# E-GOVERNANCE FOR GOOD GOVERNANCE THROUGH PUBLIC SERVICE DELIVERY

## An Assessment of District E-Service Centres in Bangladesh

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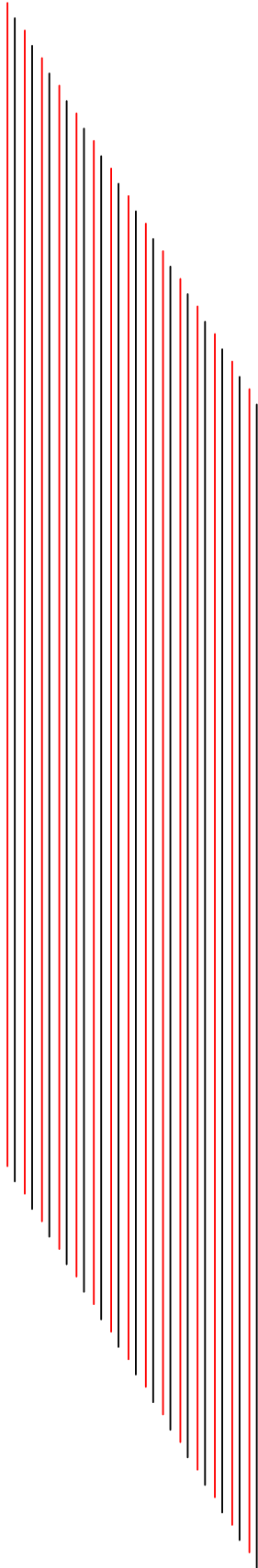Id No. 12172007

A Dissertation

Submitted in Partial Fulfillment of the Requirements for the

Degree of Master of Arts in Governance and Development

**MA in Governance and Development**
Institute of Governance Studies, BRAC University
Dhaka-1212, Bangladesh

**FEBRUARY 2013**

THIS RESEARCH TESTIMONY

IS DEDICATED TO

THE MEMORY OF

MY HEAVENLY PARENTS


MOTHER **AMENA KHATUN**

WHO FOSTER MY DREAM,

LEFT THE EARTH

IN DECEMBER 8, 2009

AND

FATHER **MOHAMMAD ALFAZ ALI**

WHO NURTURING MY MOTHER,

LEFT THE EARTH

IN MAY 10, 2010

# Acknowledgement

All appreciation to Almighty Allah who creates us such a beautiful earth, manages each and every things soundly. From the core of my heart, I would like to reveal my earnest awe, loyalty and reverence to him who enabled me to complete the thesis.

I would like to extend my wholehearted appreciation to my supervisor Dr. Md. Zohurul Islam, Assistant Professor, Institute of Governance Studies, BRAC University for his scholastic guidance, valuable suggestion and steady help throughout the thesis work.

I wish to express my deep gratitude and sincere appreciation to Dr. Rizwan Khair, Director, Institute of Governance Studies, BRAC University and Dr. Salahuddin M Aminuzzaman, Professor, Department of Public Administration, University of Dhaka for their precious propositions on the dissertation work.

I acknowledge the inspiration from the course teacher Dr Shah Mohammad Sanaul Hoque, Deputy Secretary, Prime Minister's Office, Government of the People's Republic of Bangladesh. My gratitude goes to all of my respected teachers of MAGD program for their academic collaboration and blessing to well wishes.

I also thankful to all of my colleagues and peers for their critiques and tends me to do better although the thesis work. I wish to record my thanks to Md. Khorshed Alam, Assistant Admin Officer (Training) for his support all over the course.

The cerebral support rendered by my wife Lija, I have deprived her and bestow seldom time to her due to generous extra effort in report writing. I convey gratitude to her.

**Mohammad Abdul Salam**
February 2013

# Abstract

E-governance is widely accepted as an effective tool of service delivery and equated with good governance by all developed countries in general and developing countries like Bangladesh in particular. The purpose of this study is to assess efficiency and implications of district e-service centres of Bangladesh and validate the e-governance for good governance. Both the qualitative as well as quantitative research approaches were conducted. Data was collected using self-administered questionnaire from random samples drawn from the population of service providers individuals provide services and service receivers take receives from four different DESCs of Bangladesh. The constructs in this study were developed by using measurement scales adopted from prior studies. Data were analyzed using MS Excel and SPSS Program.

Efficiency of DESC was assessed by choice & consultation, courtesy & consultation, openness & transparency, entrance & information, openness & transparency and value for money while the level of citizen satisfaction was measured through attenuation of corruption, intensity of clarity, efficiency of service, level of convenience, extent of accessibility and altitude of interaction. The good governance is assessed by accountability, transparency, responsiveness, rule of law, effectiveness and participation. Due to e-governance initiative entrance and information in e-governance service, extent of accessibility in citizen satisfaction and effectiveness in good governance showed the high level of advancement.

The study results revealed that the DESC provides public services efficiently, the e-service delivery has positive impacts on citizen satisfaction and the e-governance initiative leads to good governance promises impending to validation of hypothesis. An understanding of the current status of e-governance service in Bangladesh can help to policy makers and policy implementers in persuasion of the public service delivery properly. This is believed the comprehensive analysis on e-service centres would be imperative for assessment the effectiveness for delivery of e-government services. This study and their results have some limitations and also indicate directions for further research towards better governance.

*Key-words:* *e-service, e-governance, good governance, public service delivery, DESC*

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# Chapter 1
# INTRODUCTION

# 1. INTRODUCTION

The endeavor of the study is to assess the efficiency of e-service centres and to evaluate the impact of e-service delivery on the citizens' of Bangladesh. This chapter provides a general introduction to e-governance and illustrates the transformation of the traditional form of government to e-government. This chapter also describes the statement of the problem, rationale of the study, research objectives, scope and limitations of the study.

## 1.1 Background of the Study

Due to the direct and indirect forces of globalization, governance[1] has become a key agenda both in developed countries as well as developing world. The advancement in Information and Communication Technology (ICT) has added a new dimension to the governance arena and the concept of e-governance[2] has emerged. ICTs are developing faster than ever before and these aid the process of development and good governance. It is widely accepted as effective tools of service delivery and equated with good governance by all developed countries in general and developing countries.

Advancement in Internet Technology (IT) is creating new aspirations and expectations among people for enhanced and quality service delivery. The term e-government refers to the use of IT by government agencies, is a way which can transform relations with citizens, businesses and other arms of government. E-government is being regarded as powerful tool in hands of government for reducing cost, enhancing revenues, improving delivery of public services (Saeed, 2012). It also purports to ensure the efficiency, accountability and transparency in the functioning of government and show the way of good governance (Harris, 2000).

Heeks (2001) claimed that the effect of new information and communication technologies has significant contribution to the achievement of good governance goals. It simplifies the administration process by integrating various departmental information systems and facilitates the performance more effectively. It can help an organization in many ways. First, it integrates all parts of the organization to enable more control over its administrative

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[1] The term comes from an ancient Greek word *kebernon,* which means to steer.
[2] It is the combination of e-administration, e-service and e-society (Heeks, 2001)

operations, thus can reducing an organization's operating costs. Second, it helps to increase operational efficiency by connecting and integrating all administrative processes so that personnel use less time to perform tasks. Third, it helps users to have more and faster access to the information, which improves the time and information available for decision-making.

Public service delivery is the main rationale for the existence of any popularly elected government. Thus, every government takes various initiatives to bring about changes within their existing traditional and process-oriented administrative systems and to achieve the trust and seek support from its citizens in the course of delivering public services efficiently. It is an accepted fact that traditional government structures and systems are no longer adequate to meet the demands of rising citizen aspirations as the consequence e-governance has emerged. Heeks (2001) also point out three main contributions of e-governance like improving government processes (e-administration), connecting citizens (e-services), and building external interactions (e-society).

Ghosh *et al.* (2004) conceptualizes e-service as interactive information service among the service providers, service recipients and agencies. Electronic service (e-service) is becoming increasingly important in providing customers with a convenient service with interactive information flow in the transaction process (Santos, 2003). E-service delivery is very different from traditional service delivery, which is based on interactive information flow between customers and service providers (Li and Suomi, 2007). The process is based on information flow via information technology and information quality is important in formulations of customer's satisfaction. This study is tried to assess the District E-Service Centres (DESC[3]) in Bangladesh in terms of the public service delivery. The present research is attempted to establish linkage between the e-governance and good governance.

## 1.2 Statement of the Problem

Bringing changes keen on public service delivery means dealing with a situation where the known environment is changed into largely unknown environment. Under such circumstances, the general principles or theories governing above aspects alone cannot create a successful transformation. To carry out the transformation process a customized approach towards public service delivery will be needed (Jehan and Nishantha, 2009). A closer

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[3] DESC inaugurated by the GoB in 2010 to better service delivery of the citizens

evaluation of the proposed change design should be carried out. Governments must be able to avail the unique opportunity of interacting with the people effectively. It should take public services and the government literally to the doorsteps of the citizens through information technology. Information technology should ensure openness and accessibility to the citizens.

With the aspire to provide the services at the doorsteps of citizens and connecting the people of countryside, Bangladesh government has set-up e-service centers at Union (UISC[4]), Upazila and District (DESC) level as part of e-governance scheme. Prior to entering into the e-governance, the public services had delivered through the conventional way where connecting citizens were hardly concern and doorsteps services were totally ignore and termed as c-service[5]. At the digital era Bangladesh, government has tried to deliver the services through the e-service centers are called e-service. Shortage of power supply, lack of IT skilled manpower and existence of bureaucratic style of governance causes the e-service centres are facing challenge to deliver the public services in an efficient manner.

Consequently, the e-service centres are incapable of creating close coordination between the various government agencies or business groups or citizens for achieving the desired objectives. Thus creating a gap and between government and its main stakeholders or citizens. This gap gradually becoming wider to wider and citizens lose their trust on government. This situation results in a government incapable of establishing the good governance. This research study is conducted for assessing the efficiency of service delivery, evaluating the impacts of e-government technology and its contribution to enhancing the good governance imperatives.

### 1.3 Rationale of the Study

ICT is a potential tool of efficient public service delivery. UNDP (2007) says that e-governance can provide essential tools and mechanisms for poor communities to hold both policy makers and service providers accountable for a sustained supply of services. Thus, it becomes important to view the status of e-governance. Kasubiene and Vanagas (2007) pinpoint that it is crucial to investigate the factors influencing customer perception towards e-governance. They believe that since e-governance is a new research area and e-governance service quality aspect is even more in need for research, despite its importance in the public

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[4] UISC (4501)  inaugurated by the GoB in 2009  to connecting citizens and to services at doorsteps
[5] The way of service delivery through the agency-centric model of public service

sector with due regard to the customer's perceptions and expectations from a service delivery point of view. The motivations for e-government and e-services have been well documented in contemporary literature. The two terms, e-government and e-services can be viewed from a supply and demand perspective. On the demand side, the desire for electronic services or the level of e-service use by people can be used to rationalize engaging in e-government, while on the supply side, e-government can also be a means to get citizens to access e-services.

The current study ranges from the dimensions and attributes of e-service quality, the level of citizen satisfaction as well as relationship between e-governance to good governance. The outcome of this research will help e-government administrators[6] to make substantial initiatives for obtaining the goal of good governance through various ways. The results obtained from this research study will be helpful for government officials to know the contribution of e-government towards good governance. The information obtained from the research will provide useful guidance for managers of e-government in improving the application of e-government. Consequently, the knowledge obtained from the outcome of this research can be used in future e-government initiatives by the government.

The research also unties our bureaucratic system in service delivery and moving to the efficient ways. The e-governance can directly connect individuals with officials in the government and decision-makers. The impact of e-governance is immediate and puts greater access and control over governance mechanism in the hands of individuals. Spaces therefore get created within the existing governance mechanisms that would be democratically informed by citizen voice. This process will make the government more responsible and accountable to its citizens and ultimately towards good enough governance.

### 1.4 Research Objectives
The research is attempted to identify the linkage between the factors responsible for creating conducive environment for effective implementation of e-governance and factors[7] relating to good governance. Thus, the assessment of DESC to attain the following objectives:

    a. To know the effectiveness of the DESC in public service delivery.
    b. To evaluate the impacts of e-services to the service receivers or citizens.
    c. To empathize the e-governance scheme make possible to good governance.

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[6] Policy makers who take decision and policy implementers' who are close to the citizens
[7] Accountability, Transparency, Rule of Law, Participation, Effectiveness, and Responsiveness

**1.5 Research Questions**

With the attempt to identify and establish linkages between e-governance and good governance, the study is primarily concerned with performance appraisal of DESC in Bangladesh to provide public services. Therefore, the research study is carried out with the following research questions:

    a.  How efficiently the services are provided by DESC to the citizens?

    b.  What are the implications of e-services to the service receivers or citizens?

    c.  Does the e-governance initiative lead to promise of the good governance?

**1.6 Scope of the Research**

The core intention of e-governance is to allow the public sector to provide citizens with information based on their need. Along the lines of the connotation, the research has focused on the involvement of e-government tools in enhancing the efficiency of public organizations and its implication among citizens through e-service delivery that lead to improve good governance.

The study analyzes the quality of public service delivered by the DESC to assess[8] the e-governance progression based on its indicators. In addition, the level of citizen satisfaction has framed under the research and it's compared with the traditional style of governance. Lastly, the research intended to identify and establish linkages between e-governance service standards and citizen satisfaction on the way to good governance those performances are determined by the efficiency of e-service delivery.

**1.7 Limitation of the Study**

Like other research, the present study has some limitations. The research is restricted to interactive-service model only instead of other four generic models of e-governance. Citizen-centric approach has to comply instead of the agency-centric approach in the conceptualization of public service delivery. The study also limited to analyze the e-service sphere only but other domains of e-governance scum like e-administration and e-society are not reflect on. Moreover, the study has focused on the Government-to-Citizen (G2C) forms of e-government while Government-to-Government (G2G) and Government-to-Business (G2B) are being apart thus necessitated to further study.

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[8] The assessment has done based on the e-service delivery by the district e-service centres

The sample size[9] of the total population is very small due to time and other financial limitation, the study is focused on four e-service centres only. It would be better if comparative study of more than four service centres. It is found that the service receiver become doubtful about the intention of the research. Citizens presume the data collector acts as an agent of law enforcing agencies while service providers more concern about their bureaucratic process[10].

## 1.8 Organization of the Report

This dissertation report has structured with five chapters. The first chapter explains the study background, problem statement and its justification. It specifies the research objectives, research questions with the scope and limitations of the study and last of all ending with the organization of the report.

The second chapter reviews the relevant literatures and contextualizes perspectives, which covers conceptual framework, theoretical background, empirical evidences on e-governance and the analytical framework along with the variables of this study. It also presents the brief overview of e-governance initiatives in Bangladesh and its linkage with good governance along with the framing of hypothesis.

The third chapter represents the research methodology that contains the brief description on study area, data source, scale construction, data collection, data processing and data analysis along with the test of reliability and correlation analysis of the variables.

The fourth chapter analyzes the data and variables as well as relationship among the variables. This chapter provides the descriptive statistics, comparative and gap analysis of each item of e-governance, level of citizen satisfaction and advancement of good governance along with the reliability test, correlation analysis of the variables and validation of hypothesis.

The fifth chapter provides the recommendations with a brief discussion on the study. It contains a model of linkage among the variables along with the summary of the hypotheses and the research proposed a model of public service delivery.

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[9] The sample size of the study is 64 and only 4 DESC has selected for the study
[10] More concern about the security of the government offices and bother about the permission of higher authority or senior officials.

# Chapter 2
# LITERATURE REVIEW

# 2. LITERATURE REVIEW

A lot of studies have been conducted in developed as well as developing countries to assess the parameters leading to good governance. The chapter presents a review of the literature on e-governance for good governance through service delivery where by some of the theoretical and empirical debates and development of the hypotheses are presented and discussed. This chapter extensively illustrates the research studies already conducted that are related to the application of ICT for the purpose of good governance. This chapter also presents the e-government initiatives taken by the government of Bangladesh with the purpose of improving efficiency and effectiveness of the service centres with critical analysis.

## 2.1 E-Governance: Conceptual Framework

The emergence of Information and Communications Technology (ICT) has provided means for faster and better communication, efficient storage, retrieval and processing of data and exchange and utilization of information to its users. E-governance is the logical next step in the use of ICT in systems of governance in order to ensure wider participation and deeper involvement of citizens.

### 2.1.1 Defining E-Governance

E-governance, the application of Information and Communications Technology to the government processes to bring Simple, Moral, Accountable, Responsive and Transparent (SMART) governance (Heeks, 2001). Different governments defined this term to suit their own aims and objectives. Sometimes, the term 'e-government' is also used instead of 'e-governance' but there is a debate on the correct use the two terms. E-governance defined as the use of emerging information and communication technologies to facilitate the processes of government and public administration (Drucker, 2001) while e-government defined as the use of information technology to support government operations, engage citizens, and provide government services (West and Wind, 1996).

Coleman (2006) defined e-government as the combination of electronic information-based services (e-administration) with the reinforcement of participatory elements (e-democracy) to achieve the objective of balanced e-government. Muir and Oppenheim (2002) defined e-government as the delivery of government information and services online through the

internet or other digital means. Kumar *et al.* (2007) was defined e-government as the delivery of improved services to citizens, businesses, and other members of the society through drastically changing the way governments manage information.

World Bank (2001) defined as the government owned or operated systems of information and communication technologies that transform relations with citizens, the private sector and/or other government agencies so as to promote citizens' empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency. But, Abramson and Means (2001) argued e-government can be defined as the electronic interaction (transaction and information exchange) between the government, the public (citizens and businesses) and employees.

### 2.1.2 Domains of E-governance

E-governance facilitated by the creative use of ICT has the ability to transform relations with citizens, businesses, and various arms of government. Heeks (2001) identified three main domains of e-governance (Figure 2.1):

- o **E-administration:** improving government processes
- o **E-services:** connecting individual citizens with their government
- o **E-society:** building interactions with and within the civil society



**Figure 2.1:** Overlapping domains of e-government (adapted from Heeks, 2001)

The main purpose of the e-administration is to improve the internal workings of the public sector by cutting process costs, managing process performance, creating strategic connections within government bodies. E-service initiatives focus mainly on improving the relationship between the government and its citizens by increasing the information flow and improving

the service levels of government towards its citizens. E-society initiatives extend the previous e-services domain by focusing on institutional stakeholders, such as private sector service providers, other public agencies, and not-for-profit and community organizations. The three domains of e-governance are seldom separate in their implementations; rather, they involve overlapping activities as part of the same initiative. To put it more strongly: good e-governance programs must take into account all three domains (Heeks, 2001). The current study concentrated on the e-service domains of e-governance that lead to good governance.

### 2.1.3 Interactions in E-Governance

Backus (2001) pointed out that e-governance aims to enable the interaction between government and citizens (G2C), improve inter-agency relationships (G2G), and establish efficient relationship between the government and business enterprises (G2B), have shown in next outline (Figure 2.2).
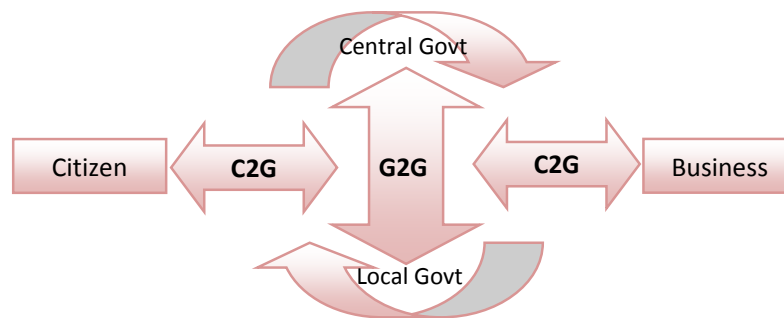


**Figure 2.2** Interactions between main groups in e-groups (Buckus, 2001)

**G2G (Government to Government):** Information and Communications Technology is used not only to restructure the governmental processes involved in the functioning of government entities but also to increase the flow of information and services between different entities. The primary objective is to increase efficiency, performance and output.

**G2C (Government to Citizens):** An interface is created between the government and citizens which enables the citizens to benefit from efficient delivery of the public services. This expands the availability and accessibility of public services and improves the quality of services. The primary purpose is to make government, citizen-friendly.

**G2B (Government to Business):** Here, e-governance tools are used to aid the business community – providers of goods and services – to seamlessly interact with the government.

The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government.

