNO office of Debidwar Upazila is http://www.uno.debidwar.gov.bd. As websites are available in the studied offices, it could be conclusively said that both units of administrations have crossed the 'Emerging' stage by this time.

Secondly, some of the respondents told that forms, notices, resolutions, examination results etc. are available on the websites i.e. increased information is, though limited, available as content. Hence, the offices have passed the criteria of 'Enhanced Stage'.

Thirdly, as 'Interactive Stage' is intuitive in nature, it is essential to compare the result with this stage. During the study it is found that although websites and increased information are available, almost all are found to be static rather than interactive. Only 2% of the beneficiaries told that various forms, notice etc. are 'Available', whereas 55% told 'Don't Know' and 43% told 'Not Available'. On the other hand, an interesting fact noticed that 60% of the officials have 'Low' and 25% have 'High' utilization capacity of the furnished information on the website. Due to low utilization capacity of officials in terms of ICT facilities, regular update and interaction of information are done in limited forms. Bhuiyan (2010) found that 66% of the respondents update websites 'regularly' while 23% does it 'occasionally' and 9% 'do not have any idea' about the updating of websites. These findings are further cross-verified by the findings of impediments to E-Governance Readiness where 45% of the respondents from supply side told that due to lack of human capital the overall preparedness is being hindered. Further, it is found that 10% of the respondents are 'Satisfied' upon the present e-service delivery system, whereas 90% are 'Not Satisfied'. The study also revealed that in the dissemination of e-services UISCs (55%) are playing significant roles. Hence the perception of the citizens is no longer positive about the readiness of E-Governance. Besides, the speed of office internet is found to be 65% 'Moderate',

whereas only 10% of the respondents told it is 'High Speed'. In case of impediments to overall E-Governance readiness, only 25% of the respondents expressed their views that lack of infrastructure and logistics hampers the overall preparedness. Rather it can be said that at present infrastructure and logistics is not a problem at all. Therefore, the summary of the findings in this regards is that there are websites having some information such as forms, notice, resolution of meetings etc. and infrastructure and logistics are necessarily sufficient except highly qualified human capital, the study area (Comilla Sadar and Debidwar Upazila) does not qualify all the criteria of 'Interactive Stage of E-Governance Maturity level' rather it has achieved the criteria partially.

Hence, the latter two stages such as 'Transactional' and 'Connected' are need not necessary to assess as it is deemed that the study areas are not fully passed the prior stage (Interactive) of readiness. Thus, it could be said that at present Comilla Sadar and Debidwar Upazila are at the transition of 'Enhanced' and 'Interactive' stages of 'UN Model' of E-Governance readiness.

On the other hand, in terms overall evaluation of E-Governance Readiness it evident that Comilla Sadar scored 3.66 for officials and 2.33 for beneficiaries, while Debidwar scored 3.00 for officials and 1.67 for beneficiaries. The result is cross-checked by another study conducted by Hasan (2011). He found the score for DC Office, Dhaka is 4.17 for officials and 3.3 for citizens. For both the officials and the citizens the scores are higher than the study area's scores. It is also interesting that the score of DC Office, Dhaka is greater than the score of Comilla Sadar, and again the value of Comilla Sadar is greater than the score of Debidwar. This may be due to digital divide between the centre and periphery. Although there is quantitative benchmark for assessment of the E-Governance readiness, the obtained scores would not conclusively express any specific level of e-readiness. Furthermore, the second query of the study was to identify the major factors that affect the e-readiness of field level administration. In response to this query, it is found that a set of factors affect the e-readiness, but the major factors revealed in the study are lack of human capital, insufficient policy and regulatory framework, lack of infrastructure and logistics, frequent load shedding, perception of the citizen and lack of privacy and security. Of these, lack of human capital is found to be the most prominent barrier to the E-Governance readiness.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

This chapter intends to present an overall conclusion and recommendations of the study. In the conclusion part the results are analyzed in line with the variables incorporated in the analytical framework and then in the second part recommendations are made herewith to draw the attention of the policy makers.

