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**Present Status and Implementation Barriers of eService in the Local
government of the People's Republic of Bangladesh**

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Technology Governance

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Abstract

The thesis presents an overview of the current situation of eServices at the local government level in Bangladesh. The objective of the thesis is to identify eService implementation barriers from the point of view of three different actors: citizens, union council information centre employees, and local government experts. The author uses a survey method and semi-structured interviews for primary data collection, in addition to data collected from secondary sources. Similar questions were presented to the three target groups: what kind of barriers have been faced by citizens when receiving eServices and what kind of problems have been faced by the Union council's employees when delivering these services; third question was targeted at local government experts concerning their observations about eService delivery in the local government level. Based on the interviews, the study identifies barriers faced by the citizens such as harassment by and lack of professional attitude from government employees, slow internet speed, third party intervention, and power crisis in the rural area. The union council information centre's employees emphasized issues such as lack of training, political pressure, lack of infrastructure, lack of motivation, and internal grouping. The local government experts indicated obstacles such as lack of effective policy support from the government, lack of financial support, artificial and excessive bureaucracy, and lack of skilled project managers. Based on these results, the thesis offers recommendations to local government officials, and serves as a basis for future research on finding solutions to the barriers identified.

Key words: Union council information centre, Local government expert, Rapid Action Battalion, Motivation, Digital literacy, eService

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Section One – Introduction

1.1 Introduction

eServices accelerate and improve the delivery of public services to the citizens. “E-government show two dominant avenues of thinking: using ICT as a tool to either increase the efficiency of existing processes or radically transform governmental functioning.” (Nielsen, 2016, P-2) In Bangladesh, a Union council is part of the local government organized on the basis of population density and geographic boundaries that is planning to begin providing eServices. Responsible authorities must think cautiously about the specific objectives and long-term vision for eServices while keeping in mind the existing capacity. eServices have the potential to raise efficiency but this is conditional on improved infrastructural and technical capabilities and increased participation and institutional capacity (Gupta, P-28, 2012).

In the developing country context, there are many obstacles to implementing an effective eService delivery process at the local government level (Zakir, P-31, 2013). “The activities of bureaucrats in some government agencies create problems in the implementation of the project, thereby giving rise to acrimony and legal hassles.” (Hossain & Saba, 2013). A major challenge is ensuring appropriate training for the government employees: “...it is very important to provide training to all government officers regularly because most government officials do not have enough computer training yet.” (Alam, 2012, P-24) The majority of government officials and the public are unaware about the eService applications portal: around 51% of people haven’t heard of the eService application portal, 20% people know about it, and 26% people know only very little (Alom, P-23, 2012).

In the context of eServices delivery, the environments could be classified into two parts; technical and institutional. “The technical environment relates to the production of goods and services and the institutional relates to the set of norms, values, rituals and patterns of behaviour” (Gomes, p-36, 2004). Converting a traditional method of service delivery to a more modern one whereby optimal use is made of the internet, includes

supplying information, exchanging information, and making transactions via the internet possible (Voogd, 2007). The main objective of this study is to identify the eService implementation barriers from the point of view of three different actors: Union council's employee, the citizen, and local government experts. The study is not focusing on technical issues but rather on social and institutional matters such as corruption in the recruitment process, motivational factors in employees, observations about the current state of the system by employees and citizens, and relevant recommendations.

In terms of corruption, Bangladesh is ranked 145th in the world (TI, 2016). Specifically, the recruitment practices of the ruling political party have been questioned. Generally, in rural areas, working for the government is most desirable prestigious for young people. Local politicians can easily influence local government decisions, including in the recruitment process. Therefore, comparatively less qualified candidates are getting a job through using their financial resources to influence local politicians. In Bangladesh, rural area is less developed than urban area, especially when it comes to roads, hospitals, schools, colleges and other infrastructure (Ahmed, P-22, 2014). Most of the colleges have been established on the District level where students are getting used to urban lifestyles. After graduating, students are often moving to other urban centers due to lack of jobs and infrastructure in more rural areas. Other issues such as lack of sufficient salary and difficulties in ensuring employment are a major source of a lack of job satisfaction which in turn hampers the development of professionalism in various sectors of the economy (Aappa, P-16, 2010). What often happens in Bangladesh is that, initially, a job seeker invest a large amount of money for recommendation through a political party or politician; after getting the job they are forced to try and collect money through different illegal means, although this is often difficult to prove due to complex social circumstances. As a result, citizens become harassed by public employees whose ultimate objective is to accumulate money from the public illegally. In the present study, the author has collected local government expert's comments and their observations on what kind of problems they are facing. The author presented the following questions to the target groups: what kinds of barriers have been faced by citizens when receiving eServices, and what kind of problems have been faced by the Union council's employees when they delivered eServices to the citizens. A third question is targeted at

local government experts and concerns their observation about eService delivery in the Union council. There is significant research gap in the topic described above with most previous researchers focusing on technical barriers.