### 2.1.4 Phases of E-Governance

It is evident that e-governance is intrinsically linked with the development of computer technology, networking of computers and communication systems. The e-government of Bangladesh twisted with four phases demonstrated in subsequent sketch (Table 2.1 and Figure 2.3). Like some other developing countries Bangladesh on the edge between interaction and transaction presently.

**Table 2.1** Universal e-governance maturity stages and its meaning

| Stages | Meanings |
|---|---|
| **Information** | In this phase the quality, usability and currency of the content determine the value of the e-government service. |
| **Interaction** | In this phase, the e-government provides some degree of online interaction thus the citizens can apply for job applications online. |
| **Transactional** | In this phase, government provides secure transactions with a high level of authorization through online process. |
| **Transformational** | In this transformational phase, the government or public services are made available online to stakeholders around the clock. |
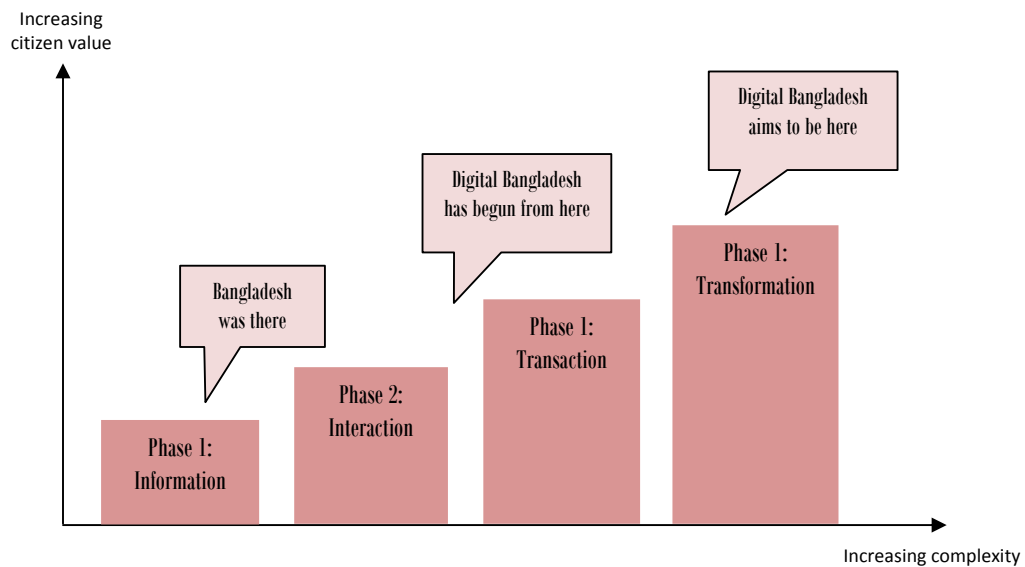


**Figure 2.3** E-governance maturity model for Bangladesh (adopted from Backus, 2001)

## 2.2 G-Governance: Conceptual Framework

Since the end of the 1980s the issue of good governance is dominating the international discussion about development and international assistance to developing countries (Wohlmuth, 1999). Good governance[11] is buzzword in this era and has swept public attention for the last decade. It has also become a significant pillar in the consideration of a state's ability to confirm to universally acceptable democratic standards.

### 2.2.1 Defining G-Governance

Good governance is a system of governance that is able to unambiguously identify the basic values of the society where values are economic, political and socio-cultural issues including human rights (Chopra, 1997). UNDP defined as the exercise of political, economic and administrative authority to manage a nation's affaires is the complex mechanisms, processes, relationships and groups articulate their interests, exercise their rights and obligations and mediate their differences (Ncube, 2005). Smith (2007) argued that it is a type of government related to political values and implies government within a democratic political culture and with efficient administration plus the right policies, particularly in the economic sphere.

### 2.2.2 Components of G-Governance

UNDP (1997) identified five basic principles of good governance like legitimacy and voice, direction, performance, accountability and fairness while OECD (2001) focused on the accountability, transparency, efficiency and effectiveness, responsiveness, forward vision and rule of law. Kettani (2009) identified eight features like participation, rule of law, effectiveness and efficiency, equitable and inclusiveness, responsiveness, transparency, accountability and consensus orientation (Figure 2.4, Table 2.2).
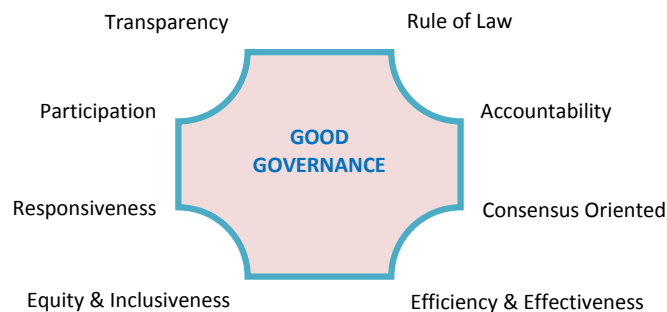


**Figure 2.4** Characteristics or components of good governance (Kettani, 2009)

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[11] The term g-governance/good governance is first introduction by the World Bank in 1989.

The present condition of good governance in Bangladesh is not satisfactory and needs good governance to improve its poor economic, social and political condition and to provide the environment for sectoral development and employment generation. The study has spotlighted the transparency, accountability, rule of law, responsiveness, effectiveness and participation attributes of good governance.

**Table 2.2** Characteristics or components of good governance and its meaning

| Components | Meanings/Definitions |
| --- | --- |
| **Transparency** | Processes, institutions and information are directly accessible to those concerned with them, and enough information is provided to. |
| **Participation** | The involvement of citizens, government department and agencies in policy and decision-making processes. |
| **Accountability** | Responsibility of government departments and organizations toward the citizens for their decisions and actions. |
| **Rule of Law** | The follow up of rules and regulations in the decision making and actions of government organizations. |
| **Effectiveness** | The competency of government organizations in carrying out various functions of the departments in a less period and in a useful manner. |
| **Responsiveness** | Timely response of the enquiry or exchange of information between the government department and organizations. |

### 2.2.3 Factors of G-Governance

Kalsi *et al.* (2009) assumed that the following factors contribute to good governance. These are good education facilities by the government which are job oriented, basic infrastructure development, peaceful law and order, creating new job opportunities in the private sector and the government, effectiveness and efficiency of the working of government and its staff, good business environment with free-market economy, reducing digital divide and other inequalities in the society by positive discrimination in favor of the poorest of the poor, providing total freedom of speech, and an attitude of noninterference by government.

### 2.3 E-Governance: Theoretical Background

Models of digital governance are still evolving in developing countries and continuously improvising to fully harness the potential of knowledge networks. Few generic models[12]

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[12] Digital Governance Models: moving towards good governance in developing countries presented by Vikas Nath, Policy Analyst of UNDP as working paper.

however have shaped up which are finding greater recognition (Figure 2.5: A-E). These models exhibit several variations dependent on the local situation and the governance functions carried out through these models.

### 2.3.1 Wider-Dissemination Model

The model is based on dissemination of information relevant to better governance that is already in the public domain into wider public domain through the use of ICT and convergent media. The rationale behind the model is that a more informed citizenry is able to better understand the governance mechanisms and is more empowered to make informed choices and exercise its rights and responsibilities.
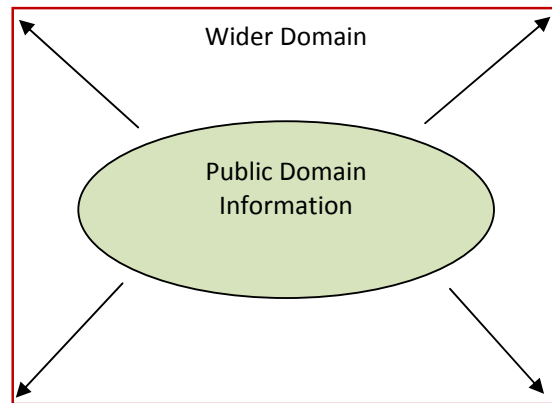


**Figure 2.5(A)** Wider-Dissemination Model

This model is the most crucial one as it catalyses free access and flow of information to all segments of the society and serves as the building block to better governance. The model loses its effectiveness where free-flow of information is not encouraged or is not objective.

### 2.3.2 Critical-Flow Model

The model is based on channeling information of critical value to a targeted audience or to the wider public domain through the use of ICT and convergent media. The model requires foresight to understand the significance of a particular information set and using it strategically. It may also involve locating users to whom the availability of a particular information set would make a critical difference in initiating good governance.
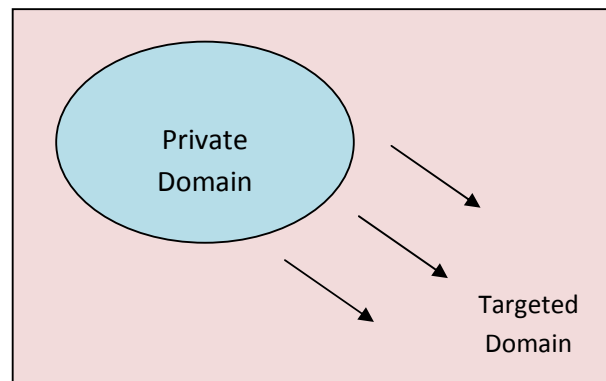


**Figure 2.5(B)** Critical Flow Model

This model exposes the weakest aspects of governance and decision-making mechanisms or state-failure and bad-governance. The model will not work in cases where government mechanisms do not foster public debates.

### 2.3.3 Comparative Analysis Model

Comparative Analysis model is based on exploring information available in the public or private domain and comparing it with the known information sets to derive strategic learning's and arguments. The comparison could be made over a time scale to get a snapshot of the past and present situation or between two different situations to understand the effectiveness of an intervention.
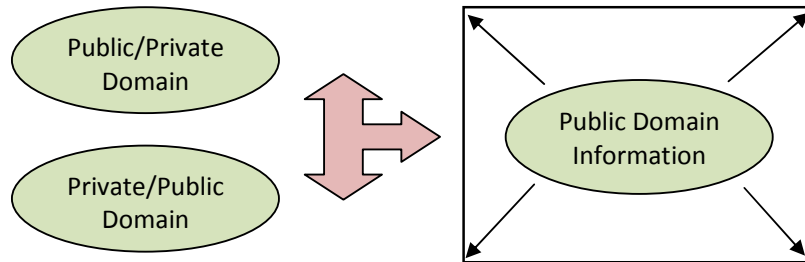


**Figure 2.5(C)** Comparative Analysis Model

Developing countries can effectively use this model to their advantage as ICT opens access to global and local knowledge products at a relatively low-cost. The model becomes ineffective in absence of a strong civil society interest and short public memory.

### 2.3.4 Mobilization and Lobbying Model

Mobilization and lobbying model is based on planned, directed, strategic flow of information to build strong virtual allies to strengthen action in the real world. It takes up the pro-active approach of forming virtual communities which share similar values and concerns, promoting active sharing of information between these communities, and linking them with real world.
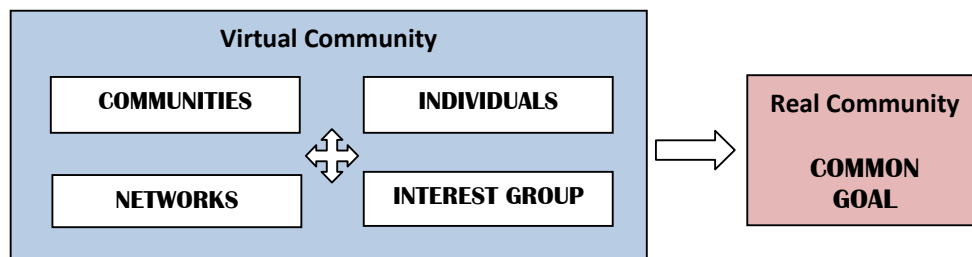


**Figure 2.5(D)** Mobilization and Lobbying Model

This model enhances the scope of participation of individuals and communities in policy issues and debates. This model could be effectively used by the government to encourage public debates and to gauge public opinion on a particular issue as a part of good governance.

## 2.3.5 Interactive-Service Model

Interactive-service model in many ways is a consolidation of the earlier digital governance models and opens up avenues for direct participation of individuals in the governance processes. The model makes possible the various services offered by the Government to be directly accessible to the citizens. It creates an interactive Government to Consumer to Government (G2C2G) channel in various functions.
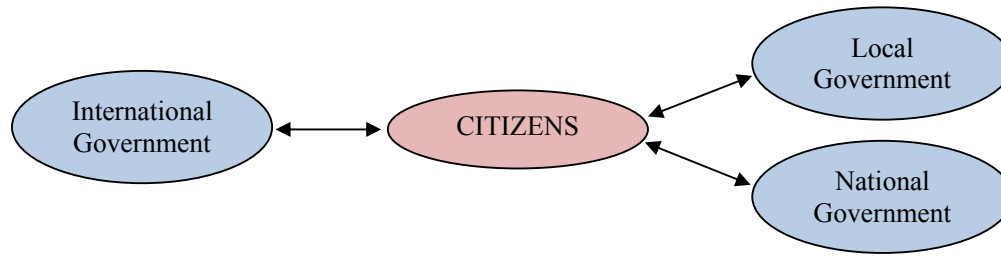


**Figure 2.5(E)** Interactive Service Model

This model is more embedded in developed countries and has often been proposed for replication in developing countries. The model is on the higher end of technology-reliance as compared to the other models. This makes it difficult to replicate in developing countries in absence of individual and secure ICT access. In this research, the interactive-service model of e-governance has considered.

## 2.4 E-Governance: Service Delivery Approaches

Yong (2004) stated that there has been a distinct shift between the agency-centric and citizen-centric approach in service delivery (Figure 2.6). Modern governments are steadily transforming from the traditional department centric model to a citizen centric model for delivering services (Shapiro, 1999). In case of public service delivery citizen-centricity is more realistic approach and excellent opportunity to interaction between government and citizens (Salam, 2012).

## 2.4.1 Agency-Centric Approach

Agency-centric approach of e-governance is also known as department centric. Al-Khouri (2011) argued that in a department centric approach, citizen needs to interact with each department separately causing inconvenience and inefficiency. Moreover, any services that requires approvals or intervention of more than one department, would take a long time to deliver. The next stage in the transformation process is the integration at the service provider

level where multiple services and departments under a single agency or service provider are integrated to give a single agency feel to the citizens. However, citizens still need to interact with different agencies for different purposes, leading to less transparency and convenience for the citizen. Thus, there is also a growing demand for governments to transform from a traditional agency and department centric model to a citizen centric model (Chhabra and Kumar, 2009). Such a transformation is expected to enhance the quality of life of citizens in terms of greater convenience in availing government services (Atkinson and Castro, 2008) and thereby result in increased customer satisfaction levels and trust in government (Bimber, 1999).
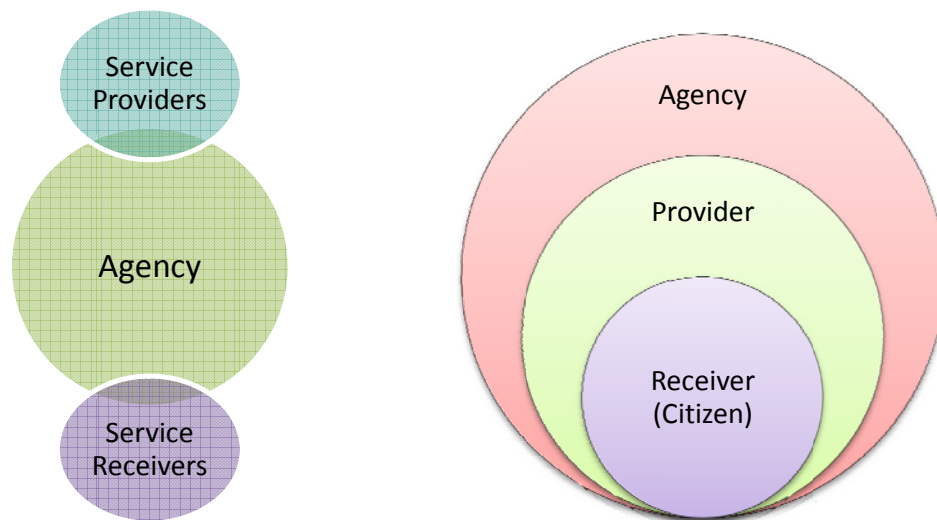


**Figure 2.6** Governance approaches: agency-centric (left) and citizen-centric (right)

## 2.4.2 Citizen-Centric Approach

A citizen-centric approach will enable governments to achieve essential efficiency gains and improve service delivery levels, improve citizen satisfaction with government services and improve quality of life (Mehra, 2004). It is all about turning the focus of government around- looking at the service delivery though the eyes of the citizens rather than operational or other imperatives of the government system. Citizen centric e-government should enjoy increased trust of citizens and should ensure accountability of government transactions (Gronlund, 2002). It should also provide enhanced collaboration among departments and stakeholders, thereby enabling fast decision making and consensus (Garson, 1999). Citizen centric e-government could also help avoid duplication and overhead through shared services and infrastructure.

A citizen-centric government is something much more fundamental than simply a collection of departments providing services to citizens. It involves rethinking the entire service delivery system-across all agencies, and all levels of government-from a citizen perspective. Moreover, user needs typically cut across the organizational structures and hierarchies of government. So a true citizen focus requires a holistic approach, appreciated by all the levels of government. The study concerned with citizen-centric approach instead of the agency-centric approach as e-governance model of public service delivery.

## 2.5 Empirical Studies: E-governance for G-governance

Many studies have been conducted in developed as well as developing countries to assess the effectiveness e-governance initiative that leads to good governance. A brief resume of researches conducted and related to the present study has been presented here.

### 2.5.1 E-Governance and Public Service Delivery

Characteristically, e-governance is the electronic delivery of services by the government to the citizens. Public service delivery is the inter-relationship between the government functionaries and the citizens to whom the services of the government are addressed to. Any effective public service delivery mechanism must ultimately lead to good governance. It simplifies delivery of government services to citizens and improves interaction with business and industry. It facilitates citizen empowerment through access to information and allows more efficient government management.

Tapscott and Caston (1993) argued that causes of information and communication technology a paradigm shift has launched in public service delivery either in mode or its principles. Documentary mode and interpersonal interaction of bureaucratic paradigm has shifted to electronic exchange and none face-to-face interaction of e-government paradigm. Standardization, impartiality and equity principles are shifted by user customization and personalization. According to Harris (2000), ICT is one of the key instruments that supported good governance by increasing transparency, accountability and eventually helping to reduce the cost of government business operations.

Batho Pele promoted nine principles like consultation with citizens, setting service standards, increasing access to information, ensuring courtesy, providing information, openness and transparency, redress and value for money (RSA, 1997). Furthermore, Citizen Charters

characterized with six principles like standard of services, cost and time, choice and consultation, courtesy and consideration, redress and apology and value for money (BSI, 2008). In this research, the standard of service, choice and consultation, courtesy and consideration, openness and transparency, entrance and information, and value for money are setting standards for e-governance service.

## 2.5.2 Service Quality and Customer Satisfaction

E-service provides customers with a different experience with the interactive flow of information. Much of research work in e-service quality takes a combination of traditional service quality dimensions and web interface quality dimensions as its point of departure. Field *et al.* (2004) argued that e-service can play a critical role in improving the services quality delivered to its customers as it can achieve survival, increase satisfaction and trust and then generate the competitive success for organizations.

Dabholkar (1996) conducted research work on dimensions of e-service quality focusing on web site design, and he argues that seven dimensions of e-service quality can be illustrated as the basic parameters in the judgment of e-service quality, including website design, reliability, and delivery, ease of use, enjoyment and control. Cox and Dale (2001) laid down six dimensions of online retailing service quality with the comparison of the traditional dimensions of service quality such as website appearance, communication, accessibility, credibility, understanding and availability.

Yang (2001) argues that customers reach satisfaction decision by comparing the performance a product or service with their prior expectations. If performance exceeds the expectation positive disconfirmation occurs and increases in satisfaction can be expected to take place. Saha and Zoha (2005) state providing a good service quality is a major issue for all business. Online quality service is a key issue to maintain customer satisfaction. Customer satisfaction is collective outcome of perception, evaluation and psychological relations to the consumption experience with a product or service.

Kalsi et al. (2009) has addressed the e-government initiatives has a direct impact on the citizens and in which the citizens derive benefits through direct transactions with the governmental services. Al-Tarawneh (2012) is studied on e-service quality and customer perception, the study indicates that responsiveness, ease of use, personalization, security; and website design have influence on customer's perception of e- service quality.