5.1 CONCLUSION

E-Governance has become a new fashion in the debate of public administration. At the edge of globalization it has become the demand of time to translate the literature of E-Governance into reality in the public sector administration of Bangladesh. Keeping the urge in mind the study is conducted to reveal the status of E-Governance Readiness of field level bureaucracy especially the Upazila Administration. The findings obtained from both demand and supply sides are crossed verified to have a common understanding of the overall scenario of E-Governance of Upazila bureaucracy in general and Comilla Sadar and Debidwar Upazila in particular. In the study human capital, lack of infrastructure and logistics, web presence and perception of beneficiaries are taken into consideration for verifying the dependent variable, E-Governance Readiness.

The study reveals that the capability of officials in using computer is not up to the mark. Their utilization level of computer facilities at workplace is considerably low. The younger officials tend to have more capability in using computer. Beside this, most of the officials do not have enough training; rather they have only elementary training in computer. In terms of analysis of factors that affect the e-readiness, it is also observed that due to lack of human capital implementation of E-Governance in Comilla Sadar and Debidwar Upazila is being hindered. In case of infrastructure and logistics, it is found that the offices have reasonable support of infrastructure and logistics. It is also evident that the trend in using computer and internet by the employee is gradually increasing. Lack of infrastructure and logistics have deemed to be minimal effect on e-readiness at the field level administration right now. As per web presence concerned, it is seen that every office has website of its own and this website

possesses various forms, notice, examination results, application form for MPO, health related information, agriculture related information etc. but it is paradoxical that almost every website is seemed to be static rather than interactive. Albeit there are some interactions are observed, it should be improved. In context to perception of the beneficiaries, it is found that the beneficiaries or the citizens are aware enough about ICTs. Most of them told that they feel comfort using mobile phone in availing e-services. They are found not satisfied in terms e-service delivery. So, it is beyond doubt that the Upazila administration of Comilla is not ready enough to cater e-services to the citizens.

With regards to E-Governance readiness, the overall scenario of Comilla Sadar is better than that of Debidwar Upazila. During the comparison between both the Upazila it is observed that the Upazila stood adjacent to the district headquarter is better performing in terms of E-governance implementation that leaves room for sensing digital divide between the centre and the periphery.

However, the overall E-Governance readiness of field level bureaucracy or Upazila administration of Comilla is not at the satisfactory level. Due to lack of human capital the readiness process is being hampered. As Upazila administration is the main engine of implementing E-Governance initiatives, it should have proper training and skill to translate the essence of E-Governance into a reality.

5.2 RECOMMENDATIONS

With a view to leapfrogging into the ranks of top ICT-ready countries, it is of paramount importance to have a holistic approach of E-Governance readiness. Hence, the policy makers should be very careful in implementing E-Governance initiatives in the public sector administration of Bangladesh. The following recommendations are made herewith based on the major findings of the study.

1. Skilled manpower: The government officials are the main engine of E-Governance implementation. So, they should be well-equipped and technologically sound. At present, E-governance readiness is being hindered due to lack of trained workforce. That's why the government should pay proper attention to the special training program for the field level officials with utmost priority.

2. Speed of Internet Connectivity: Speed of the official Internet is still seemed to be very low. For successful implementation of E-Governance high speed Internet connectivity

is a prerequisite. The government should ponder over the matter with utmost sincerity and take necessary action for providing high speed Internet connectivity at government offices.

3. Monitoring: Strong vigilance is needed to make the websites interactive. If required, the government may introduce a 'monitoring cell' at every division which will be monitored by the centre equally.

4. Awareness of the Citizen: The citizens or the end users of the e-services are not aware enough. Many of them have negative perception about E-Governance preparedness of bureaucracy. So, the government should make arrangements for creating awareness among citizens about E-Governance benefit.

5. Strengthening UISCs: Today UISCs have become important vehicles for disseminating e-services to the citizens. The government should have pragmatic steps to make the UISCs functional more.