Following this introductory section, including the sections below, the rest of the thesis is structured as follows. The second section will offer a literature review and background in the relevant data discussed in secondary sources. The third section will discuss the research methodology used, including the process of data collection and analysis, and explain how it relates to the conceptual framework. The fourth section, relying on secondary data sources, will present the current eService situation in Bangladesh, focusing specifically on what kind of services are available in Union council. The empirical part of the thesis is presented in the fifth section where the main findings and recommendations of the study are discussed. At the end of this section, the author will incorporate some expert recommendations collected through the open-ended interview questions along with barriers identified by the local government experts. In the final, sixth section, the author will summarize the key findings and recommendations, together with concluding thoughts on future research.

1.2 Problem Statement

The focus of the thesis is the present status of eService in Bangladesh local government and identification of implementation barriers. Bangladesh government has been exploring a suitable institutional framework to improve eService delivery and develop relevant standards (DIF, 2010). The authority responsible for the national ID card and an effective eService delivery platform is the Bangladesh election commission: “Bangladesh Election commission and... other public agencies like local government offices and city corporations are jointly issuing different public documents such as birth certificates, marriage certificates, passports, and driving licenses.” (Bhuiyan, 2011) But there is lack of coordination between separate public agencies. Despite “some economic benefits of ICT to individuals there is evidence that computer literacy and access gap between urban and rural areas should be increased” (Asgarkhani, 2005). eServices are particularly important in rural areas, and “failure to roll out eGovernment in rural areas has been acknowledged as a major obstacle to accomplish government eService in the

developing countries like Bangladesh.” (Islam & Salam,2015)The author of this thesis has witnessed that some barriers derive from union council information centres. These include low internet speed, third party interference, and illegal financial transactions faced by the citizens when receiving eService from Union council. Almost 63% of dealings in the land inspector’s office is blocked by the broker due to the local political interference (Prothom Alo,2015). Other obstacles observed concern problems like computer program language, local political interference, and internal grouping. Local politicians, especially ruling party’s members,are internally controlling to the whole tender system: purchasing, recruiting, and governance process (Prothom Alo, 2015). The thesis aims to investigate the effects of these barriers in eService delivery. For example, due to the lack of maintenance fund for the ICT equipment, eService delivery can be interrupted (Hasan, P-123, 2014). Additionally, the author wants to investigate the causes of these problems from the local government expert’s point of view.

1.3 Purpose of Study

Local government in Bangladesh is directly connecting to the mass people and executing local level development and the Union council is a part of local government as well as the Union council information centre is providing eService to the rural people.Officially, Union council is providing 33 type of services to the rural people and 17 type of services are delivered electronically (BBS, Local Government, 2014). However, the reality is different and quality of eService is not up to the mark. Therefore, the present thesis aims to identify what are the implementation barriers of the eService delivery from the point of view of citizens, local government employees, and Local Government experts.

1.4 Research Questions and Target group

There are three different central research questions among the three different groups. Mostly three different central research questions are represent similar meaning (eService problem)among the three different groups.Three different groups are indicated the problem from three different angle. The citizens are addressed the problem from eService user’s perspective, whereas union council employee’s are addressed some problematic issues from eService provider’s perspective and that would be the practical issues addressed by the service providers. The local government experts are important