### 2.5.3 E-Governance and Good Governance

Heeks (2001) studied the effect of new information and communication technologies and how it can make a significant contribution to the achievement of good governance goals. The paper elaborates to information systems (IS) and claimed e-governance as the ICT-enabled route to achieving good governance. The e-government in short is a tool for good governance- transparency, participation, regulations and accountability. Administrative efficiency, quality of public services and democratic participation are core principles of both e-governance and good governance.

Islam (2003) explored the link between information flows and governance with the objective to examine how the availability of information may affect governance. Empirical analysis showed that countries which have better information flows as measured by both indicators have better quality governance. Saxena (2005) argued that e-governance initiatives in most countries promise a more citizen-centric government and reduce operational cost. Unfortunately most of these initiatives have not been able to achieve the benefits claimed. E-governance requires the initiative to be effectiveness-driven and not merely efficiency-driven. This will require the initiative to be led by good governance.

Dada (2006) provided a review of academic literature on the failure of e-governance in developing countries. There exist wide gaps between the current reality in developing countries and the future of e-governance systems. These gaps classified into three types: a hard-soft gap, implying a gap between the technology and the social context in which it is applied; a private-public gap, suggesting that what works in the private sector may not work in the public sector; and a country context gap, that arises from the application of the same e-governance systems for both the developing and developed countries. The paper recommends that administrators in developing countries must assess the situation at hand before implementing e-governance that necessitated keeping eyes on challenges and propositions.

Akther et al. (2007) in their study on an e-government project in Bangladesh highlighted that most e-government projects within developing countries employ high-technology intervention whereas citizens are not ready for this. The research concludes that stakeholders' participation is the driving factor for success, which acts as the critical factor for triumph in e-government. In the current study, the good governance has assessed based on accountability, transparency, responsiveness, equitable, rule of law and participation.

## 2.6 E-Government Initiatives in Bangladesh

The government of Bangladesh has been continuously endeavoring to provide citizen services in a better manner. There have been several successful initiatives and many noteworthy projects have been undertaken. Some successful initiatives mentioned here.

### 2.6.1 Context of ICT in Bangladesh

In the late 1990s, ICT has been introduced as a tool to governance, a leap forward leading to e-government. Bangladesh has not kept up with ICT developments worldwide, compare to other nations in a similar economic, position, and the overall ICT infrastructure is poor (Zukang, 2012). The country's overall low ranking (Table 2.3) highlights the urgent need for improvements in areas such as the regulatory framework, developing human resource capacity, providing greater access and increasing usage of ICT by citizens and investing in ICT infrastructure (Ahmad and Quayum, 2010).

**Table 2.3** World e-government development ranking of the SAARC countries

| | World E-Government Development Index | | World E-Government Development Ranking | |
|---|---|---|---|---|
| *Survey Year* | *2010* | *2012* | *2010* | *2012* |
| **Afghanistan** | 0.2098 | 0.1701 | 168 | 184 |
| **Bangladesh** | 0.3028 | 0.2991 | 134 | 150 |
| **Bhutan** | 0.2598 | 0.2942 | 152 | 152 |
| **India** | 0.3567 | 0.3829 | 119 | 125 |
| **Maldives** | 0.4392 | 0.4994 | 92 | 95 |
| **Nepal** | 0.2568 | 0.2664 | 153 | 164 |
| **Pakistan** | 0.2755 | 0.2823 | 146 | 156 |
| **Sri Lanka** | 0.3995 | 0.4357 | 117 | 115 |

### 2.6.2 Digital Bangladesh and E-Government

During the 2008 elections, the Awami League's election manifesto "Vision 2021 Bangladesh: A New Horizon" introduced the concept of Digital Bangladesh (BAL, 2008). The concept was also reiterated in the government's updated manifesto (July 2009). The DB agenda composed of four pillars that outline key areas like human resource development, connecting citizens, digital government and private sector (A2I, 2009). Over the years, a number of definitions have conceptualized e-government. World Bank (2002) emphasized the core principles of good governance: "the use of information and communications technologies (ICT) to transform government by making it more accessible, effective and accountable. E-

government includes: providing greater access to government information; promoting civic engagement by enabling the public to interact with government officials; making government more accountable by making its operations more transparent and thus reducing the opportunities for corruption; and providing development opportunities, especially benefiting rural and traditionally underserved communities."

### 2.6.3 Overview of ICT Laws

**National ICT Policy:** Bangladesh introduced its first ICT Policy in 2002. Due to weak implementation capacity, this policy was never fully realized. Post-election, the government revived the ICT policy and legal framework to enable their DB vision, and approved the new ICT Policy in 2009 (Ahmad and Quayum, 2010).

**ICT Act 2009:** The ICT Policy 2009, the ICT Act 2009 was also promulgated. This was almost exactly the same as the ICT Act 2006, which was never adopted. The only change was an amendment to Clause 18, which had stipulated that the Controller of Certifying Authority (CCA) should be appointed within 90 days of the promulgation (Ahmad and Quayum, 2010).

### 2.6.4 Overview of the Institutions

There are multiple institutions implementing ICT-related policies and legislations in Bangladesh. The findings reveal that the institutions responsible for the oversight and nurturing of the ICT sector have limited implementation capacity and unclear, sometimes overlapping, mandates that severely weaken sectoral policy execution and program implementation.

**Union Information and Service Centre:** The main initiative under the Access to Information Program, the Union Information and Service Centre (UISC), aims to achieve the two citizen-centric pillars of the DB agenda to connecting citizens and delivering services to the citizens' doorsteps. The centres are housed at a publicly accessible location, e.g. a Union Parishad Office, and are run by a villager or local entrepreneur (A2I, 2009). The UISCs have got the acceptance already by all in the course of some important role like birth registration, labor registration, student registration etc.

**National Web Portals:** By the guidance and administration of DC offices and with the aim to ease of getting services and information from the web pages government of Bangladesh has launched national web portals containing 64 district web portals with the name of 64

administrative units of Bangladesh. Education, health, agriculture, business, district profiles has ranged together for citizens. The web portals also have the opportunity to getting information about the day to day works, circulars and notices from the government organization by the citizens of all.

**District E-Service Centers:** Prime Minister of Bangladesh and visiting UN Secretary General formally opened the e-service centres from the Prime Minister's Office through video conferencing after talking to the people at Jessore district e-service centre.  Later, total 64 service centres has introduced in Bangladesh for better service delivery to the citizens. With the launching of the DESC desires to ending the era of over 200-year-old traditional ways of providing government services, which often cause sufferings to millions.

The most common and routine works of the DESC are applications from citizens for getting services, application for Porcha, official applications as well as know about the condition of progress of application by tracking system. The DESC are not able to fulfilling the desire of the government and even citizens. The present work has tried to assess the e-service centres across the Bangladesh with a view to explore the efficiency of public service delivery and benefits imparted from them to citizens.

## 2.7 Analytical Framework: E-Governance for G-Governance

The analytical framework has been developed for this research study based on the conceptual analysis, theoretical background and empirical studies. The model demonstrated the variables of e-government, citizen satisfaction and good governance through the way of e-service delivery (Figure 3.1). The analytical framework illustrated the quality of e-service which satisfied the citizens was measured by attributes of satisfaction and contingent factors of good governance by the way of public service delivery (Figure 3.2).

E-service is one of the domains of Heeks (2001) e-governance is concerned to assess the performance of DESC. In order for the research to be effectively contextualized the principles of Batho Pele (RSA, 1997) and Secretariat Instructions (BSI, 2008) are aligned to determine the e-governance service quality. The criteria of citizen satisfaction recognized to determine the impact of e-government initiatives as self-administrative attributes based on text. Six factors have decided as good governance attributes suggested by the Kettani (2009).
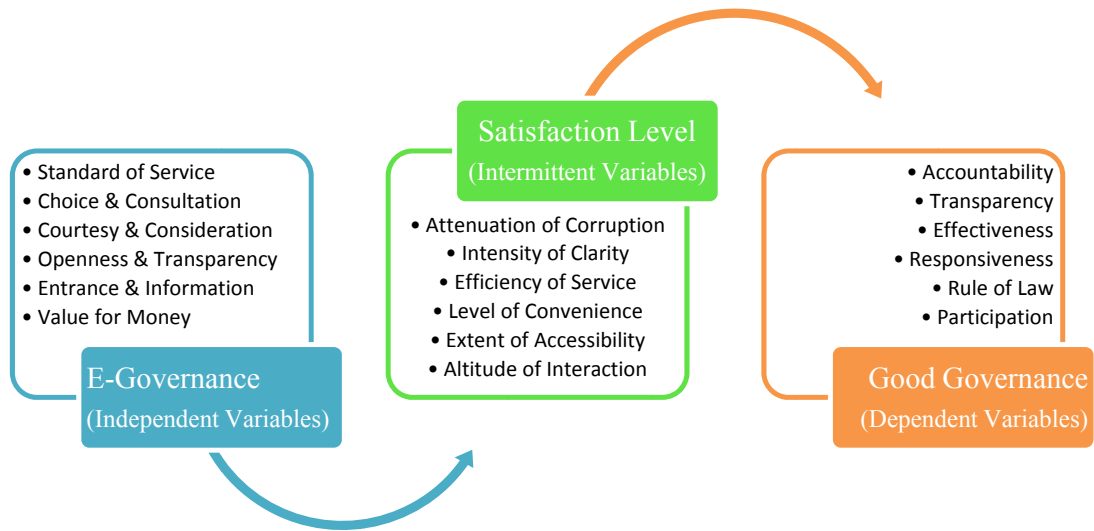
**Figure 2.7** Research model demonstrates the independent and dependent variables
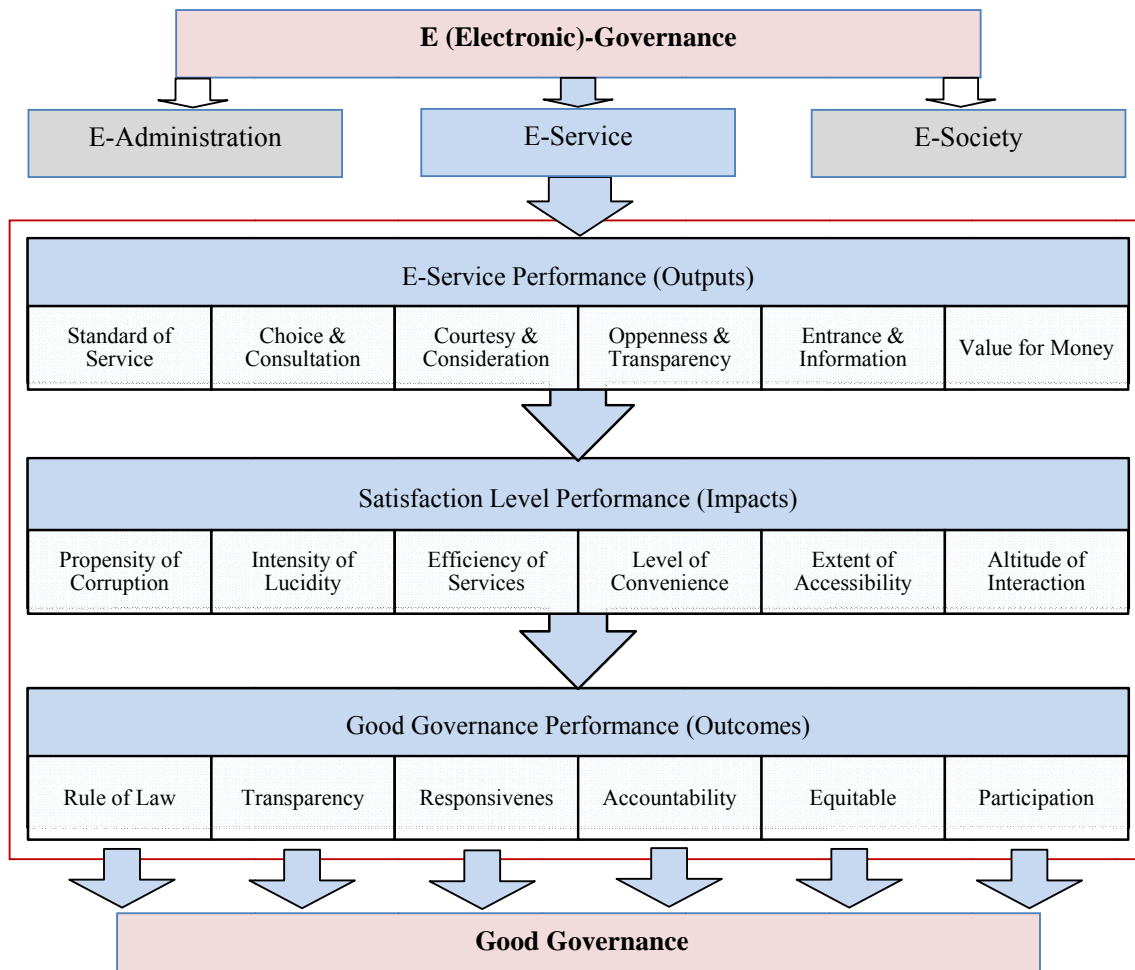


**Figure 2.8** Analytical framework: e-governance for good governance

Salam MA (2013), MA Dissertation, MAGD, Institute of Governance Studies, BRAC University, Dhaka

## 2.8 Development of Research Hypotheses

As stated in the literature review on the way to conceptual framework, theoretical background and empirical studies by various researchers, the following research hypotheses are formulated to investigate the efficiency and implication of District E-Service Centres lead to promise the good governance.

E-service can play a critical role in improving the services quality delivered to its customers as it can achieve survival, increase satisfaction and trust and then generate the competitive success for organizations (Field *et al.* 2004). Bangladesh government has launched 64 DESC to provide services to the citizens and already proved some progress in the line of e-service delivery. Therefore, the hypothesis is-

**H-1:** *E-service centres is positively related to effective e-governance service*

Saha and Zoha (2005) said online quality service is a key issue to maintain customer satisfaction. Customer satisfaction is collective outcome of perception, evaluation and psychological relations to the consumption experience with a product or service. Kalsi *et al.* (2009) addressed the e-government initiatives has a direct impact on the citizens and in which the citizens derive benefits through direct transactions with the governmental services. Therefore, the hypothesis is-

**H-2:** *E-governance services has a positive impact on enhancing citizen satisfaction*

According to Harris (2000), ICT is one of the key instruments that supported good governance by increasing transparency, accountability and eventually helping to reduce the cost of government business operations. Heeks (2001) studied the effect of new information and communication technologies and how it can make a significant contribution to the achievement of good governance goals. The establishment like DESC as e-governance initiative may leads to good governance. Therefore, the hypothesis is

**H-3:** *E-governance is positively correlated to the good governance promises*

# Chapter 3
# RESEARCH METHODOLOGY

# 3. RESEARCH METHODOLOGY

This is a descriptive type of research which purpose to elucidate the relationship between electronic governance with good governance through service delivery by the DESC. The study approaches both the qualitative as well as quantitative research. The research labeled as quantitative because it uses numbers to try to understand the process and the data are collected by conducting surveys. The qualitative research makes use of words rather than numbers and the information collected by the informal interviews from the officials working as service providers.

## 3.1 Research Design

With the aim to determine and qualify the relationship between dependent and independent variables the quantitative research was apprehended. The relationship was expressed between variables using effect statistics such as correlations, relative frequencies or means and percentage differences (Creswell, 2003). The way-out of the overview of the research design has shown in flow-chart (Figure 3.1).
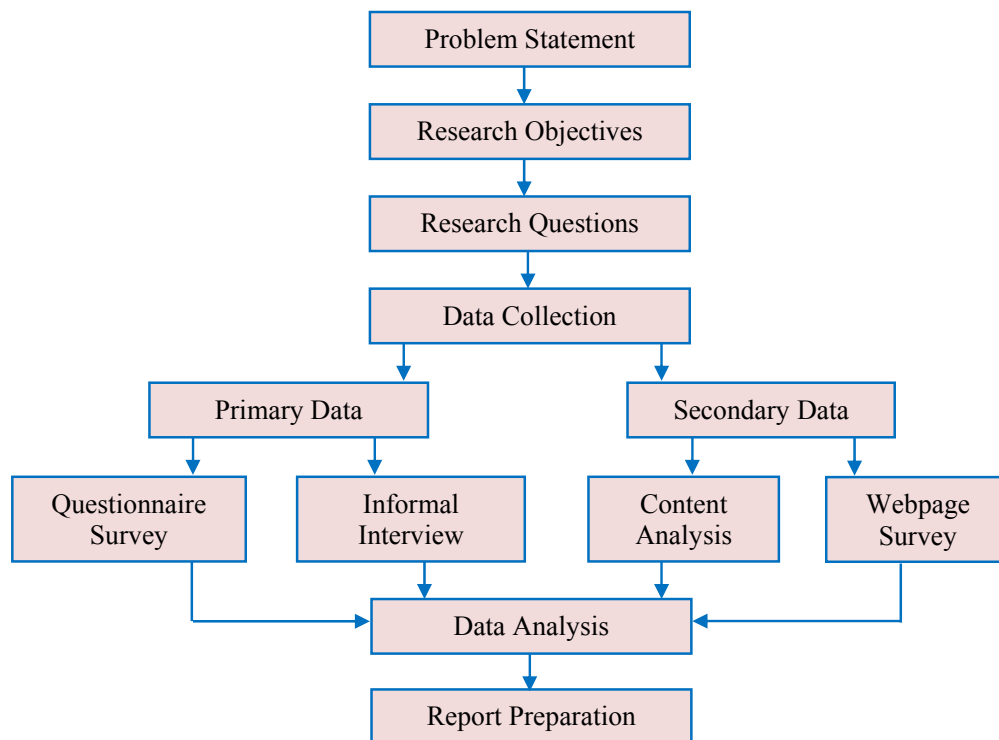


**Figure 3.1** An overview of the research design and its components

Salam MA (2013), MA Dissertation, MAGD, Institute of Governance Studies, BRAC University, Dhaka
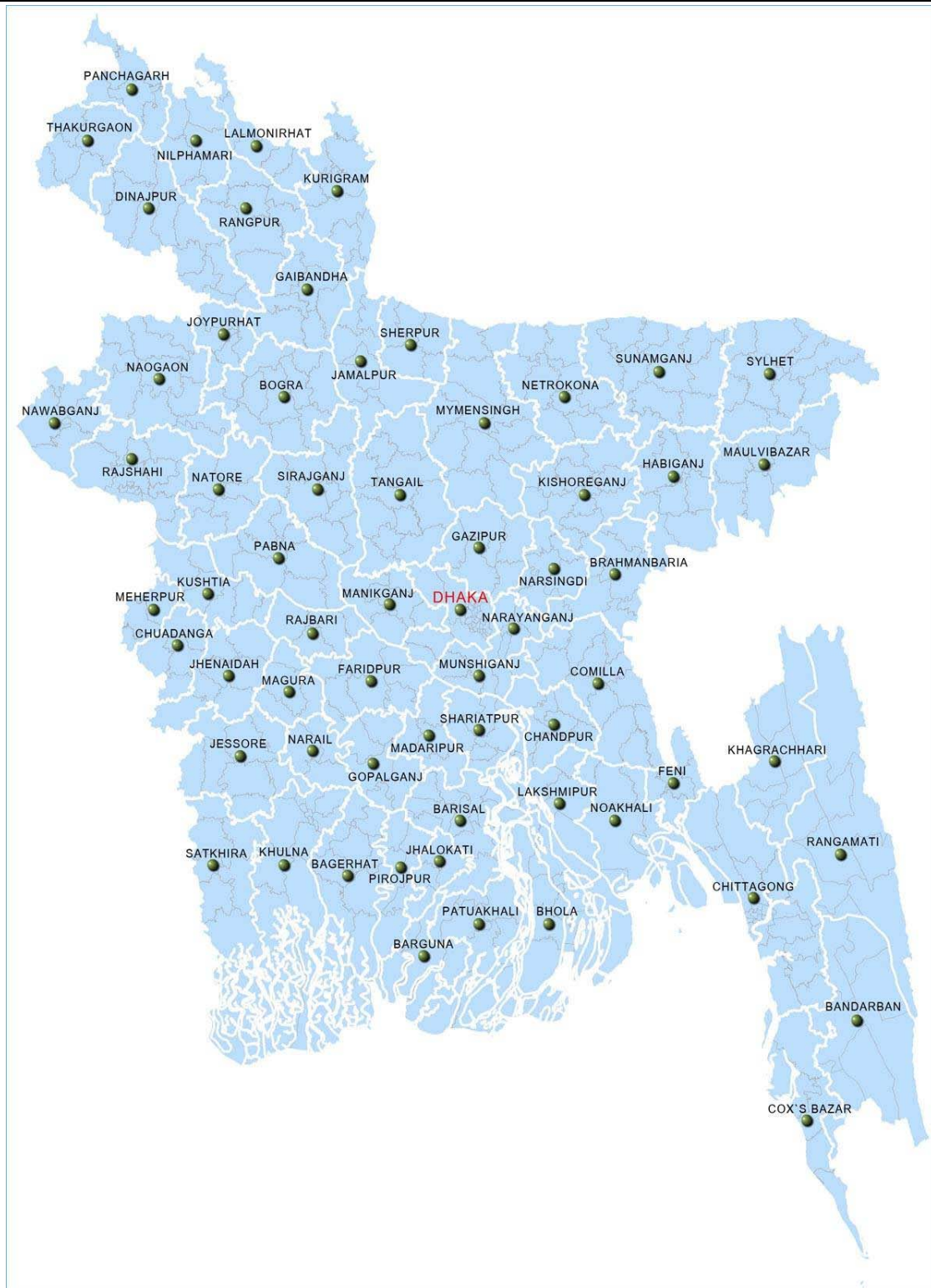
**Figure 3.2** Administrative maps[13] Bangladesh showing the study areas or districts[14]

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[13] From Wikipedia: the free encyclopedia (retrieved at January 28, 2013)
[14] Categories has been chosen based on the GoB order, dated 1984.