6. Narrowing the digital divide: In the study it is observed that Comilla Sadar is doing better than that of Debidwar Upazila. That means there are an evident digital gap between the centre and the periphery. So, the government should give more attention to those Upazila situated at the periphery with a view to minimizing the visible digital divide.

Albeit E-Governance is relatively a new concept in the public sector administration of Bangladesh, there is hardly any study available for benchmarking the assessment of E-readiness. So, there is still enough scope for further in-depth research in the context of E-readiness, missing links and knowledge gap associated to this field.

REFERENCES

Alam, M. et al. (2008), E-Governance Initiatives in Bangladesh, ICEGOV, Cairo, Egypt.

Aminuzzaman, M.S (1991), Introduction to Social Research, Bangladesh Publishers.

Backaus,M. (2001), E-Governance and Developing Countries: Introduction and Examples. IICD Research Brief, Vol. 1.March.

Baum,C. & DiMaio,a. (2000), Ganter's Four Phases of E-Government Model.

BBS (2009), Statistical Pocket Book of Bangladesh 208, Bangladesh Bureau of Statistics, January 2009. Ministry of Planning, Government of Bangladesh.

BEI (2010), Realizing the Vision of Digital Bangladesh through e-Government, July 2010.

Bhuiyan, S. H. (2009), E-Government in Kazakhastan: Challenges and Its Role to Development, Public Organization Review, 10(1), pp31-47.

Bhuiyan, H.S.M. (2010), Public Sector E-Service Development in Bangladesh: Status, Prospects and Challenges.

BTRC (2009), Annual Report 2007-2008. Bangladesh Telecommunication Regulatory Commission, available at http://btrc.gov.bd/ , accessed on 18 December 2012.

BTRC (2010), Bangladesh Telecommunication Regulatory Commission, April 2010, available at http://btrc.gov.bd/ , accessed on 14 December 2012.

Capgemini(2009), Smarter, Faster, Better eGovernment. 8th Benchmark Measurement. European Commission Directorate General for Information Society and Media.

DIF (2010), Digital Innovation Fair: Services at doorsteps, Bangladesh Shekh Mujibur Rahman Novo Theatre, 4-6 March 2010, Dhaka, Bangladesh.

Farhad, H.(2005), E-Governance Initiatives in Developing Countries: Helping the Rich? Or Creating Opportunities for the Poor? Asian Affairs, 27(4) pp5-23.

Goldkuhl,G. & Persson, A. (2006a), From E-ladder to E-diamond-Reconceptualising Models for Public E-services. Accepted on 14th European Conference on Information Systems (ECIS 2006), June 12-14, 2006, Goteborg, Sweden.

Haque, M.M. (2009), An Information System planning Framework for E-Governance in Bangladesh (Unpublished report).

Haque, M.S.(2002), E-governance in India: Its Impacts on Relations among Citizens, Politicians and Public Servants, International Review of Administrative Sciences, 68, pp231-250.

Haque, S.M.S.(2005), E-Governance in Bangladesh: A Scrutiny from Citizens' perspective. Paper presented in Network of ASIA-Pacific Schools and Institutes of Public Administration and Governance (NAPSIPAG) Annual Conference 2005.

Hasan, R.M. (2011), E-Governance Preparedness of Bureaucracy: A Case Study of Office of the Deputy Commissioner, Dhaka (Unpublished).

Hasan, S. (2003), Introducing E-Government in Bangladesh: problems and Prospects, International Social Science Review, 78(3&4) pp111-125.

HSR (2007), E-Government in Bangladesh: Horizon Scan Report 2007-Where We Stand. Access to Information (A2I) Program, Prime Minister's Office, Bangladesh.

ITU (2009), Measuring the Information society-The ICT Development Index,2009 Edition, Revised 16 March 2009, International Telecommunication Union.

Jackson, P. (2000), Electronic Government in Bangladesh: Prospects and Approaches.