because they are involved to the eGovernance policy making level as well as different project in the government and non government level. The local government experts are university professors, government higher officials, different NGOs representatives who were involved national eGovernance policy making committee at the government level. An expert group is well addressed to the problem especially in the policy issue according to their recommendation on the national eGovernance policy paper. The first target group is the Union council's employee, meaning those who are working as a service provider at the Union council. First, what are the problematic issues which are impeding the eService delivery to the citizens? Second, what kind of problems are faced by citizens contacting Union council when accessing eServices? Generally, people need different services from the local government like birth registration, death registration, trading licenses for local SME, drainage management, street light, and many others. The citizen group is selected on the basis of two criteria: a respondent must have a residency in the union council area and be over 15 years old. The citizens are the key actors for getting feedback on satisfaction and dissatisfaction (indicated barriers) of eService which will form the key findings of the research. The second group, the union council employees, is selected based on single criteria: currently working in the union council information centre (rural area). It is important that union council's employee as a respondent can address the ultimate obstacle that they are facing regularly in their job. The data gathered from union council employees will be important for findings in this research. The local government experts are selected on the basis of working experience in the IT field, public administration, government higher officials, university professors, or NGOs professionals according to the expert sampling technique. The acquired data from the expert group will provide an overview of lack of policy aims, present education, and competence relating to the eService projects.

In this section the author has discussed some background literature, central research questions and the target group. The next section will provide a full literature review and background in relevant data with comparison in different countries, relying on secondary sources.

Section Two – Literature Review

The objective of this section is to provide an overview of literature relevant to in the context of the research question from different journal articles and books.

eService is the logical next step in the use of ICT in eGovernance in order to ensure wide participation and involvement of the citizens. Many studies have been focused on different focal point such as infrastructure, policy, the legal and financial issue in local governance area in Bangladesh. There are three perspectives including citizens, business and government that need to be considered to develop a successful eGovernment service (Reynolds and Regio, 2001), and the organizational paradigm, technology paradigm and end user paradigm are the key factors that have impact on implementing successful eGovernment (Al-Azri et al, 2010)

In a study on the Sultanate of Oman, the focus was on the technical factors affecting the implementation of successful eGovernment (Al-Rahbi, 2012). In the context of the present study, the internet speed is an important challenge which is obviously a technical issue. Other major factors are: ICT infrastructure, IT security, IT standards, and technical experts (Al-Rahbi, 2012). The Oman case is important for executing eService in Bangladesh because lack of proper ICT infrastructure in Bangladesh especially in the rural area as well as lack of IT expert in Bangladesh. Transforming Oman into a sustainable knowledge-based economy starts with setting the economic vision for the sultanate for the year 2020 to which the Oman eGovernment strategy, endorsed in March 2003, contributes in terms of developing the Oman digital society and eGovernment services (Sarrayrih & Sriram, 2015). Sustainable knowledge based economy is a vision which has stated by Oman and Bangladesh should be followed how to developed a knowledge based economy as well as practice of eGovernance effectively. Basically, eGovernance does not only aim at efficiency and effectiveness in public service delivery but also to serve as a strategy in achieving good governance (Siahaan, 2016). There are some factors that are pre-requisite for good governance: quality of service delivery (service provider), service provider's education, internal political interference, and service provider's motivation. From the citizen's perspective,

a developing country like Bangladesh has important obstacles to the promotion and implementation of eGovernance. The major challenges are poor ICT infrastructure, lack of effective IT policy, lack of IT training, poor salary structure, hassle in getting required service, the practice of violation of law and order, and lack of awareness of government officials (Chowdhury & Satter, 2013). The fact is that the adaptive challenges of eGovernment go far beyond technology; they call for organizational structures and skills, new leadership forms, and the transformation of public-private relationships (Ndou, 2004).

Many government offices are out of internet connection or employees are using very slow internet speed (Alom, 2012). Bangladesh has already connected with high-speed fiber optics connection. However, not all government offices are connected to the internet yet. On the other hand, most of the government officials cannot get an opportunity to use the internet and different type government websites because they lack internet connection and computers. According to the Internet world status report only 3.5% of people were using the internet among the total population in 2011 (Internet World stats, 2011). *“All of the government offices of different ministries of Bangladesh are not on the same network.”* (Alom, 2012) This means that one ministry cannot share their data with another ministry, department or NGOs. The local government system of Bangladesh totally depends on the decisions of the national government. In the overall eGovernance context, *“...it is a huge challenge for the policy planners to scrutinize the alternatives and prepare an appropriate roadmap for eGovernance in Bangladesh and the country is still waiting for such a strategic roadmap.”* (Haque, 2005) *“Creating a connectivity infrastructure, particularly in rural areas, is a major challenge for e-governance initiative in Bangladesh that needs special attention in terms of both arranging new facilities and ensuring optimum use of existing facilities”* (Haque, P-135, 2005). An important challenge is to ensure access for poor and rural people to bring them closer to eGovernance activities as rural areas are *“...where the vast group of people are struggling with the hardship of food, health, nutrition, and shelter... as rural areas are under the immense crisis of power supply and connectivity.”* (Haque, P-235, 2005) The activities of *“bureaucrats in some government agencies creates problems in the implementation of projects, thereby giving rise to*