### 3.2 Research Area

Based on the number of Upazila, Government of Bangladesh has categorized the administrative districts fewer than four groups (GOB, 1984). Category-A (consists 8 Upazila and more), Category-B (consists 5-7 Upazila) and Category-C (consists 4 Upazila or less) and Special Category. In this research, out of 64 DESC of Bangladesh four service centres has selected to study named as Mymensingh, Shariatpur, Madaripur and Dhaka district as category A, B, C and special category respectively which represents all others service centres (Figure 3.2). The service centres has selected through the cluster sampling method from four different categories of districts. During the research following important information (BBS, 2012) has considered to selecting the study area (Table 3.1).

**Table 3.1** District profiles of the study areas: at a glance[15]

| Features | Dhaka | Mymensingh | Shariatpur | Madaripur |
|---|---|---|---|---|
| Coordinates | $23.79^0$N$90.30^o$E | $24.38^0$N$90.16^o$E | $23.12^0$N$90.21^o$E | $23.17^0$N$90.10^o$E |
| Area | 1463Km$^2$ | 4363Km$^2$ | 1181Km$^2$ | 11144Km$^2$ |
| Population | 12517 thousands | 5042 thousands | 1082 thousands | 1137 thousands |
| Density | 8600/Km$^2$ | 1200/Km$^2$ | 916/Km$^2$ | 990/Km$^2$ |
| Upazila | 05 | 12 | 06 | 04 |
| Unions | 86 | 146 | 65 | 84 |

### 3.3 Sampling Design

The total sample size of the research was 64 (n=64). In this research, multi-stage sampling method was followed which put up with another two steps. As a consequence to equal number of service providers and service receivers in the study, quota sampling method was followed. In this step, 16 from each and total 64 respondents from four service centres were selected. Purposive sampling method followed for respondent selection. The respondents were preferred who took part as service provider in any one of the selected service centres or the person who received any services from any one of the selected service centres after inauguration at district level.

### 3.4 Scale Construction

The identical response categories were used for several items intended to measure a given variable and each item has scored in a uniform manner with five response categories, score 1

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[15] 2011 Population and Housing Census: Preliminary Results, Bangladesh Bureau of Statistics, 2012

to 5. In the scale construction, response patterns across several items were scored (Scott and Xie, 2005). The level of good governance was graded by using five point Likert scales (UNDP, 2003). The table displayed the grading scale used in grading the questionnaires by the respondents. The scale has five level of grading from 5-1 where 5 denoted the highest grading score while 1 referred to the lowest (Table 3.2).

**Table 3.2** Five point of Likert scale for assessing the DESC

| Scale | Electronic Governance | Citizen Satisfaction | Good Governance |
|:---:|:---:|:---:|:---:|
| 5 | Very Effective | Very Satisfied | Very Good |
| 4 | Effective | Satisfied | Good |
| 3 | As Usual | As Usual | Moderate |
| 2 | Ineffective | Dissatisfied | Poor |
| 1 | Very Ineffective | Very Dissatisfied | Very Poor |

### 3.5 Data Collection

In this research, different types of data collection procedure for this research were conducted to collect the primary and secondary data. The primary data were collected by using structured questionnaire (Appendix A) from key respondents and asking set of questions (Appendix B) from experts' interview. The secondary data was gathered through content analysis from the research articles, text books and dailies while documents survey scheme from various webpage. Data collection was done through head to head survey[16] or electronic mail and by local agents or peers. In addition, the observation method was outlook to amass the services which given to the citizens from service centres.

### 3.6 Data Processing

To ease of the data analysis, the data were edited, coded, tabulated and classified according to objective of the study. Recorded data were classified using broad patterns like qualitative, chronological or location difference and systematically organized on the basis of predetermined variables. Respondents' age, sex, education, occupation etc. were classified based on qualitative types of classification while data of traditional governance and electronic governance organized using chronological classification. Data for different categories of services centres like Dhaka, Mymensingh, Shariatpur and Madaripur were classified according to the location difference.

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[16] Head to head survey with the service providers in reunion program of 27th batch at December 2012

## 3.7 Data Analysis

All of the recorded data were transcribed into excel texts to ease the data analysis and then data were further interpreted through SPSS method. The data was analyzed by using simple and suitable mathematical and statistical tools like tabulation, frequency, percentage, arithmetic means and standard deviations using Microsoft Excel (Version 2007) program. A relationship between the dependent and independent variables were analyzed through Pearson Correlation, Cronbach's Alpha and Regression Analysis by using SPSS (Version 12) program. Results were presented through graphs, tables, narrative text, simple computations and logical reasoning. Analysis was carried out in relation to the research objective and questions which lead to conclude.

### 3.7.1 Measuring of E-Governance

Using the information and communication technologies in governmental administration increases the effectiveness of government actions. In response to justify e-government investment, to assess the impacts and citizens expectations country used range of measurement tools. In this research the e-government performance was measured through e-service delivery out of three domains of e-governance approximating e-administration, e-service and e-citizen.

E-Service is measured by using six indicators like standard of service, choice & consultation, courtesy & consideration, openness & transparency, entrance & information and value for money. The measuring indicators consist of two questions in the questionnaire which is measured by using five point Likert scale as it has been used in the evaluation of good governance. Five point of scale marked as very effective (5), effective (4), as usual (3), ineffective (2) and very ineffective (1).

### 3.7.2 Measuring of Satisfaction Level

The level of satisfaction depends of the effectiveness and efficiency of e-service delivery. The study also covers the assessment of citizen satisfaction on the e-governance initiatives by the government. The study overview the e-governance idea through e-service delivery as a result the impacts of e-governance measures on six measuring indicators like attenuation of corruption, intensity of clarity, efficiency of service, extent of accessibility, level of convenience and altitude of interaction.

Each measuring indicators consists two questions in the questionnaire which is measured by using five point Likert scale as it has been used in the evaluation of good governance. Five point of scale marked as very satisfied (5), satisfied (4), as usual (3), dissatisfied (2) and very dissatisfied (1). The effectiveness of good governance also measure by the citizen satisfaction. The gaps between the perception of the service providers and service receivers on level of satisfaction also measured in this research.

### 3.7.3 Measuring of Good Governance

The potentiality of e-government technology assists in enhancing the good governance capability of public organizations. Here, the indicators have been used to measure the good governance competence of the DESC through service delivery to the citizens. In this research, good governance performance is measured by using six indicators like accountability, transparency, effectiveness, responsiveness, rule of law and participation. Under the heading of each indicator, two questions were framed in the questionnaire for grading the level of each indicator and comparison with the traditional system.

The good governance was analyzed: firstly, overall performance of government in enhancing good governance capability by adding up the score for each core characteristic was verified for selected service centres; secondly, the study assessed the effectiveness e-government in enhancing the good governance in relation with the traditional government in addition to analyzed the level of good governance effectiveness based on the scale (Table 3.3).

**Table 3.3** Scale for assessment of good governance effectiveness (UNDP, 2003)

| Assessment scale | Good governance effectiveness |
|---|---|
| 85%-100% | Very good (Keep it up) |
| 65%-84% | Good (But still room to improve) |
| 50%-64% | Fair (Can do much better) |
| 35%-49% | Poor (More commitment and effort needed) |
| Below 35% | Very poor (Something is drastically wrong) |

### 3.8 Reliability Tests

In this research, reliability tests for variables have conducted to verify the variables consistencies. It measures the extent to which the response collected for given item correlate highly with each other (Kenova and Jonnason, 2006). Cronbach's alpha test of reliability has

estimated to measures internal consistency of a scale. Ideally, the Cronbach alpha coefficient of scale standardized with the value 0.7 and above (Pallant, 2007).

## 3.9 Correlation Analysis

In order to establish the e-governance for good governance, a correlation matrix was constructed using the variables in the questionnaire to show the strength of relationship among the variables considered in the questionnaire. According to Kline (1998), correlation matrix defined as `a set of correlation coefficients between the variables by using SPSS.

## 3.10 Hypothesis Validation

### Hypothesis 1

*E-service centres is positively related with effective e-governance service*

To test this hypothesis, mean values and chi-square test of e-governance service quality and e-governance service improvements was carried out with the help of SPSS (Version 12).

### Hypothesis 2

*E-governance services has a positive impact on enhancing the citizen satisfaction*

To test this hypothesis, paired sample t-test and regression for analysis of variance was carried out with the help of SPSS (Version 12).

### Hypothesis 3

*E-governance is positively correlated to good governance promises*

To test this hypothesis, paired sample t-test and regression for analysis of variance was carried out with the help of SPSS (Version 12).

# Chapter 4
# FINDINGS AND ANALYSIS

4.1 Demographic Profiles: Descriptive Statistics

4.2 Electronic Governance: Data Analysis

4.3 Satisfaction Level: Data Analysis

4.4 Good Governance: Data Analysis

4.5 Key Findings: Analysis and Discussion

4.6 E-Governance: Challenges and Propositions

# 4. FINDINGS AND ANALYSIS

The aim of this chapter is to present the empirical results of the model analyzed from content analysis and to discuss the results obtained from the data source. This chapter presents the results of research findings derived from the data analysis by using quantitative and qualitative methods. The present study analyzed the e-governance for good governance through service delivery. In this study, questionnaire survey, informal interview, content analysis and webpage survey method have been followed.

## 4.1 Demographic Profiles: Descriptive Statistics

The study was conducted for the period from November 2012 to January 2013. The descriptive statistics was aimed to summarize the data that collected from the sample target population of the service centres. Total respondents were 64 from four districts of Bangladesh. The table 4.1 displayed the respondents' demographic profiles (Appendix C).

**Table 4.1:** Respondents (service providers and receivers) demographic profiles

| Age groups | | Educational level | |
|---|---|---|---|
| Below 25 years | 1.6% | Up to PSC | 17.2% |
| 26-30 years | 20.3% | JSC/JDC | 6.3% |
| 31-35 years | 28.1% | SSC/O level | 4.7% |
| 36-40 years | 18.8% | HSC/A level | 9.4% |
| 41-45 years | 10.9% | Undergraduate | 21.9% |
| 46-50 years | 7.8% | Postgraduate | 39.1% |
| More than 50 years | 12.5% | PhD or equivalent | 1.6% |
| | | **Gender status** | |
| **Occupational status** | | Male | 73.44% |
| Govt. Service | 57.81% | Female | 26.56% |
| Non-govt. Service | 6.25% | **Service status** | |
| Teacher | 3.13% | Service Providers | 50.0% |
| Student | 3.13% | Service Receivers | 50.0% |
| Agriculture | 12.5% | **Residential status** | |
| Business | 9.38% | Within Headquarters | 84.38% |
| Others | 7.81% | Outside Headquarters | 15.62% |

## 4.1.1 Age Distribution

The subsequent table (Table 4.1) illustrated the respondent age groups and the level of educational. Table 4.1 showed that among the 64 respondents maximum numbers of respondents were 28.1% within 31-35 years while 20.3% were within 26-30 years and so on. Age level revealed that respondents' career was not equally developed.
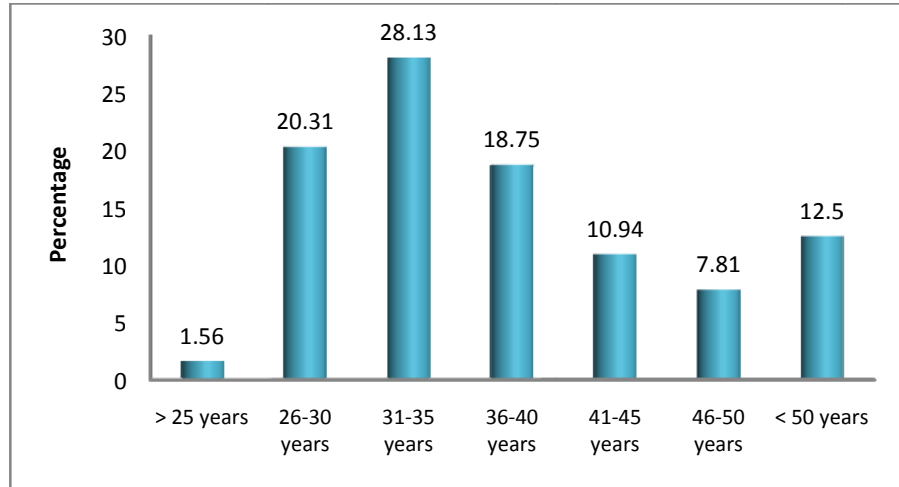


**Figure 4.1** Age distribution of the service providers and service receivers

## 4.1.2 Education Level

Level of education revealed that respondents' were highly educated like most of the respondents were postgraduate (39.1%) and undergraduate (21.9%). But, most of the educated respondents were under the service providers while most of the respondents' (17.2%) educational qualifications were up to PSC (Table 4.1 and Figure 4.2).
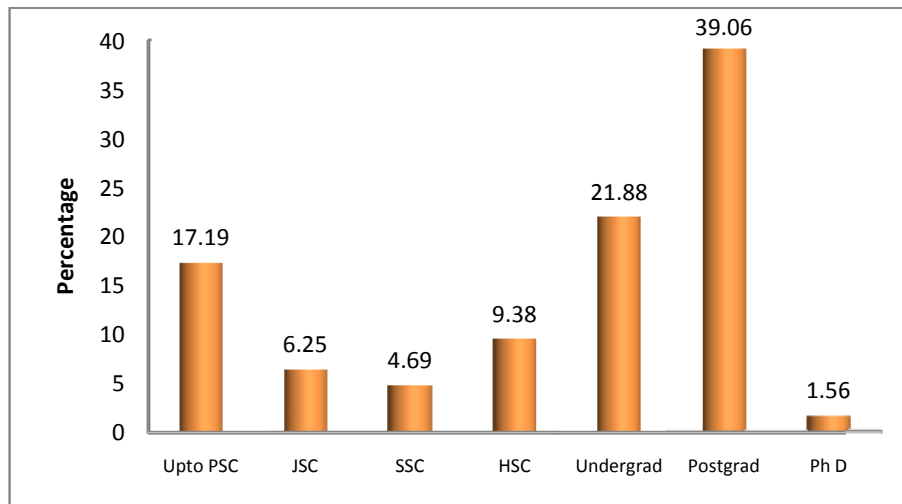


**Figure 4.2** Educational levels of the service providers and service receivers

### 4.1.3 Occupational Status

Figure 4.3 demonstrated the occupational status of the respondents both the service providers and the service receivers. About 57.81% respondents were serving as government servant which group included all of the service providers and 7.81% service receivers only. Among the service receivers 12.5% were living on agriculture, 9.38% were in business and so on (Table 4.1).
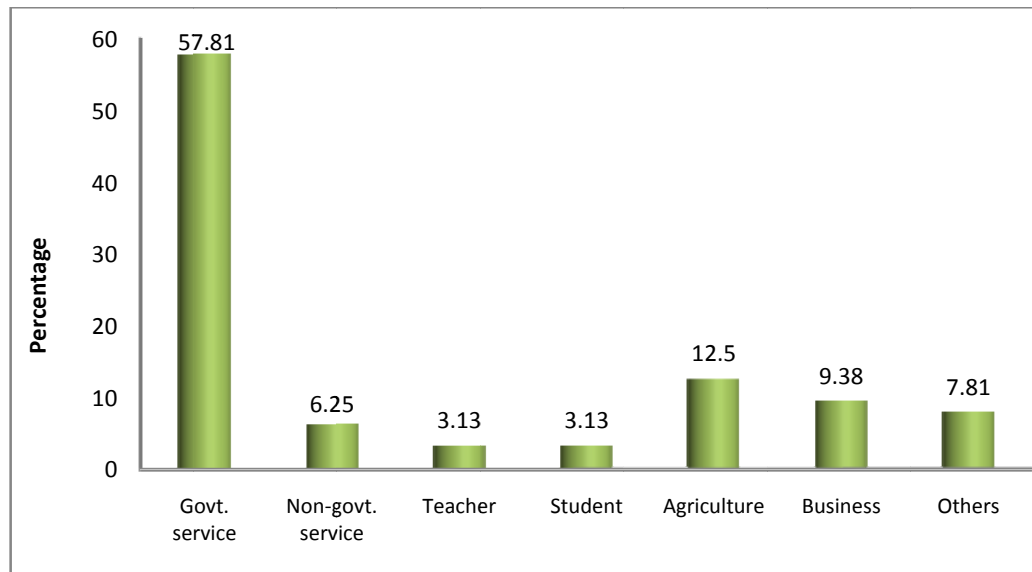


**Figure 4.3** Occupational statuses of the service providers and service receivers

### 4.1.4 Gender and Service

Table 4.1 illustrated the gender status and service pattern of the respondents. In this research, about 73% male respondents and 27% female respondents were conducted (Figure 4.4). On the other hand, intentionally equal number of service providers (50%) and service receivers (50%) were conducted as respondent (Figure 4.4).
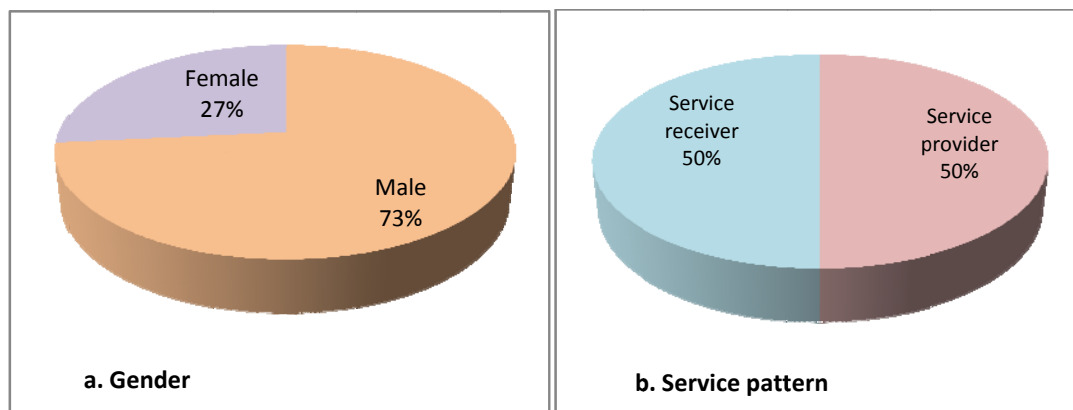


**Figure 4.4** Gender and pattern of service of the service providers and service receivers

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### 4.1.5 Residential Location

The study found that the 84% respondents were residing within the District headquarters while 16% respondents resided outside of the District Headquarters (Figure 4.5).
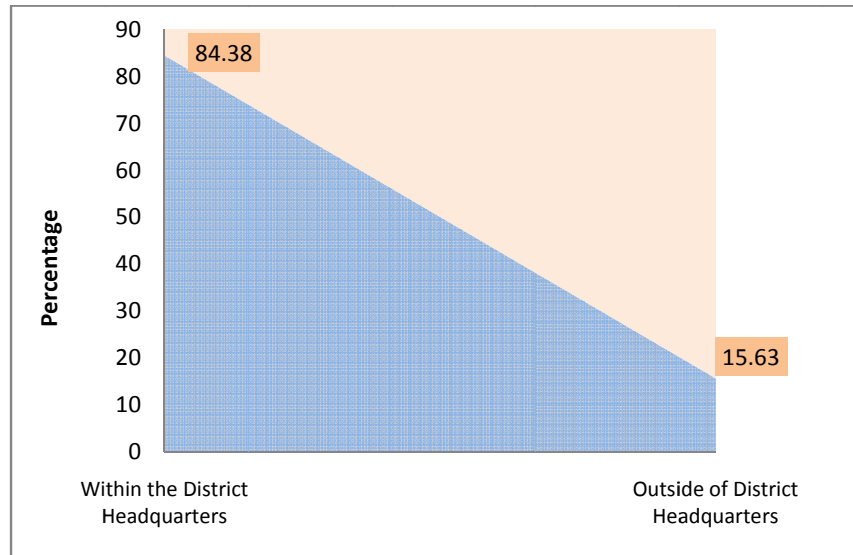


**Figure 4.5** Residences of the service providers and service receivers

From the above figures and facts, descriptive statistics exposed that the younger and older peoples and women were less concerned about the e-service centres. The study also revealed that the citizens from rural area were receiving services not as much of residents of the district headquarters from the DESC that necessitated further research in this area.