Jho, W. (2005), Challenges for E-Governance: Protests from Civil Society on the Protection of Privacy in E-government in Korea, International Review of Administrative Sciences, 71(1) pp151-166.

Layne, K. & Lee, J. (2001), Developing Fully Functional E-Government: a four-stage model. Government Information Quarterly. 18(2): 122-136.

Morshed, K.A.M.(2007), E-Governance: Bangladesh Perspective. available at http://unpan1.un.org./intradoc/groups/public/documents/APCITY/UNPAN02625.pdf, accessed on 17.12.2012.

National ICT Policy 2002, Ministry of Science and Information & Communication Technology. Government of Bangladesh.

National ICT Policy 2009, Ministry of Science and Information & Communication Technology. Government of Bangladesh.

Pablo, D. Zelinna & Pan, L. Shan (2002), A Multi-disciplinary Analysis of E-Governance: Where Do We Start? (Unpublished Report)

Pardo, T.A.(2000), Realizing the Promise of Digital Government: It's More than Building a web site, IMP Magazine, available at www.cisp.org/imp/october_2000/10_00pardo.htm.

Reily, B.T. (2001), Electronic Governance and Electronic Democracy: Living and Working in the Connected World, Commonwealth Centre for Electronic Governance, Vol.2, Australia : Brisbane.

Rowley, J. (2006), An analysis of the e-service literature: towards a research agenda. Journal of Internet Research. 16(3), 339-359.

Schiavo-Ocampo,S. & Sundaram, P.(2001), To Serve and Preserve: Improving Public Administration in a Competitive World. Manila, Philippines: Asian Development Bank.

SICT (2008), E-Government Initiatives in Bangladesh-a sample survey 2008. Support to ICT Taskforce Program Project (SICT), Ministry of Planning, Government of Bangladesh.

Taifur,S. (2006), SICT's Step Towards Good Governance Through ICTs: E-Governance Strategies, Support to ICT Task Force Program Project (SICT), Ministry of Planning, Government of Bangladesh.

UN (2008), UN E-Government Survey 2008: From E-Government to Connected Governance. Department of Economic & Social Affair's Division for Public Administration and Development Management, United Nations, New York.

UN (2010), UN E-Government Survey 2010: Leveraging E-Government at a time of Financial and Economic Crisis. Department of Economic & Social Affairs Division for Public Administration and Development Management, United Nations, New York.

UN (2012), UN E-Government Survey 2012: E-Government for the People. Department of Economic & Social Affairs Division for Public Administration and Development Management, United Nations, New York.

Valentina, N. (2004), E-Government for Developing Countries: Opportunities and Challemges, The Electoral Journal on Information Systems in Developing Countries, EJISDC (2004)18, 1, 1-24.

WEF-INSEAD GITR (2009-2010), Global Information Technology Report 2009-2010.

Websites Visited:

www.bangladeshictpolicy.bytesforall.net , accessed on 5.12.2012

www.bbs.gov.bd , accessed on 11.12.2012

www.dccomilla.gov.bd , accessed on 7.1.2013

www.digitalbangladesh.gov.bd , accessed on 13.12.2012

www.napsipag.org/pdf/EGovernance_Bangladesh.pdf , accessed on 26.12.2012

http://www.sict.gov.bd/digitallibrary.php , accessed on 23.12.2012

http://www.unodebidwar.gov.bd , accessed on 6.1.2013

http://www.unocomillasadar.gov.bd , accessed on 6.1.2013

http://www.w3.org/2008/12/wcag20-pressrelease.hyml , accessed on 27.1.2012

APPENDIX-A: QUESTIONNAIRE FOR OFFICIALS

E-Governance Readiness of Upazila Administration: A Case of Two selected Upazila of Comilla District

[N.B: The answers given to these questions will be used for academic research only]

[Your sincere cooperation will add a lot of value to the research]

Name	Designation	Age	Sex		Work Place
			Male	Female	

(Please put the tick marks in the box)