acrimony and legal hassles.” (Hossain & Saba, 2012) Political unrest, due to the lack of understanding between government and other stakeholders, delays implementation of the eGovernance projects. Quality of service delivery also strongly depends on human competency (Rushidee, P-43, 2013). From the point of view of organizational behaviour, there are issues that directly or indirectly influence people’s attitude. Job satisfaction has an impact on professional attitude which affects the organization as a whole negatively (Ruhul, P-8, 2010). Either directly or indirectly, local politics and especially the ruling party is influencing the local public administration’s decisions through tender, project approval, recruitment and other governmental activities. Politics can manipulate the government recruitment process (Akand, P-36, 2009). As a result it is very challenging to ensure that a right people are in right positions, especially in the public sector.

In summary, internet connection in the government offices, political interference in the public recruitment process, and organizational behaviour issues are all affecting delivery of service, somewhat similarly to Oman eGovernance practice and challenges. The next section will discuss the methodology of the present study, along with the conceptual and theoretical framework.

Section Three– Methodology

The objective of this section is to present a research methodology and discuss how it is applied to this thesis according to the conceptual framework. It will also present the procedure of data collection and analysis.

3.1 Research Methodology

Scientific research can be broadly classified into two different approaches, the first one is positivism and another is hermeneutics. For creating knowledge about the social world, following positivism can be challenging (Insights, A., 2009). Still, in “research conducted within a field such as information systems, a positive philosophy is one of the more popular approaches.” (Brooks, C. 2002).

As discussed above, the aim of this thesis is to identify the implementation barriers which affect eService delivery at the local government in Bangladesh, especially Union council information centre. In the complex context of a developing country, it is good to investigate such a question from different perspectives, in this case service provider, service receivers, and finally local government experts. In general, the thesis takes a positivist approach. “Positivism is the term used to describe an approach to the study of society that relies specifically on scientific evidence, such as experiments and statistics, to reveal a true nature of how society operates.” (Scarince, C. 2016) Therefore, positivism refers to the fundamental connection between theoretical study and statistical analysis, often through an investigation of quantitative relationships. According to Yin (1995), there are two main options to choose from when performing a scientific research: quantitative and qualitative approach. “*Quantitative research approach gives us an analytical perspective with formalized and structured data, which is used for statistical analysis*” (Holmes & Solvang, 1996). In other words, quantitative research is based on observations that are transferred into a discrete unit that can be compared to other units by using statistical analysis (Maykut, P. & Morehouse, R. 1994). Qualitative research means that the primary purpose of the method is to give an understanding of

fundamental information: "...qualitative approach can provide a better understanding of the phenomenon under investigation so the problem can be understood within the context." (Marshall, C. & Rossman, G. B. 1999)The present study is based on both qualitative and quantitative research methods. Qualitative and quantitative data are collected by using both secondary and primary sources. Secondary data is collected from different research reports, published books, and journal articles. On the other hand, primary data is collected from the employees in Union council information centre, the citizens and local government experts like government higher officials, University's professor, and NGOs specialists. This is done through a semi structured questionnaire in face to face interviews. Survey method is a good way to collect primary data. Survey method can be understood as questioning individual respondent on a specific topic. Survey method is widely used as a primary data collection in order to test concepts, gauge the attitude of the people or the level of customer satisfaction. Survey methods can be used in both quantitative and qualitative studies. The two main purposes of surveying is to collect data about the characteristics of a population and testing hypotheses about the nature of relationships within the population. Survey method is usually divided into three categories: mail survey, telephone survey, and personal interview. The author of this study wanted to apply this methodology to collect information about the attitude of the respondents. The thesis aims to investigate what kinds of problems have been faced by the citizens and local government employees when they received or provided eService, and whether there are differences between the two. Theoretically, and according to existing literature, there are some issues such as corruption, nepotism, organizational behaviour related issues, and politics that are hampering the delivery of eService. The author wanted to investigate whether these issues are really influencing the delivery of eService or not. The author has collected data through personal face-to-face interview technique, even though other survey methods could be faster and cheaper with types of data easier to analyse. There are some drawbacks of the survey method such as human bias of respondents, distinctions in understanding, unwillingness or incompetence in providing information.