### 4.2 Electronic Governance: Findings and Analysis

In this step of analysis, the effectiveness of the e-governance service was analyzed based on the six principles of service delivery indicators in each categories of District to comparative analysis. Moreover, the study also revealed the gap analysis in between service providers and service receivers towards the effectiveness increase of e-service delivery.

### 4.2.1 Descriptive Statistics

The next table represented the mean value and standard deviation for the attributes of the quality of e-service delivery (Table 4.2, Appendix D). The highest mean value of the measured item was 4.26 score with 0.47 standard deviation for 'entrance and information'. The second highest mean value was 4.02 with 0.82 standard deviation score for 'value for money'. Both the variables scored above 4 out of 5 which signified the effective levels of e-service delivery by the DESC but span for develop.

**Table 4.2** Descriptive statistics for public service delivery by DESC

| Variables | N | Mean± Std. Deviation |
|---|---|---|
| Standard of Service | 64 | 3.73±0.65 |
| Choice & Consultation | 64 | 3.72±0.64 |
| Courtesy & Consideration | 64 | 3.70±0.57 |
| Openness & Transparency | 64 | 3.60±0.63 |
| Entrance & Information | 64 | 4.26±0.47 |
| Value for Money | 64 | 4.02±0.82 |

## 4.2.2 Comparative Analysis

E-governance initiatives were analyzed in terms of four different regions of e-governments in DESC like Dhaka, Shariatpur, Mymensingh and Madaripur. The study was taken into consideration only one indicator to measure the levels of e-governance that was e-service delivery. In this step, the total grading scores of all indicators of e-governance was calculated by the total score obtained from all indicators divided by the maximum total score for all data samples and multiplied by 100.

**Table 4.3** Levels of e-government by the different categories of e-service centres

| E-Governance Indicators | DHK[1] | MYM[2] | SHA[3] | MAD[4] | TOTAL |
|---|---|---|---|---|---|
| Standard of Service | 75.63% | 73.75% | 76.88% | 72.50% | 74.69% |
| Choice & Consultation | 73.13% | 71.25% | 78.13% | 75.00% | 74.38% |
| Courtesy & Consideration | 71.25% | 73.75% | 77.50% | 73.13% | 73.91% |
| Openness & Transparency | 72.50% | 71.88% | 73.75% | 70.00% | 72.03% |
| Entrance & Information | 83.75% | 85.00% | 86.25% | 85.63% | 85.16% |
| Value for Money | 78.13% | 82.50% | 78.75% | 81.88% | 80.31% |

[1]Dhaka, [2]Mymensingh, [3]Shariatpur, [4]Madaripur

The above table (Table 4.3) showed the level of effectiveness of e-government service delivery by the four DESCs. All cases of e-governance indicators indicated the satisfactory level of effectiveness but especially the entrance and information (85.16%) attribute showed the very good level of effectiveness as a whole. However, a mixed level of effectiveness was shown in four different service centres. Shariatpur (Category B) District showed the relatively very good level of effectiveness compare to other categories in all attributes of e-governance except the value for money. In case of value for money Mymensingh (Category A) District showed very good level of effectiveness which scored 82.50%.

Kalsi *et al.* (2009) found e-government has shown improvements over the previous year. Thus, leading governments are emphasizing the need for their e-government programs to deliver an earlier return on their investment, through greater service effectiveness for their customers or increased internal efficiency. The results of current research showed the similar pattern of improvements in satisfaction level e-service delivery.

### 4.2.3 Gap Analysis

The contour (Figure 4.6) showed the efficacy of each indicator of e-governance service and its perception between the service providers and receivers. The figure demonstrated the gaps between the service provider and service receiver perception in all cases like standard of service, choice & consultation, courtesy & consideration, openness & transparency, entrance & information as well as value for money. The citizen acuity about the openness and transparency of e-service delivery 67.19% was not as much of service provider insight, 76.88%. Case of courtesy and consideration also showed the similar trend of citizen perception (71.56%) as well as the service provider (76.25%) sensitivity.
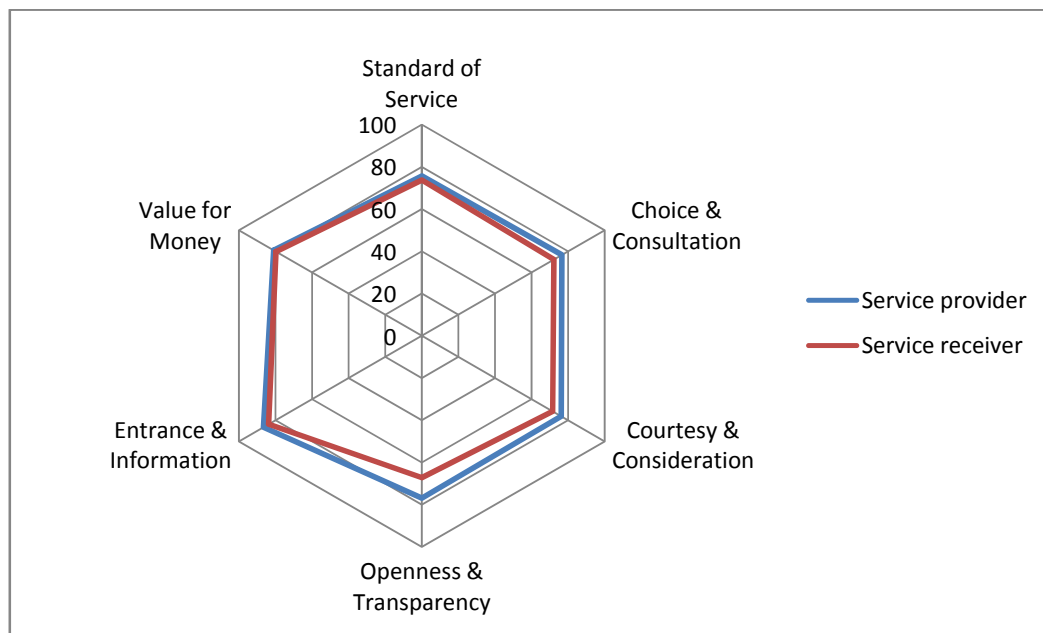


**Figure 4.6** Gaps in e-governance indicators between service providers and receivers

The results from the figure 4.6 have been desired to minimize the gap between service providers and receivers in case of openness and transparency, courtesy and consideration as well as choice and consultation also. In addition, all attributes of e-governance required further improvement.

## 4.2.4 Pearson Correlation

The Pearson Correlation was run to find out the relationship among the variables of e-governance service with the citizen satisfaction. All variables of e-governance have shown significant relation with significant level of satisfaction (Table 4.4). The correlation results suggested that variables were explained with high correlation coefficient.

**Table 4.4** Correlation among the variables of e-governance with satisfaction level

|  | SS | CC | CCO | OT | EI | VM | SATIS |
|---|---|---|---|---|---|---|---|
| Standard of Service | 1 |  |  |  |  |  |  |
| Choice & Consultation | .390(**) | 1 |  |  |  |  |  |
| Courtesy & Consideration | .676(**) | .364(**) | 1 |  |  |  |  |
| Openness & Transparency | .514(**) | .345(**) | .381(**) | 1 |  |  |  |
| Entrance & Information | .521(**) | .312(*) | .535(**) | .533(**) | 1 |  |  |
| Value for Money | .613(**) | .085 | .478(**) | .565(**) | .492(**) | 1 |  |
| SATISFACTION LEVEL | .454(**) | .276(*) | .512(**) | .355(**) | .525(**) | .421(**) | 1 |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

## 4.2.5 Regression Coefficients

The regression coefficients (Table 4.5) revealed that citizen satisfaction was highly positive and significant relationship with entrance & transparency and it explained highest 29.3% of total variance. Similarly, courtesy & consideration and value for money showed the positive relation with satisfaction level. In contrast, openness & transparency showed the negative relation with citizen satisfaction. The next figure (Figure 4.7) represented the regression line which drawn by the variables of e-governance and satisfaction level.

**Table 4.5** Coefficient [(a)] results of e-governance variables on citizen satisfaction

| Model |  | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
|  |  | B | Std. Error | Beta |  |  |
| 1 | (Constant) | 1.963 | .340 |  | 5.770 | .000 |
|  | Standard of Service | .011 | .085 | .022 | .128 | .899 |
|  | Choice & Consultation | .041 | .065 | .079 | .635 | .528 |
|  | Courtesy & Consideration | .145 | .089 | .247 | 1.633 | .108 |
|  | Openness & Transparency | -.009 | .076 | -.018 | -.124 | .902 |
|  | Entrance & Information | .206 | .098 | .293 | 2.099 | .040 |
|  | Value for Money | .060 | .062 | .148 | .965 | .339 |

a Dependent Variable: SATISFACTION
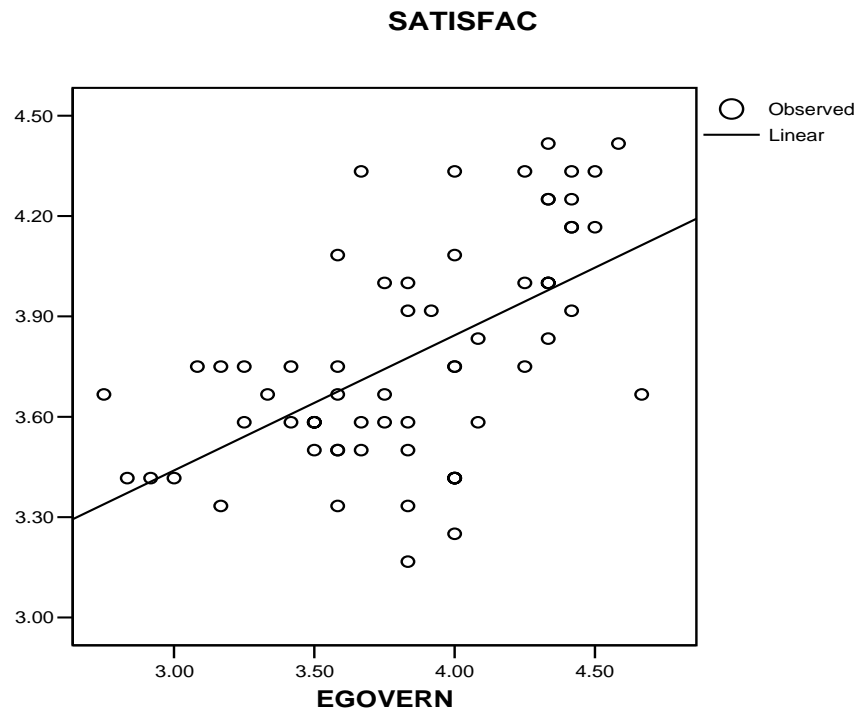
**SATISFAC**



**Figure 4.7** Regression line for e-governance with level of satisfaction

## 4.3 Satisfaction Level: Findings and Analysis

Level of satisfaction measured on six indicators like attenuation of corruption, intensity of clarity, efficiency of service, extent of accessibility, level of convenience and altitude of interaction. The study conducted the comparative analysis as well as the gaps analysis.

## 4.3.1 Descriptive Statistics

The subsequent table represented the mean value and standard deviation for the attributes of the level of satisfaction of quality of e-service delivery (Table 4.6, Appendix D).

**Table 4.6** Descriptive statistics for level of satisfaction delivery by DESC

| Variables | N | Mean± Std. Deviation |
|---|---|---|
| Attenuation of Corruption | 64 | 3.87±0.51 |
| Intensity of Transparency | 64 | 3.69±0.55 |
| Efficiency of Service | 64 | 3.82±0.44 |
| Level of Convenience | 64 | 3.80±0.61 |
| Extent of Accessibility | 64 | 4.09±0.48 |
| Altitude of Interaction | 64 | 3.39±0.48 |

The highest mean value of the measured item was 4.09 score with 0.48 standard deviation for 'extent of accessibility' except it all aspects has shown the mean values lower than 4. The results of satisfaction suggested that the e-service delivery by the DESCs failed to give highest level of satisfaction (5).

### 4.3.2 Comparative Analysis

In this research, the comparative analysis was done for the level of satisfaction among the service providers as well as the citizens which illustrated in Table 4.7. The table revealed that all attributes showed the good level of satisfaction (above 70%) except the altitude of interaction which scored 67.81% while the extent of accessibility scored highest (81.88%).

**Table 4.7** Comparative analysis of the satisfaction level of e-service centres

| Satisfaction Level Indicators | DHK[1] | MYM[2] | SHA[3] | MAD[4] | TOTAL |
|---|---|---|---|---|---|
| Attenuation of Corruption | 74.38% | 74.38% | 80.63% | 75.00% | 76.09% |
| Intensity of Clarity | 71.25% | 75.63% | 73.75% | 74.38% | 73.75% |
| Efficiency of Service | 75.00% | 75.00% | 80.63% | 75.00% | 76.41% |
| Level of Convenience | 72.50% | 76.88% | 77.50% | 77.50% | 76.09% |
| Extent of Accessibility | 78.75% | 80.00% | 83.75% | 85.00% | 81.88% |
| Altitude of Interaction | 64.38% | 69.38% | 69.38% | 68.13% | 67.81% |

[1]Dhaka, [2]Mymensingh, [3]Shariatpur, [4]Madaripur

### 4.3.3 Gap Analysis

The customer satisfaction analysis exposed a gap between the perception of service providers as well as service providers about the level of satisfaction which illustrated in Figure 4.8. The study found that extent of accessibility showed the highest level of satisfaction average scored 81.88%. In addition, the satisfaction level of service providers showed the higher than the service receivers' level.

Previous studies have categorized public service delivery in three groups: publishing, interacting, and transacting (Kumar *et al.* 2007). Main benefits of e-government as identified by Ndou (2004) which are cost reduction and efficiency gains, quality of service delivery to customers, transparency, anticorruption, accountability, increase the capacity of government, network and community creation and improve the quality of decision making. In the case of accessibility both the analysis was shown the similar stand of satisfaction.
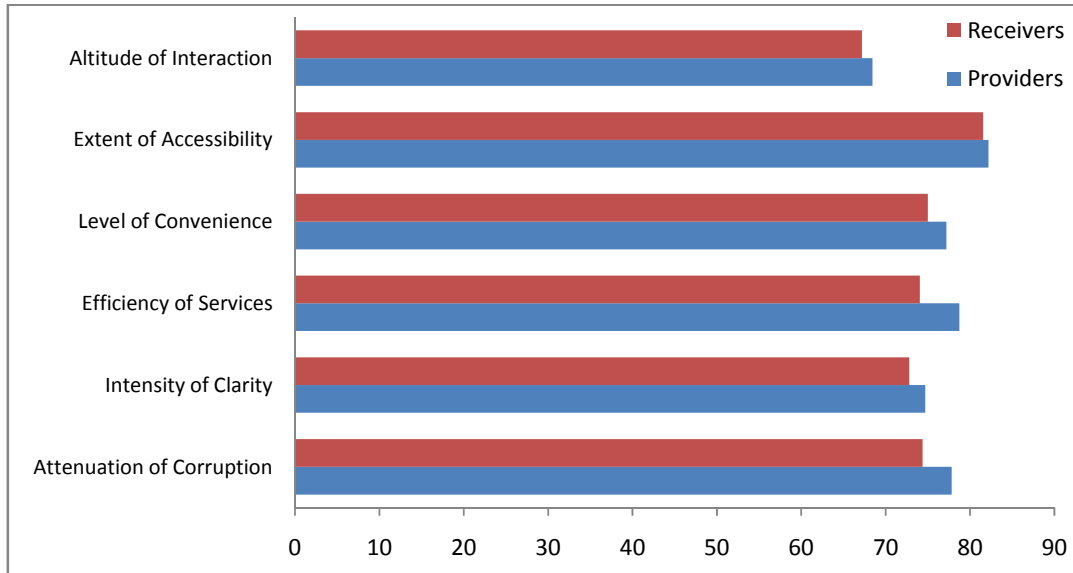
**Figure 4.8** Service providers and receivers perception about the level of satisfaction

### 4.3.4 Pearson Correlation

The Pearson Correlation was considered to find out the relationship among the variables of satisfaction level with the good governance. All variables of citizen satisfaction have shown significant relation with good governance (Table 4.8). The correlation results suggested that variables were explained with high correlation coefficient except the extent of accessibility.

**Table 4.8** Correlation among the variables of satisfaction with good governance

|  | AC | IC | ES | LC | EA | AI | GOOD |
|---|---|---|---|---|---|---|---|
| Attenuation of Corruption | 1 | | | | | | |
| Intensity of Clarity | -.009 | 1 | | | | | |
| Efficiency of Service | .360(**) | .266(*) | 1 | | | | |
| Level of Convenience | .309(*) | .240 | .175 | 1 | | | |
| Extent of Accessibility | .261(*) | .112 | .135 | .609(**) | 1 | | |
| Altitude of Interaction | .180 | .523(**) | .255(*) | .614(**) | .371(**) | 1 | |
| GOOD GOVERNANCE | .329(**) | .485(**) | .447(**) | .438(**) | .243 | .542(**) | 1 |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

### 4.3.5 Regression Coefficients

The regression coefficients (Table 4.9) revealed that good governance was highly positive and significant relationship (0.05 levels) with intensity of clarity and efficiency of service which explained 27.3% and 23.4% of total variance. Similarly, altitude of interaction, level of

convenience and attenuation of corruption showed the positive relation with good governance. In contrast, extent of accessibility showed the negative relation with good governance. The next figure (Figure 4.9) represented the regression line which drawn by the variables of citizen satisfaction and good governance.