1. Do you have any computer at home? ☐ Yes ☐ No

2. Does your office have computer facilities? ☐ Yes ☐ No

3. How smart are you in using computer?
   ☐ Very Smart ☐ Smart ☐ Moderately Smart ☐ Not Smart

4. On an average how long do you use computer daily for your official works?
   ☐ Less than 30 min ☐ 30 min to 1 hr ☐ 1hr to 2 hr ☐ 2hr to 4hr ☐ More

5. Do you have an internet connection at your office?
   ☐ Yes ☐ No

6. What is the speed of the internet connection at your office?
   ☐ Very High Speed ☐ High Speed ☐ Moderate ☐ Slow ☐ Very Slow

7. How often do you use internet for your official activities?
   ☐ Several times a day ☐ Once in a day ☐ Once in week ☐ Once in a month ☐ Never

8. Do you have an official e-mail address?
   ☐ Yes ☐ No

9. How often do you use your official e-mail for communication?
   ☐ Several times a day ☐ Once in a day ☐ Once in week ☐ Once in a month ☐ Never

10. Do you have any formal ICT training?
    ☐ Yes ☐ No

11. If 'Yes', then what is the level of the training?
    ☐ Advanced ☐ Moderate ☐ Elementary

12. Does your office have an official website?
    ☐ Yes ☐ No

13. Do you provide any service through the official website?
    ☐ Yes ☐ No

14. If 'Yes', then please put the name of the services you provide:
    ……

15. What is the utilization level of the existing ICT facilities at your workplace?
    ☐ Very High ☐ High ☐ Low ☐ Very Low

16. What is the overall power situation (electricity) at your workplace?

☐ Sufficient   ☐ Insufficient   ☐ Rarely Sufficient   ☐ Worst

17. What is your evaluation about e-governance readiness of your office?(0=Completely unready… 5= Completely ready)

☐0   ☐1   ☐ 2   ☐3   ☐4   ☐5

18. Do you think are there any impediments/barriers to e-governance readiness?(Tick all Possible options)

☐ Lack of human capital   ☐Lack of infrastructure and logistics   ☐Frequent Load shedding   ☐Insufficient policy and regulatory framework   ☐Lack of proper perception of the citizen   ☐Lack of privacy and security   ☐Others

APPENDIX-B: QUESTIONNAIRE FOR BENEFICIARIES

E-Governance Readiness of Upazila Administration: A Case of Two Selected Upazila of Comilla District

[N.B: The answers given to these questions will be used for academic research only]

[Your sincere cooperation will add a lot of value to the research]

Name	Address	Age	Sex	
			Male	Female

1. For what sort of services are you visiting this office?

    ……………………………………………………………………………

2. Do you know the government offices provide E-Services to the citizen?

    ☐ Yes   ☐ No

3. If the answer is 'Yes', how do you know about it?

    ☐ By UNO office   ☐ By Union Parished   ☐ By UISC   ☐ Others

4. Do you have any idea about the use of ICTs?

    ☐ Yes   ☐ No

5. Do you think ICTs are using in providing the services you are asking for?

    ☐ Yes   ☐ No

6. If the answer is 'No', then do you think that ICTs can be used to provide the service?

    ☐ Yes   ☐ No

7. Do you think the forms/ information you seek available in the web site regarding the service?

    ☐ Yes   ☐ No

8. Do you have any computer facilities at your home?   ☐ Yes   ☐ No

9. If the answer is 'No', then how do you avail the e-services?

    ☐ Computer centre/ Cyber cafe   ☐ UISCs   ☐ Share others' computer

10. Do you have any access on the website?

    ☐ Yes   ☐ No   ☐ Limited access

11. How do you get your maximum e-services?

    ☐ Through mobile   ☐ Through computer   ☐ Others

12. Do you think the use of ICTs in the government offices can accelerate the service delivery?

    ☐ Yes   ☐ No

13. Are you satisfied with the present e-service delivery system of government offices?

    ☐ Yes   ☐ No

14. If 'No', do you think the present service pattern should need to be improved?

☐ Yes   ☐ No

15. As a service seeker, what is your overall evaluation about E-Governance Readiness of Upazila Administration? (0=Completely Unready…   5= Completely Ready)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