3.2 Framework

The goal of this thesis is to identify the implementation barriers of eService in the local government of Bangladesh. The focus is on three different actors (see Graph 1). Local government employees are directly involved in the execution of eService. Local government experts are involved in the policy making level. Finally, citizens are consumers who receive services from union council information centre. The thesis asks: what are the problematic issues, especially from an organizational behaviour point of view (individuals in the organization) that are interrupting the effective delivery of eService to the citizens. It is important to know about the satisfaction of local people and what kinds of problems they have been facing when receiving eService from Union council information centre.

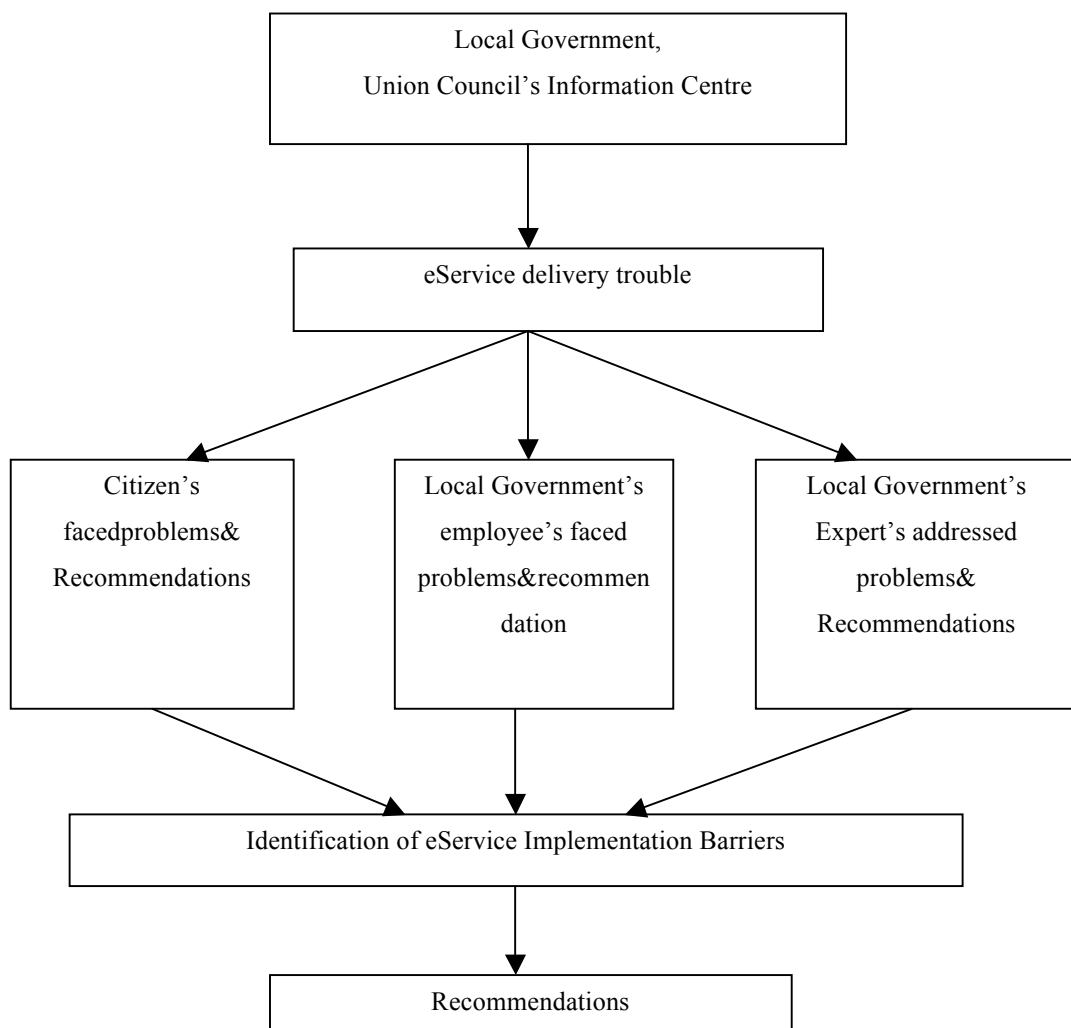


Graph 1: Local government eService and concern actors

Local government experts are mostly involved in the policy-making level. According to their expertise and experiences, they can specifically address what are the implementation barriers and what could be the solution. It is a great challenge to implement eService in the local government, with social, cultural, legal, and political aspects (Wimmer & Bredow, 2002). Hypothetically, there are issues like internal political interference, corruption, and various social issues such as job satisfaction from local government employees. In the delivery of eService, all three actors mentioned above are important but the author has witnessed that in reality, two of them (citizens and local government employees) are playing a key role and are particularly affected by

the barriers in service delivery. The author has included local government experts for getting an observation from the policy level.