**Table 4.9** Coefficient [(a)] results of satisfaction variables on good governance

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.099 | .270 | | 7.762 | .000 |
| | Attenuation of Corruption | .072 | .047 | .167 | 1.535 | .130 |
| | Intensity of Clarity | .110 | .047 | .273 | 2.338 | .023 |
| | Efficiency of Service | .116 | .053 | .234 | 2.171 | .034 |
| | Level of Convenience | .064 | .053 | .175 | 1.210 | .231 |
| | Extent of Accessibility | -.024 | .056 | -.052 | -.426 | .672 |
| | Altitude of Interaction | .102 | .064 | .221 | 1.582 | .119 |

a Dependent Variable: GOOD
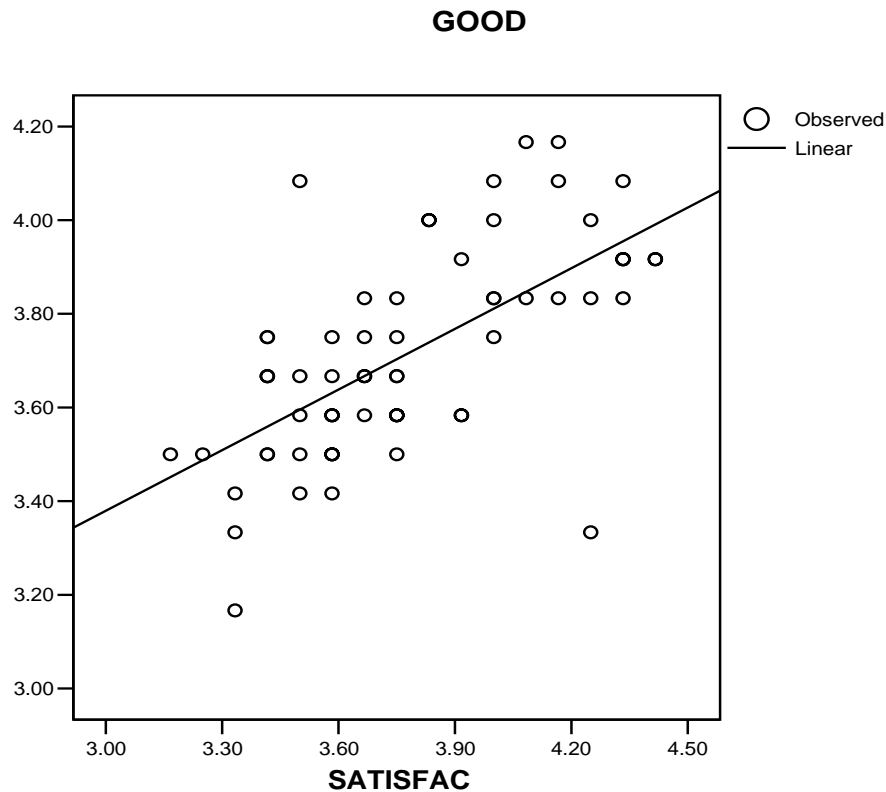


**Figure 4.9** Regression line for level of satisfaction and good governance

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## 4.4 Good Governance: Findings and Analysis

E-government enables better outcomes, higher quality services and greater engagement with citizens (Kalsi *et al.* 2009). Kettani (2009) identified eight features like participation, rule of law, effectiveness and efficiency, equitable and inclusiveness, responsiveness, transparency, accountability and consensus orientation. The good governance effectiveness was measured on accountability, transparency, effectiveness, responsiveness, rule of law and participation.

### 4.4.1 Descriptive Statistics

The consequent table represented the mean value and standard deviation for the attributes of good governance over the e-service delivery (Table 4.10). The highest mean value of the measured item was 4.04 score with 0.47 standard deviation for 'effectiveness' except it all aspects has shown the mean values substandard than 4 (good). The descriptive statistics for the attributes of good governance guided that the moderate level of good governance.

**Table 4.10** Descriptive statistics for the attributes of good governance

| Variables | N | Mean± Std. Deviation |
|---|---|---|
| Accountability | 64 | 3.81±0.40 |
| Transparency | 64 | 3.70±0.44 |
| Effectiveness | 64 | 4.04±0.47 |
| Responsiveness | 64 | 3.65±0.48 |
| Rule of Law | 64 | 3.80±0.51 |
| Participation | 64 | 3.27±0.48 |

### 4.4.2 Comparative Analysis

In this step, the comparative analysis was conducted of the obtained results from the first analysis of good governance in each DESC of four districts. The obtained scores in all four districts had been compiled in a single table and provide a comparative look at the improvement level in each form of e-government then drawn a figure (Figure 4.10). The figure showed a comparative look of the each indicator of good governance by all four types of districts e-governance. The results reveal that the accountability enhanced maximum in Shariatpur (77.50%) and minimum in Dhaka (75.63%) district which demonstrated a good level of enhancement. Transparency enhanced range from 73.75% to 75.63%, which demonstrated a good level of enhancement. Similarly, the effectiveness in Shariatpur enhanced 83.13% and 80.63% in Dhaka and Madaripur, which also demonstrated a good level of enhancement.
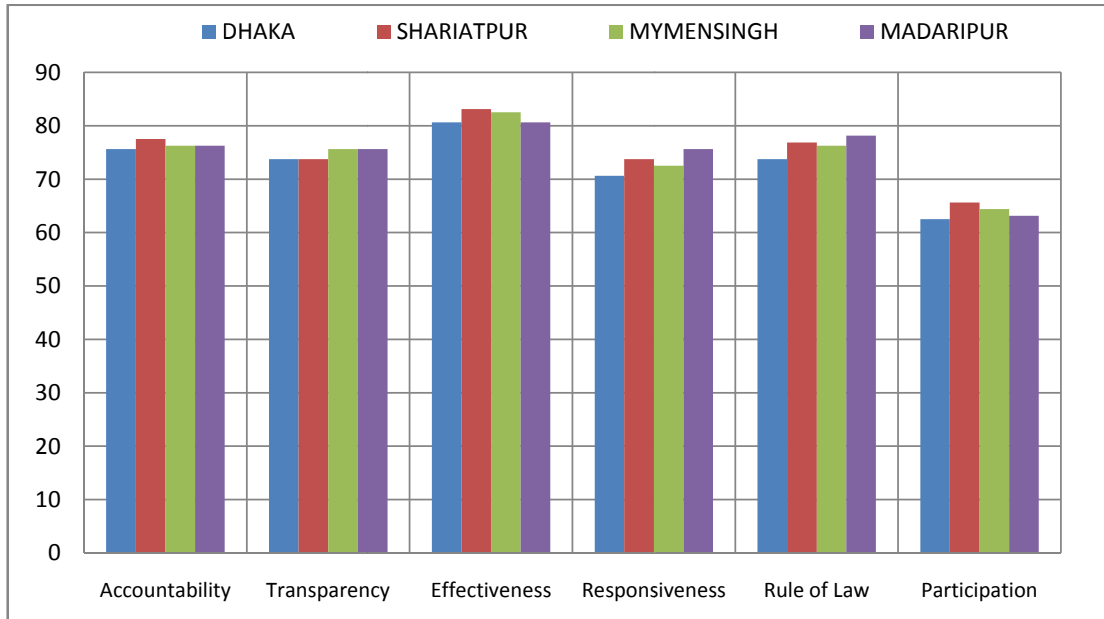
**Figure 4.10:** Comparative analysis of good governance through e-service delivery (%)

### 4.4.3 Level of Enhancement

The study also analyzed the effectiveness of good governance for e-government. In this pace of data analysis, the total grading scores of all indictors of good governance was determined. The graph (Figure 4.11) displayed the total effectiveness of each indicator of good governance.



**Figure 4.11** Level of enhancement of good governance indicators

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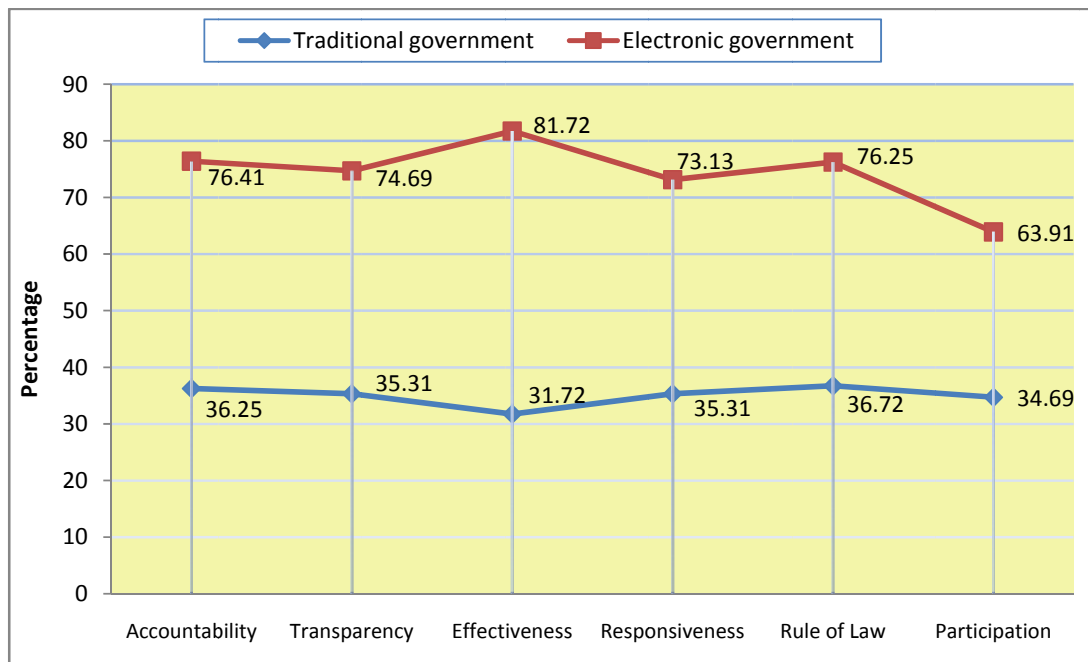
In every aspects of good governance, the level of effectiveness was raised in e-government era compare to traditional government instance. But, effectiveness showed the high level of advancement compare to other all attributes of the good governance. Even if the highest level of good governance attributes was the effectiveness which scored 81.72%.

**Table 4.11** Level of enhancement of good governance indicators

| Good Governance Indicators | Enhancement Level | Level of Effectiveness |
|---|---|---|
| Accountability | 40.16% | Poor |
| Transparency | 39.38% | Poor |
| Effectiveness | 50.00% | Fair |
| Responsiveness | 37.81% | Poor |
| Rule of Law | 39.53% | Poor |
| Participation | 29.22% | Very poor |

The on top of stand (Table 4.11) revealed the enhancement level and effectiveness of good governance indicators in Bangladesh after e-governance initiatives compare to traditional government. The results illustrated in table that the effectiveness has enhanced 50.00%, which demonstrated a fair level of enhancement towards good governance where can do much better. Moreover, the accountability has enhanced 40.16%, transparency has enhanced 39.38%, responsiveness has enhanced 37.81%, and rule of law has enhanced 39.53% which demonstrated a poor level of enhancement. However, the participation enhanced only 29.22% which demonstrated very poor level of enhancement.

Heeks (2001) studied the effect of new information and communication technologies and how it can make a significant contribution to the achievement of good governance goals. Pitman (2006) claimed that e-government is the way for governments to realized improved efficiency and function. The current findings of the research also pointed out that e-government initiative like DESC had a insignificant improvement in good governance in the case of service delivery required more commitment.

### 4.4.4 Gap Analysis

The contour (Figure 4.12) showed the efficacy of each indicator of good governance and its perception among the service providers and receivers. The figure demonstrated a remarkable gap between the provider and receiver perception in case of transparency and effectiveness

but accountability, responsiveness, rule of law and participation did not shown. Citizen perception about the transparency of good governance through e-service was 73.13% less than service provider view, 76.25%. Case of effectiveness also showed a gap between the perceptions of citizens (80.63%) and the service providers (82.81%).
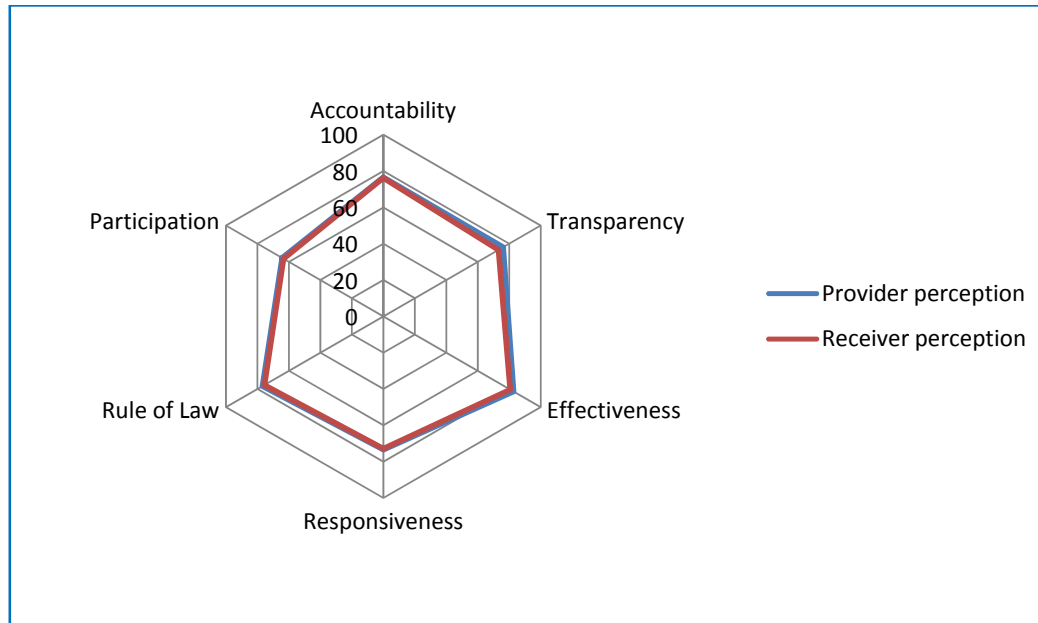


**Figure 4.12** Service providers and receivers perception on good governance efficacy

### 4.4.5 Pearson Correlation

The Pearson Correlation was considered to find out the relationship among the variables of e-governance with the good governance. All variables of e-governance were shown significant relation with good governance (Table 4.12). The correlation results suggested that variables were explained with high correlation coefficient except the choice & consultation and openness & transparency.

**Table 4.12** Correlation among the variables of e-governance with good governance

|  | SS | CC | CCO | OT | EI | VM | GOOD |
|---|---|---|---|---|---|---|---|
| Standard of Service | 1 |  |  |  |  |  |  |
| Choice & Consultation | .390(**) | 1 |  |  |  |  |  |
| Courtesy & Consideration | .676(**) | .364(**) | 1 |  |  |  |  |
| Openness & Transparency | .514(**) | .345(**) | .381(**) | 1 |  |  |  |
| Entrance & Information | .521(**) | .312(*) | .535(**) | .533(**) | 1 |  |  |
| Value for Money | .613(**) | .085 | .478(**) | .565(**) | .492(**) | 1 |  |
| GOOD GOVERNANCE | .299(*) | .219 | .422(**) | .166 | .379(**) | .348(**) | 1 |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

## 4.4.6 Regression Coefficients

Table 4.13 revealed the regression coefficients for good governance was highly positive with value for money, courtesy & consideration, entrance & information and choice & consultation which explained 29.2%, 28.4%, 21.7% and 14.8% of total variance respectively. On the contrary, standard of service and openness & transparency showed the negative relation with good governance. The next figure (Figure 4.13) represented the regression line which drawn by the variables of e-governance and good governance.

**Table 4.13** Coefficient [(a)] results of e-governance variables on good governance

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.793 | .246 | | 11.332 | .000 |
| | Standard of Service | -.047 | .062 | -.139 | -.761 | .450 |
| | Choice & Consultation | .052 | .047 | .148 | 1.096 | .278 |
| | Courtesy & Consideration | .111 | .064 | .284 | 1.730 | .089 |
| | Openness & Transparency | -.072 | .055 | -.203 | -1.306 | .197 |
| | Entrance & Information | .102 | .071 | .217 | 1.436 | .156 |
| | Value for Money | .079 | .045 | .292 | 1.756 | .084 |

a Dependent Variable: GOOD
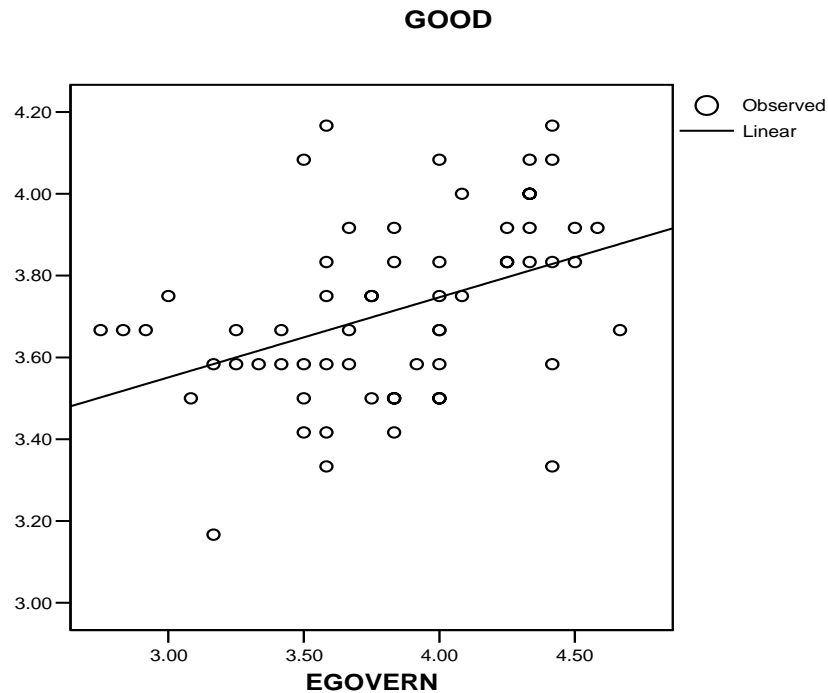
**GOOD**



**Figure 4.13** Regression line for e-governance and good governance

## 4.5 Key Findings: Analysis and Discussion

The next discussion highlights the key findings of the four based on the quantitative survey results. The key findings and statements were found after the data analysis of e-governance, citizen satisfaction and good governance which presented under the sub-heads naming reliability test, correlation analysis and hypothesis validation. Discussion on the basis of research objectives was done afterward.

### 4.5.1 Reliability Statistics

The value of Cronbach's alpha for the major variables were reported in the table (Table 4.14, Appendix F). The Cronbach alpha coefficient for each items were above 0.7 or near to. These values were accepted and standard which satisfied the requirement (Hair *et al.* 2006). The current study validated very good internal consistency of variables.

**Table 4.14** Reliability on independent, intermittent and dependent variables

| Major Variables | No. of Items | Cronbach's Alpha |
|---|---|---|
| E-governance | 12 | 0.864 |
| Satisfaction level | 12 | 0.787 |
| Good governance | 12 | 0.667 |

### 4.5.2 Correlation Analysis

The Pearson Correlation was conducted to find out the relationship among all variables like e-governance, citizen satisfaction and good governance and to determine the degree of their correlation. The results of Pearson Correlation endow with an understanding the direct relationship among the key variables (Table 4.15, Appendix E). According to the Pallant (2001), the correlation among the electronic governance, satisfaction level and good governance were significant (less than 0.70). The correlation values were 0.645, 0.567 and 0.410 where most significant correlation value showed for e-governance with good governance ($r = 0.410$, $n = 64$, $p \leq 0.01$).

**Table 4.15** Correlation matrix among independent and dependent variable

| Major Variables | EG | SL | GG |
|---|---|---|---|
| E-Governance | 1 | | |
| Satisfaction Level | .567[**] | 1 | |
| Good Governance | .410[**] | .645[**] | 1 |

[**] Correlation is significant at the 0.01 level (2-tailed)

E-government was regarded as powerful tool in hands of government for reducing cost, enhancing revenues, improving delivery of public services (Saeed, 2012). Field *et al.* (2004) argued that e-service can play a critical role in improving the services quality delivered to its customers as it can achieve survival, increase satisfaction and trust and then generate the competitive success for organizations. Harris (2000) purported to ensure the efficiency, accountability and transparency in the functioning of government and show the way of good governance. The current research appropriated the above research findings.

### 4.5.3 Hypotheses Results

**H-1:** *E-service centres is positively related with effective e-governance service*

This hypothesis was developed to evaluate whether e-service centres is positively related to e-governance service quality and service improvement. The table 5.16 represents the mean values and results of chi-square.

**Table 4.16** Results of Mean values and Chi-square test

| Variables | Mean ± SD | Chi-Square | df | Sig. |
|---|---|---|---|---|
| Standard of Service | 3.73±0.65 | 18.500 | 5 | .002 |
| Choice & Consultation | 3.72±0.64 | 49.750 | 6 | .000 |
| Courtesy & Consideration | 3.70±0.57 | 29.375 | 5 | .000 |
| Openness & Transparency | 3.60±0.63 | 33.500 | 5 | .000 |
| Entrance & Information | 4.26±0.47 | 30.531 | 4 | .000 |
| Value for Money | 4.02±0.82 | 33.125 | 6 | .000 |

Hypothesis accepted at <0.05

The mean values (3.60 to 4.26) show that e-service centres are somewhat positive to effective e-governance service delivery. The chi-square test of independence indicates that the variables (benefits from e-service centres) are dependent on each other in the case of Bangladesh (chi-square = 38.781 with p value 0.015 < 0.05). Therefore, this result supports hypothesis 1 and it can be said that e-service centres is positively related to the effective e-governance services. The findings from the aforementioned literature Pathak *et al.* (2008) found that e-governance enabled to streamline bureaucratic procedures to make operations more efficient and many research focused on use of ICTs for facilitating service delivery. The findings of the study implied that the more the progress is made towards attainment of e-governance goals, the more are the positive impacts in areas affected by the introduction of e-government.