E-Governance Readiness of Upazila Administration: A Case of Two selected Upazila of Comilla District

[বিঃদ্রঃ এই প্রশ্নপত্রে প্রদত্ত উত্তরসমূহ কেবল মাত্র গবেষণার কাজে ব্যবহারের জন্য]

[আপনার সানুগ্রহ সহযোগিতা গবেষণায় মূল্যবান অবদান রাখবে]

১। আপনি এই অফিসে কি ধরনের সেবা গ্রহণের জন্য আসেন ?

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২ । আপনি জানেন কি সরকারি অফিসসমূহ জনগনকে ই-সেবা দিয়ে থাকে?

☐ হ্যাঁ ☐ না

৩ । উত্তর 'হ্যাঁ' হলে, আপনি কিভাবে তা জানলেন?

☐ UNO অফিসের মাধ্যমে ☐ Union Parished এর মাধ্যমে ☐ UISC এর মাধ্যমে ☐ অন্যান্য উপায়ে

৪ । ICT এর ব্যবহার সম্পর্কে আপনার কোন ধারণা আছে কি?

☐ হ্যাঁ ☐ না

৫ । আপনি যে সেবা নিতে চান তাতে কি ICT ব্যবহৃত হয় বলে মনে করেন ?

☐ হ্যাঁ ☐ না

৬। উত্তর 'হ্যাঁ' হলে, আপনি কি মনে করেন এই সেবাসমূহ প্রদানের ক্ষেত্রে ICT ব্যবহার করা যায়? ☐ হ্যাঁ ☐ না

৭। আপনার প্রত্যাশিত সেবাসমূহ যেমন ফরম/ তথ্য কি Website থাকে বলে মনে করেন?

☐ হ্যাঁ ☐ না

৮। আপনার বাসায় কি কোন ধরণের Computer facilities রয়েছে?

☐ হ্যাঁ ☐ না

৯। উত্তর 'না' হলে, আপনি এই সেবাসমূহ কিভাবে পেয়ে থাকেন?

☐ কম্পিউটার সেন্টার/ সাইবার ক্যাফে ☐ UISC থেকে ☐ অন্যের কম্পিউটার ব্যবহার করে

১০। আপনি কি Website ব্যবহার করতে পারেন?

☐ হ্যাঁ ☐ ☐ না সীমিত ব্যবহার

১১। আপনি অধিকাংশ সেবা কিভাবে পেয়ে থাকেন?

☐ মোবাইলের মাধ্যমে ☐ কম্পিউটারের মাধ ☐ অন্য উপায়ে

১২। আপনি কি মনে করেন সরকারি অফিসসমূহে ICT ব্যবহার ই-সেবা প্রদানকে আরও বেগবান করবে?

☐ হ্যাঁ ☐ না

১৩। আপনি কি সরকারি অফিসসমূহ বর্তমানে যে ই-সেবাসমূহ দিয়ে থাকে তা নিয়ে সন্তুষ্ট?

☐ হ্যাঁ ☐ না

১৪। উত্তর যদি 'না' হয়, তাহলে বর্তমান সেবা প্রদানের ধরণ কি আরও উন্নত করা উচিত বলে মনে করেন?

☐ হ্যাঁ ☐ না

১৫। একজন সেবা প্রার্থি হিসেবে উপজেলা প্রশাসনের ই-গর্ভন্যান্স এর সার্বিক প্রস্তুতি সম্পর্কে আপনার মূল্যায়ন কী? (০=সম্পূর্ণ অপ্রস্তুত   ৫=সম্পূর্ণ প্রস্তুত)

☐ ০ ☐ ১ ☐ ২ ☐ ৩
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