**H-2:** *E-governance services has a positive impact on enhancing the citizen satisfaction*

This hypothesis was intended to identify differences between the mean values, in this case e-governance service and level of satisfaction was under consideration. The table 4.17 represents the results of paired sample t-test while the table 4.18 illustrates the regression model summary with analysis of variance (ANOVA) for e-governance with satisfaction. The t-test results showed e-governance has a positive (0.567) and significant relationship with citizen satisfaction (P value 0.000 < 0.05).

**Table 4.17** Results of Paired Sample T-Test Statistics

|  |  | N | Mean | Correlation | Sig. |
|---|---|---|---|---|---|
| Pair 1 | EGOVERN | 64 | 3.8359 | .567 | .000 |
|  | SATISFAC | 64 | 3.7773 | | |

It showed that the e-governance services have a highly positive (0.607) and significant (with p value 0.000 < 0.05) impact on level of citizen satisfaction. Therefore, this result supports hypothesis 2 and it can be said that the e-governance services has a positive impact on enhancing the citizen satisfaction.

**Table 4.18** Regression Model Summary and Analysis of Variance

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | .607(a) | .369 | .302 | .27711 | 5.544 | .000(a) |

a  Predictors: (Constant), EGVM, EGCC, EGEI, EGCCO, EGOT, EGSS
b  Dependent Variable: SATISFACTION

Zeithaml *et al.* (2002) said that customer satisfaction is the difference between perception of public service experience and expectation of public service. While Field *et al.* (2004) argued that e-service can play a critical role in improving the services quality delivered to its customers as it can achieve survival, increase satisfaction and trust and then generate the competitive success for organizations. All the research validate the results of current study.

**H-3:** *E-governance is positively correlated to good governance promises*

This hypothesis was developed to assess whether good governance is positively related to the outcomes of the e-governance services. The table 4.19 represents the results of paired sample t-test while the table 4.20 illustrates the regression model summary with analysis of variance

(ANOVA) for e-governance for good governance. The t-test results showed e-governance has a positive (0.410) and significant relationship with good governance (P value 0.001 < 0.05).

**Table 4.19** Results of Paired Sample T-Test Statistics

|  |  | N | Mean | Correlation | Sig. |
|---|---|---|---|---|---|
| Pair 1 | EGOVERN | 64 | 3.8359 | .410 | .001 |
|  | GOODGOV | 64 | 3.7148 |  |  |

It showed (Table 4.20) that the e-governance service is positively correlated (0.511) and significant (with p value 0.007 < 0.05) promises of good governance attributes. Therefore, this result supports hypothesis 3 and it can be said that the e-governance is positively correlated to good governance promises.

**Table 4.20** Regression Model Summary and Analysis of Variance

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | .511(a) | .261 | .183 | .20076 | 3.353 | .007(a) |

a  Predictors: (Constant), EGVM, EGCC, EGEI, EGCCO, EGOT, EGSS
b  Dependent Variable: GOODGOVERN

E-government promises the change from the traditional bureaucratic paradigm-which prioritizes standardization, departmentalization and operational cost-efficiency to a new paradigm emphasizing coordinated network building, external collaboration and citizen service (Ho, 2002). Harris (2000) purported to ensure the efficiency, accountability and transparency in the functioning of government and show the way of good governance. The current study showed the similar result with above research findings.

## 4.6 E-Governance: Challenges and Propositions

The subsequently discussion highlights the findings from the qualitative results of informal interviews. Bangladesh has made a significant development in all indicators of e-readiness index (Islam and Khair, 2012) in spite of some difficulties has faced to implement the e-governance initiatives by the government of Bangladesh. In this research, the challenges and propositions for e-governance study was done by the informal interviews. Two questions (Appendix B) were asked with seeking two more answers for each.

**4.6.1 Major Challenges**

The study attempted to know the challenges of e-governance in Bangladesh through the interviewing of service providers. The service providers were government officials and staffs worked in DESC. The research was conducted total 32 service providers under the interviewing of the study.
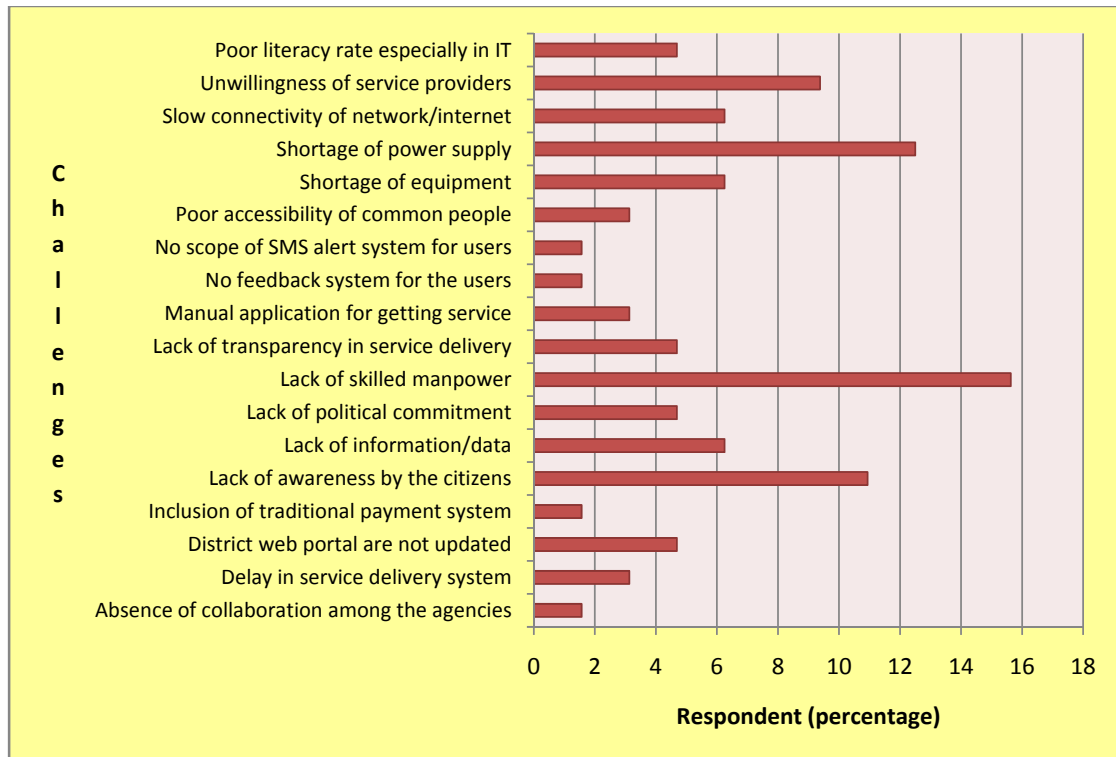


**Figure 4.14:** Challenges of electronic governance in Bangladesh

The stature illustrated in above figure (Figure 4.14, Appendix G) a huge number of challenges of e-governance in Bangladesh where lack of skilled manpower (15.63%), shortage of power supply (12.50%), lack of awareness (10.94%) and unwillingness of service providers (9.38%) claimed as key disputes.

Jaeger (2003) described several broad areas in which e-government faces obstacles. These included security, privacy, homeland security, digital divide, economic disparities, education, accessibility, prioritization, citizen awareness and confidence. Srivastava and Sharma (2010) identified geographical, social and economical disparities among citizens were the biggest barriers for e-governance. Illiteracy, lack of infrastructure, security and privacy of personal and financial data were other constraints that hamper e-governance efforts.

Bwalya (2009) faced some challenges on e-government like low level of internet penetration, lack of budget, lack of citizen awareness, limited IT skill and training etc. Athmay (2012) also listed some restraining forces of e-governance readiness like lack of institutional readiness, lack of political will, lack of participation and so on.

Hossan et al. (n.d.) stated, the most critical factors contribute to the failure of e-government implementation in Bangladesh are lack of internal political desire, inadequate technological infrastructure, lack of overall vision or strategy and dominance of politics or self interest. The present study stanched that the lack of skilled manpower was the main challenge but the political commitment one of the major cause not to proper implementation of e-service.

### 4.6.2 Plausible Propositions

Besides the challenges of e-governance, the study also scrutinized some propositions from the interviewers who were pub officials and staffs played their roles as service providers. The research was conducted total 32 service providers under the interviewing in order to find out the propositions for efficient e-governance. The standing illustrated (Figure 4.15, Appendix G) a good number of suggestions for efficient e-governance in Bangladesh.
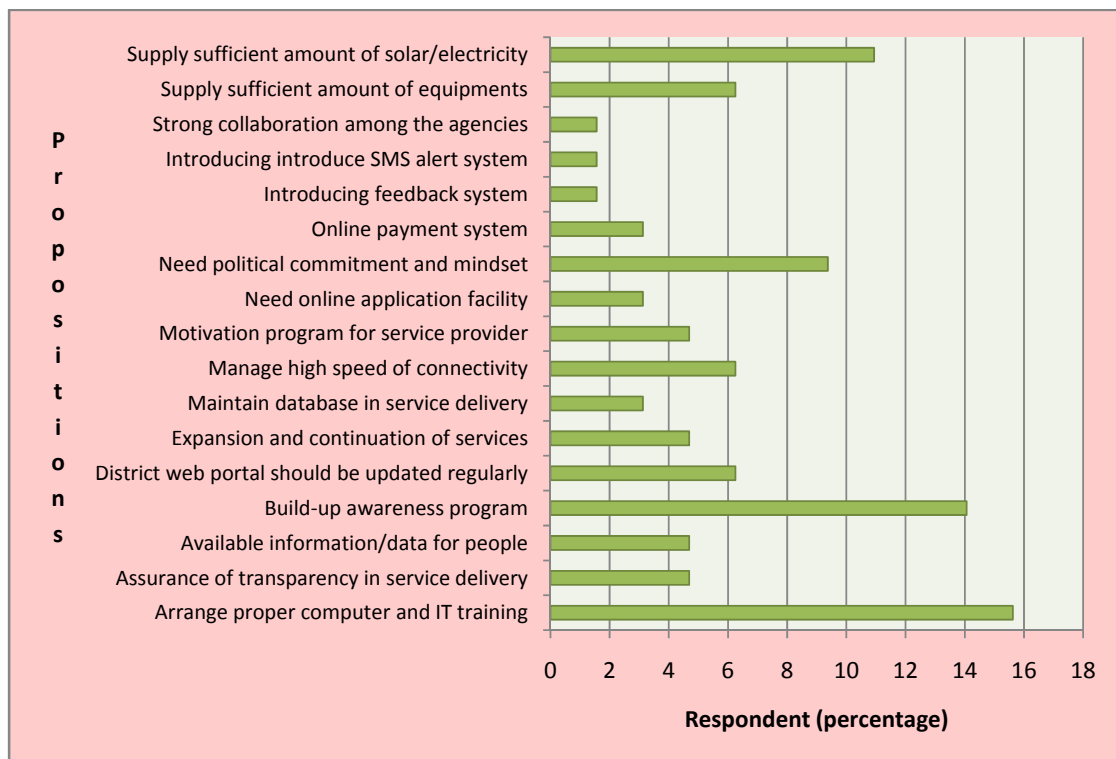


**Figure 4.15:** Propositions for electronic governance in Bangladesh

The study summarized a number of propositions like arrange proper computer and IT training (15.63%), build-up awareness program (14.06%), supply sufficient amount of power (10.94%) and need political commitment and mindset of service providers (9.38%).

Gronlund *et al.* (2005) pointed out that for e-government projects to be effective, focus must be placed on social and economic context. Athmay (2012) also pointed some driving forces for e-governance improvement like trends on on-line business, internet facility, and better service delivery and so on.

According to Hossan, *et al.* (n.d.), the most important factors for successful implementation of e-government in Bangladesh are internal political desire, technological infrastructure, overall vision or strategy, change management and competencies among the officials. The current research pointed out that ICT training, awareness build-up among the citizens and also political commitment must need to proper implementation of the e-service delivery schema.

# Chapter 5
# CONCLUSION

5.1 Summary of the Research

5.2 Proposed Framework of E-Governance to G-Governance

5.3 Proposed Model of Public Service Delivery

5.4 Proposed Diagram for E-Governance Implementation

5.5 E-Governance Areas for Further Research

# 5. CONCLUSION

The last chapter of the report is conclusion. It presents the comprehensive summary of the research dissertation, model of public service delivery, model of e-governance for good governance in addition to diagram for e-governance implementation derived from the data analysis. It also presents the summary outcome of hypothesis findings as well as gives a direction for further research.

## 5.1 Summary of the Research

Strategic objective of e-governance is to support and simplify governance for all parties like government, citizens and businesses. The key objective of this study was to explore the relation between e-governance and good governance. With the consequence of the main objective promote three objectives has identified. The study results revealed that the DESC provides public services efficiently, the e-service delivery has positive impacts on citizen satisfaction and the e-governance initiative leads to good governance promises. In the end, the study proved that e-government show the way for good governance. The current research also proved the research hypothesis (Figure 5.1).

**Table 5.1** Summary of the research hypothesis outcomes

| |
|---|
| **Objective 1:** To know the effectiveness of the DESC in public service delivery |
| **Hypothesis 1:** E-service centres is positively related with effective e-governance service |
| **Outcome 1:** Accepted |
| **Objective 2:** To evaluate the impacts of e-services to the citizen satisfaction |
| **Hypothesis 2:** E-governance services has a positive impact on enhancing citizen satisfaction |
| **Outcome 2:** Accepted |
| **Objective 3:** To empathize the e-governance scheme make possible to good governance |
| **Hypothesis 3:** E-governance is positively correlated to good governance promises |
| **Outcome 3:** Accepted |

It can say that e-governance is the key to the good governance for the developing countries like Bangladesh to minimize corruption, provide efficient service, ensure accountability and intensify the transparency through the easy accessibility, greater convenience and altitude of interaction. In this field, the district e-service centres are good initiatives for effective e-governance service delivery but needs further improvement as desire of the citizens.

## 5.2 Proposed Framework of E-Governance to G-Governance

E-governance uses electronic means to support and stimulate good governance. Therefore the objectives of e-governance are similar to the objectives of good governance. E-governance is a channel through which the ruling class interacts with its citizens (e-services), improves public service delivery and processes (e-administration), and builds external interactions (e-society). This creates a win-win relationship where the work of the government is made easier by providing a public service at the disposal of a citizen (Alshehri and Drew, 2010). Information and Communication Technology are important initiators and drivers of change in an organization. The use of ICT creates new possibilities, and ultimately ICT has the potential to reinvent organizations and their services (Leer, 2000).

The current research anticipated a model of e-governance that is assertive to good governance promises (Figure 5.1). This model is formulated based on the e-service delivery through the DESC. The efficiency of e-services is assessed by standard of service, choice & consultation, courtesy & consultation, entrance & information, and value for money which has positive impacts on citizen satisfaction. The level of citizen satisfaction is measured with corruption, clarity, efficiency, convenience and accessibility which have positive relation with good governance promises. On the other hand, the good governance is assessed by accountability, transparency, responsiveness, rule of law, effectiveness and participation.
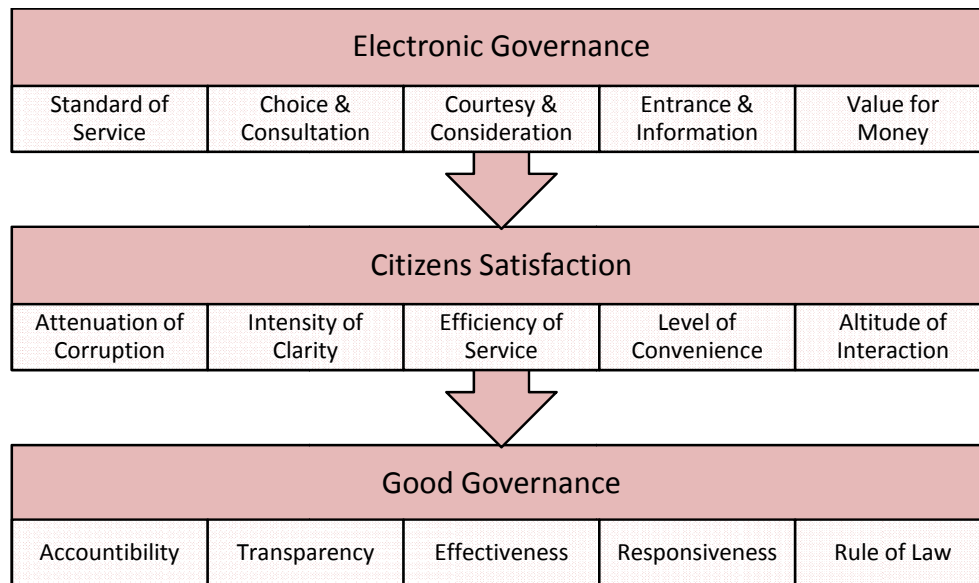


**Figure 5.1** Proposed model of e-governance for good governance

Salam MA (2013), MA Dissertation, MAGD, Institute of Governance Studies, BRAC University, Dhaka

## 5.3 Proposed Model of Public Service Delivery

Proper service delivery is vital for the survival of a modern government. Access to government information by citizens and organizations is therefore a fundamental ingredient in effective government. E-service delivery thus shows a government's willingness to provide services to its citizens in the quickest and best possible way. Traditionally, these services were delivered face to face by visiting a public office. Of course this type of service, which exists in cities, is not available in rural areas where transport is poor, roads are inaccessible, and government departments are scarce.

Salam (2012) argued to ensuring the e-governance principles m-services are imperative as the innovation of process re-engineering and reach to the door of disable people, ethnic community or young people. The study found the females and citizens of countryside less cognizant to getting services from e-service centres. The system needs infrastructure and policy to enable a fluid or portable cooperation and interaction among the government agencies and citizens. The government should pay attention to the new technologies and their impact on organizations, the organizations need give attention to further research on the challenges and opportunities.
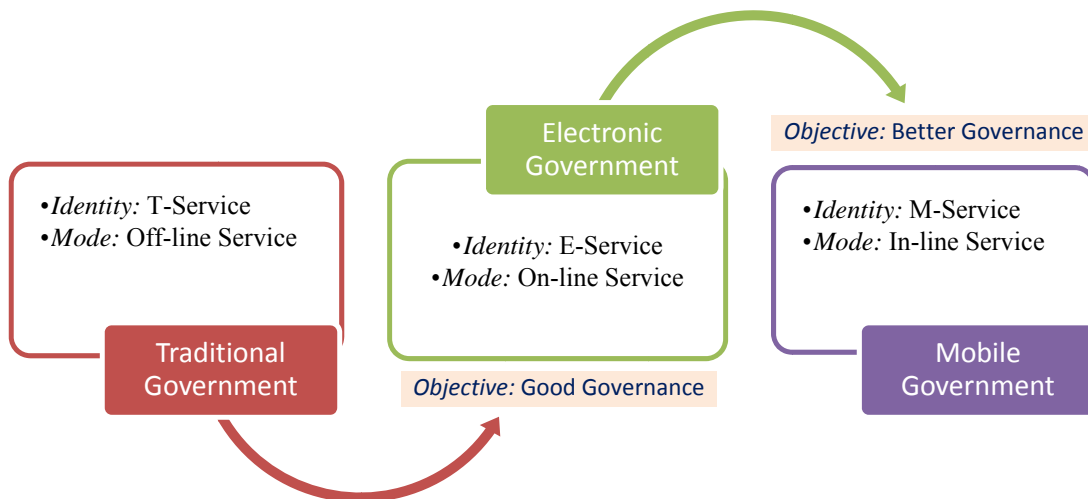


**Figure 5.2** Proposed approaches to public service delivery

The figure (Figure 5.2) shows the approach to public sector service delivery has evolved over time from the traditional model of government dispensing services via traditional modes to an emphasis on e-government (through e-services) for good governance, to m-government (through m-services) for better governance. To being portable, it should think more about the

meaning of mobile technologies, in-line services and interactive governance as reshaping of government itself. Finally, move towards a service paradigm shift from e-government to m-government for better service delivery to the citizens.

## 5.4 Proposed Diagram for E-Governance Implementation

E-governance is the use of modern information and communication technologies such as internet, local area network, wide area network, mobiles, etc., by government to improve effectiveness, efficiency, and service delivery to citizens and promote transparency (Bretschneider *et al.*, 2003). The proposed model (Figure 5.3) has drawn on the basis of service provider perception about the e-governance. It includes the challenges and propositions to proper e-government implementation in Bangladesh.
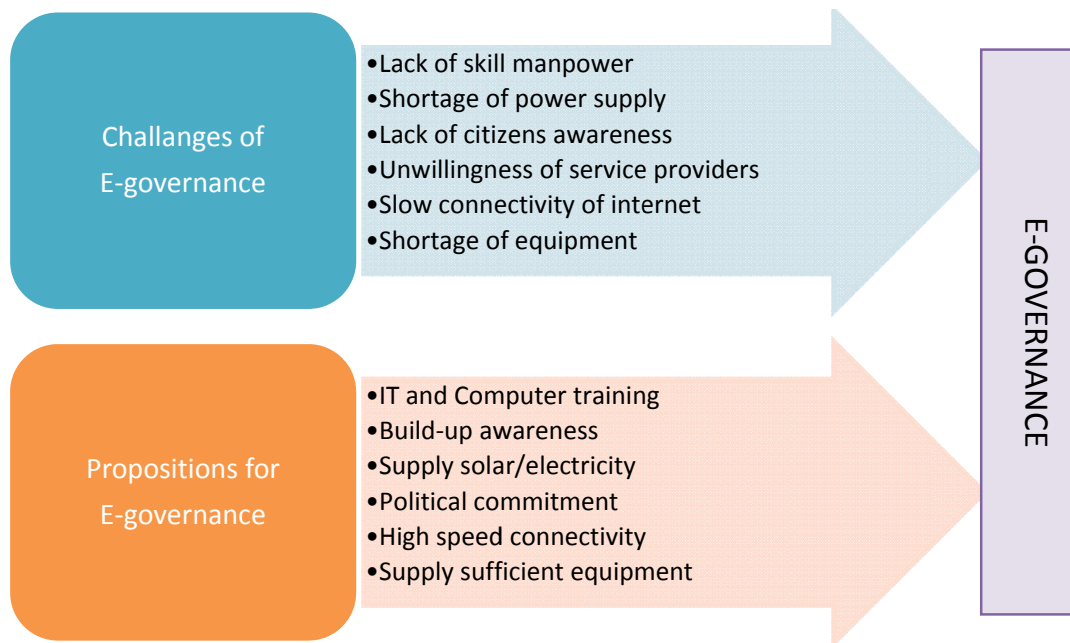


**Figure 5.3** Proposed diagram of e-governance implementation (modified by Athmay, 2012)

The present condition of good governance in Bangladesh is not satisfactory particularly to service delivery. Proper implementation of e-government tools may have the positive role to ensure good governance in public service delivery.

a.  A central body must be institutionalized that can coordinate with ministries and execute the necessary reforms to make achievement of the citizen-centric pillars of e-governance. Thus, the negligence and the failure of the e-governance initiatives can be monitored.

b. Strengthen the regulatory framework by amendment of the ICT Act 2009 with inclusion of adequate data privacy and security provisions and the RTI Act 2009 must be put into action, so that citizens can access information quickly and effectively.

c. Awareness raising and competitive pricing are essential as people need to see a value to these centres in order to use them. Here, electronic and print media can play their roles.

d. Ensure business process-engineering and adequate ICT infrastructure allowing automation to make processes faster and more efficient for citizens. Institutional restructuring, reforms and capacity building also required to provide government services.

e. Establish adequate data privacy and security provisions that ensure the confidentiality of sensitive personal information and prevent unauthorized access to it. In addition, the volume of the e-service must be increased for the citizens.

f. Government e-services are particularly important in rural areas, and the failure to roll out a platform for e-government in rural areas has been identified as a major obstacle to attaining government e-services in the developing world like Bangladesh.

## 5.5 E-Governance Areas for Further Research

The research study has certain limitations that could provide opportunities for further research. The methodology could look to expand by conducting focus groups involving citizen users, apart from administrators and IT managers. In order to evaluate whether this has taken place, the three focus areas of e-governance (e-administration, e-services and e-society) need to be considered. This paper has looked at the role of e-governance initiative like DESC in improving service delivery and the impact that has on customer satisfaction. Further research in e-governance should discover for effective utilization of e-governance toward the searching of better governance.

The changing of governance scenario demands a greater partnership between various major players in the society. Governance should be a collaborative approach and focus should be on results not on process. Professionalism and new ways of thinking are a must for marching towards good governance. The future is poised on how efforts can sustain momentum and meet the load of increasing expectations and demand; how governments are able to learn from each other and leapfrog; how and if the citizens can influence the face of e-governance.

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# APPENDICES

Institute of Governance Studies, BRAC University
**Survey on E-Governance for Good Governance**

(The purpose of this research is to develop a general understanding about e-governance services that leads to ensuring good governance. I, therefore, requesting that you give me some basic information and your opinions by filling in the questionnaire. The questionnaire is anonymous and you are not asked to sign it, though you may do so if you wish.)

**SECTION-I: Personal Details** *[Please fill-up blank spaces]*

1. Name of Respondent: …………………………………………….…….…….. ………...……

2. Age (in years): ……......………………………….....      3. Educational Qualification:…………………………

4. Occupation Status: …….……..……………………….…      5. Gender:…………………………….…………..

6. Residence:..……………………...…………………………      7. Service Status:………………………….…………

**SECTION-II: E-Service Delivery Outputs** *[Please put tick mark (√) on respective boxes]*
[Scale: Very Ineffective (1), Ineffective (2), As Usual (3), Effective (4), Very Effective (5)]

| Indicators of E-Governance | At present | | | | |
|---|---|---|---|---|---|
| **1.  Standard of Service** | | | | | |
| a. What altitude of public services receives as the expectation of citizens? | 1 | 2 | 3 | 4 | 5 |
| b. Are the documents setting out standards as the customers' entitlement? | 1 | 2 | 3 | 4 | 5 |
| **2.  Choice & Consultation** | | | | | |
| a. Have any possibility to choice wherever providing the public services? | 1 | 2 | 3 | 4 | 5 |
| b. Have the opportunity to consultation about the services that are offered? | 1 | 2 | 3 | 4 | 5 |
| **3.  Courtesy & Consideration** | | | | | |
| a. Are the citizens treated with courteousness and good manner by DESC? | 1 | 2 | 3 | 4 | 5 |
| b. Are the citizens taken care of with consideration during providing service? | 1 | 2 | 3 | 4 | 5 |
| **4.  Openness & Transparency** | | | | | |
| a. Is it open to service receivers about the charge for the specific services? | 1 | 2 | 3 | 4 | 5 |
| b. Is it unwraps to the service seekers about the service delivery procedure? | 1 | 2 | 3 | 4 | 5 |
| **5.  Entrance & Information** | | | | | |
| a. Have the easy and equal opportunity to entrance for getting services? | 1 | 2 | 3 | 4 | 5 |
| b. Is the information accurate and latest delivered by the e-service centre? | 1 | 2 | 3 | 4 | 5 |
| **6.  Value for Money** | | | | | |
| a. Is the cost of provided services from e-service centers best possible? | 1 | 2 | 3 | 4 | 5 |
| b. Have the quality of provided service ensured by the e-service centre? | 1 | 2 | 3 | 4 | 5 |

**SECTION-III: Impacts of E-Governance** *[Please put tick mark (√) on respective boxes]*
[Scale: Very Dissatisfied (1), Dissatisfied (2), As Usual (3), Satisfied (4), Very Satisfied (5)]

| Impact Assessment Indicators | At present | | | | |
|---|---|---|---|---|---|
| **1.  Attenuation of Corruption** | | | | | |
| a. What level of middleman interference changed by the DESC? | 1 | 2 | 3 | 4 | 5 |
| b. What extent of corruption has altered with inclusion of DESC? | 1 | 2 | 3 | 4 | 5 |
| **2.   Intensity of Clarity** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| a. What altitude of clarity has tainted through the inclusion of DESC? | 1 | 2 | 3 | 4 | 5 |
| b. What elevation of transparency has ensured through e-service delivery? | 1 | 2 | 3 | 4 | 5 |
| **3. Efficiency of Services** | | | | | |
| a. What level of standard have achieved by citizens through the DESC? | 1 | 2 | 3 | 4 | 5 |
| b. What extent of the citizens' are satisfied on effectiveness of the e-services? | 1 | 2 | 3 | 4 | 5 |
| **4. Level of Convenience** | | | | | |
| a. What extent of apology offer by service provider for delay in delivery? | 1 | 2 | 3 | 4 | 5 |
| b. What level of convenience have intended to the citizens by the DESC? | 1 | 2 | 3 | 4 | 5 |
| **5. Extent of Accessibility** | | | | | |
| a. What extent of accessibility do you have to the e-service centers? | 1 | 2 | 3 | 4 | 5 |
| b. What level of equitable opportunity has guaranteed by DESC? | 1 | 2 | 3 | 4 | 5 |
| **6. Altitude of Interaction** | | | | | |
| a. What altitude of interaction do you have to the e-service centers? | 1 | 2 | 3 | 4 | 5 |
| b. What level of citizen participation has ensured by the DESC? | 1 | 2 | 3 | 4 | 5 |

**SECTION-IV: E-Governance Outcomes** *[Please put tick mark (√) on respective boxes]*
[Scale: Very Poor (1), Poor (2), Moderate (3), Good (4), Very Good (5)]

| Indicators of Good Governance | Traditional | | | | | At present | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **1. Accountability** | | | | | | | | | | |
| a. What extent the e-government makes government answerable to their action and decision towards citizens? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent e-government makes government answerable in their actions and decisions to the stakeholders? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **2. Transparency** | | | | | | | | | | |
| a. What extent the e-government makes government apparent in their actions and decisions towards citizens? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent e-government makes the government accessible information to the citizens/stakeholders? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **3. Effectiveness** | | | | | | | | | | |
| a. What extent the e-government facilitates government in the proper e-service delivery to the citizens? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent e-government streamlines the interaction process between different government organizations? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **4. Responsiveness** | | | | | | | | | | |
| a. What extent the e-government facilitates government in addressing the inquiries by citizens? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent the e-government facilitates government in approaching to their stakeholders in a very well manner? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **5. Rule of Law** | | | | | | | | | | |
| a. What extent the e-government facilitates government in following up rules and regulations in the administrative operations? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent e-government facilitates government following up rules and regulations within legal framework? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| **6. Participation** | | | | | | | | | | |
| a. What extent the e-government facilitate in bringing the participation of citizens in government decision making process? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| b. What extent the e-government facilitates the government to represent the interest of citizens? | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |

Thanks for your kind cooperation……..

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**Signature and Date**

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**Appendix B:** Questionnaire for informal interview on e-governance for good governance

1. What are the factors considered major challenges in achieving the good governance through e-governance by District E-Service Centres of Bangladesh?

2. What are the suggestions you considered for obtaining the objectives of good governance through e-governance by District E-Service Centres of Bangladesh?

**Appendix C:** Descriptive statistics of respondent age, education, occupation, gender, residence and service

### I. Respondent age groups

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | less than 25 | 1 | 1.6 | 1.6 | 1.6 |
| | 25-30 yrs | 13 | 20.3 | 20.3 | 21.9 |
| | 31-35 yrs | 18 | 28.1 | 28.1 | 50.0 |
| | 36-40 yrs | 12 | 18.8 | 18.8 | 68.8 |
| | 41-45 yrs | 7 | 10.9 | 10.9 | 79.7 |
| | 46-50 yrs | 5 | 7.8 | 7.8 | 87.5 |
| | 50+ yrs | 8 | 12.5 | 12.5 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

### II. Respondent educational qualification

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | up to PSC | 11 | 17.2 | 17.2 | 17.2 |
| | JSC | 4 | 6.3 | 6.3 | 23.4 |
| | SSC | 3 | 4.7 | 4.7 | 28.1 |
| | HSC | 6 | 9.4 | 9.4 | 37.5 |
| | Undergraduate | 14 | 21.9 | 21.9 | 59.4 |
| | Postgraduate | 25 | 39.1 | 39.1 | 98.4 |
| | Ph D or equivalent | 1 | 1.6 | 1.6 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

### III. Respondent occupational status

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | govt service | 37 | 57.8 | 57.8 | 57.8 |
| | non-govt service | 4 | 6.3 | 6.3 | 64.1 |
| | teacher | 2 | 3.1 | 3.1 | 67.2 |
| | student | 2 | 3.1 | 3.1 | 70.3 |
| | agriculture | 8 | 12.5 | 12.5 | 82.8 |
| | business | 6 | 9.4 | 9.4 | 92.2 |
| | others | 5 | 7.8 | 7.8 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

**IV. Respondent gender status**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | male | 47 | 73.4 | 73.4 | 73.4 |
| | female | 17 | 26.6 | 26.6 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

**V. Respondent residence/location**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Within the District Headquarters | 54 | 84.4 | 84.4 | 84.4 |
| | Outside of District Headquarters | 10 | 15.6 | 15.6 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

**VI. Respondent service status**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Service provider | 32 | 50.0 | 50.0 | 50.0 |
| | Service receiver | 32 | 50.0 | 50.0 | 100.0 |
| | Total | 64 | 100.0 | 100.0 | |

**Appendix D:** Descriptive statistics of e-governance, citizen satisfaction, good governance variables

| Variables | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Standard of Service | 64 | 2.50 | 5.00 | 3.7344 | .65446 |
| Choice & Consultation | 64 | 2.00 | 5.00 | 3.7188 | .63543 |
| Courtesy & Consideration | 64 | 2.50 | 5.00 | 3.6953 | .56777 |
| Openness & Transparency | 64 | 2.00 | 4.50 | 3.5938 | .62915 |
| Entrance & Information | 64 | 3.00 | 5.00 | 4.2578 | .47134 |
| Value for Money | 64 | 2.00 | 5.00 | 4.0156 | .82119 |
| Attenuation of Corruption | 64 | 3.00 | 5.00 | 3.8672 | .51364 |
| Intensity of Clarity | 64 | 2.50 | 5.00 | 3.6875 | .55277 |
| Efficiency of Service | 64 | 3.00 | 5.00 | 3.8203 | .44869 |
| Level of Convenience | 64 | 2.50 | 5.00 | 3.8047 | .60826 |
| Extent of Accessibility | 64 | 3.00 | 5.00 | 4.0938 | .47871 |
| Altitude of Interaction | 64 | 2.50 | 4.00 | 3.3906 | .48361 |
| Accountability | 64 | 2.50 | 4.50 | 3.8125 | .40336 |
| Transparency | 64 | 2.50 | 5.00 | 3.7031 | .44292 |
| Effectiveness | 64 | 3.00 | 5.00 | 4.0469 | .46903 |
| Responsiveness | 64 | 3.00 | 5.00 | 3.6484 | .47709 |
| Rule of Law | 64 | 3.00 | 4.50 | 3.8047 | .50879 |
| Participation | 64 | 2.00 | 4.00 | 3.2734 | .47917 |

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**Appendix E:** Correlations among electronic governance, citizen satisfaction and good governance

### a. Pearson correlations between e-governance and citizen satisfaction

|  |  | E-Governance | Citizen Satisfaction |
|---|---|---|---|
| E-Governance | Pearson Correlation | 1 | .567(**) |
|  | Sig. (2-tailed) | . | .000 |
|  | N | 64 | 64 |
| Citizen Satisfaction | Pearson Correlation | .567(**) | 1 |
|  | Sig. (2-tailed) | .000 | . |
|  | N | 64 | 64 |

** Correlation is significant at the 0.01 level (2-tailed).

### b. Pearson correlations between citizen satisfaction and good governance

|  |  | Citizen Satisfaction | Good Governance |
|---|---|---|---|
| Citizen Satisfaction | Pearson Correlation | 1 | .645(**) |
|  | Sig. (2-tailed) | . | .000 |
|  | N | 64 | 64 |
| Good Governance | Pearson Correlation | .645(**) | 1 |
|  | Sig. (2-tailed) | .000 | . |
|  | N | 64 | 64 |

** Correlation is significant at the 0.01 level (2-tailed).

### c. Pearson correlations between e-governance and good governance

|  |  | E-Governance | Good Governance |
|---|---|---|---|
| E-Governance | Pearson Correlation | 1 | .410(**) |
|  | Sig. (2-tailed) | . | .001 |
|  | N | 64 | 64 |
| Good Governance | Pearson Correlation | .410(**) | 1 |
|  | Sig. (2-tailed) | .001 | . |
|  | N | 64 | 64 |

** Correlation is significant at the 0.01 level (2-tailed)

**Appendix F:** Cronbach's Alpha value of independent, intermittent and dependent variables

| Variables | No. of Items | Cronbach's Alpha |
|---|---|---|
| **Electronic Governance** | **12** | **0.864** |
| Standard of Service | 2 | 0.500 |
| Choice & Consultation | 2 | 0.747 |
| Courtesy & Consideration | 2 | 0.616 |
| Openness & Transparency | 2 | 0.625 |
| Entrance & Information | 2 | 0.496 |
| Value for Money | 2 | 0.860 |

| Variables | No. of Items | Cronbach's Alpha |
|---|---|---|
| **Satisfaction Level** | **12** | **0.787** |
| Attenuation of Corruption | 2 | 0.560 |
| Intensity of Transparency | 2 | 0.787 |
| Efficiency of Service | 2 | 0.581 |
| Level of Convenience | 2 | 0.629 |
| Extent of Accessibility | 2 | 0.542 |
| Altitude of Interaction | 2 | 0.597 |

| Variables | No. of Items | Cronbach's Alpha |
|---|---|---|
| **Good Governance** | **12** | **0.667** |
| Accountability | 2 | 0.343 |
| Transparency | 2 | 0.520 |
| Effectiveness | 2 | 0.644 |
| Responsiveness | 2 | 0.625 |
| Rule of Law | 2 | 0.667 |
| Participation | 2 | 0.462 |

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**Appendix G:** Major challenges of e-governance and suggestions in achieving the good governance

### a. Challenges of e-governance in Bangladesh

| No. | Challenges | Frequency | Percentage |
|-----|-----------|-----------|------------|
| 1 | Absence of collaboration among the agencies | 1 | 1.56 |
| 2 | Delay in service delivery system | 2 | 3.13 |
| 3 | District web portal are not updated | 3 | 4.69 |
| 4 | Inclusion of traditional payment system | 1 | 1.56 |
| 5 | Lack of awareness by the citizens | 7 | 10.94 |
| 6 | Lack of information/data | 4 | 6.25 |
| 7 | Lack of political commitment | 3 | 4.69 |
| 8 | Lack of skilled manpower | 10 | 15.63 |
| 9 | Lack of transparency in service delivery | 3 | 4.69 |
| 10 | Manual application for getting service | 2 | 3.13 |
| 11 | No feedback system for the users | 1 | 1.56 |
| 12 | No scope of SMS alert system for users | 1 | 1.56 |
| 13 | Poor accessibility of common people | 2 | 3.13 |
| 14 | Shortage of equipment | 4 | 6.25 |
| 15 | Shortage of power supply | 8 | 12.50 |
| 16 | Slow connectivity of network/internet | 4 | 6.25 |
| 17 | Unwillingness of service providers | 6 | 9.38 |
| 18 | Poor literacy rate especially in IT | 3 | 4.69 |
| | | **64** | **100** |

### b. Propositions for achieving the good governance in Bangladesh

| No. | Suggestions | Frequency | Percentage |
|-----|-------------|-----------|------------|
| 1 | Arrange proper computer and IT training | 10 | 15.63 |
| 2 | Assurance of transparency in service delivery | 3 | 4.69 |
| 3 | Available information/data for people | 3 | 4.69 |
| 4 | Build-up awareness program | 9 | 14.06 |
| 5 | District web portal should be updated regularly | 4 | 6.25 |
| 6 | Expansion and continuation of services | 3 | 4.69 |
| 7 | Maintain database in service delivery | 2 | 3.13 |
| 8 | Manage high speed of connectivity | 4 | 6.25 |
| 9 | Motivation program for service provider | 3 | 4.69 |
| 10 | Need online application facility | 2 | 3.13 |
| 11 | Need political commitment and mindset | 6 | 9.38 |
| 12 | Online payment system | 2 | 3.13 |
| 13 | Introducing feedback system | 1 | 1.56 |
| 14 | Introducing introduce SMS alert system | 1 | 1.56 |
| 15 | Strong collaboration among the agencies | 1 | 1.56 |
| 16 | Supply sufficient amount of equipments | 4 | 6.25 |
| 17 | Supply sufficient amount of solar/electricity | 7 | 10.94 |
| | | **64** | **100** |

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| | |
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