Importantly, the public needs to be trained to be able to use the ICT resources. At the same time they should be motivated and educated with regard to the importance of using eGovernment technologies (Sarrayrih, M., Sriram, B., 2015). Similarly important for the assurance of quality eService are ICT training and job satisfaction. The ideas presented in this section are summarized in Graph 2.



Graph 2: Conceptual mapping for the thesis

3.3 Theoretical Framework:

There are numerous research areas which provide a contribution to the theoretical framework of this thesis. *“There is a relative analysis of present government architecture and the prospects of implementing eGovernance in Bangladesh which emphasize the usage and effectiveness of eGovernance to eliminate corruption from various sectors of governance.”* (Rajon & Zaman, 2008) Beaumaster (1999) worked on technology execution issues and his study addressed some problems that are affecting information technology development and deployment. He focused on the perceiving procedure of local government administrator’s problem which is strongly related to management and organizational issues. The goal was to identify what kind of management issues have been affecting the eService delivery, some organizational aspects in general, and how organizational behaviour related issues have been influencing eService delivery at the local government. There are some major challenges such as lack of effective IT policy, lack of training, salary structure, hassle in getting required service, violation of law and order, and lack of awareness of government officials (Chowdhury and Satter, 2013).

The application of Information and Communication Technology (ICT) for delivering different government services means improving the exchange of information communication transactions and integrating various stand-alone systems and services between Government and citizens (Bose & Rashel). The technical issues which are strongly related to interoperability and legacy system implementation, present crucial challenges while organizational issues lead to poor system implementation (Goncalves & Sapateiro, 2008). Organizational issues such as internal grouping, recruitment, public administration and decision-making, difference in roles (citizen and employee), and organizational behaviour affect the delivery of eService at the local government. Balanced infrastructure development between city and village could attract investors and professionals for developing industry (Graven, p-28, 2008). Psychological dissatisfaction enforces a lack of professional attitude (Boarns, p-26, 2011). Salary or different kinds of benefits are influenced the delivery of an effective eService. An important obstacle in the development of public administration is also corruption (Karim, M., p-9, 2010). In the literature review section, there are various arguments

about ICT infrastructure, ICT policy, some technical issues on the Oman case, whereas theoretically organizational behaviour related issues, public administration, internal political issues how to interrupted eService delivery to the citizen.

3.3 Research Gap

There are numerous studies in the ICT sector all over the world, carried out from different points of view such as technical infrastructure, ICT policy, etc. (ICT week, 2014, P-13). According to this literature, introducing ICT to organizations may face problems from a managerial and organizational behaviour point of view. Quality of service delivery partially depends on human competency (Rushidee, 2013, P-43). In the context of Bangladesh, the author of this thesis has observed these problems at the Union council information centre and has tried to find out what are the specific barriers faced by three different actors: citizens, Union council information centre's employees and local government experts. Thus, the thesis aims to fill a research gap regarding the situation on the ground, which serves as a basis for designing effective reforms.

3.4 Research Design

3.4.1 Research Strategy

The research strategy is an organized plan of looking for the relevant information in an efficient way. Research strategy refers to the plan that an investigator will follow to accomplish his or her investigation to address the research questions. In addition, a research strategy "...specifies the sources of data constraints that may hamper the research and how they will be addressed." (Saunders, M. K., Lewis, P., & Thornhill, A., 2000). Basically, research strategy sets out the steps to answering the questions which have been raised by the investigator. It will comprise clear objectives derived from the investigators questions, and specify the sources from which the investigator is determined to collect data. It also considers the potential restrictions for data collection, such as access to data, time, location, money and potential ethical issues (Saunders, M. K., Lewis, P. & Thornhill, A. 2000).

Research strategy depends on the characteristics of research questions. Normally research questions are based on using 'who', 'how', 'why', 'what' type of questions: "...if these types of questions are used then the researcher can benefit from using a survey" (Yin, R. K, 1994). The author has selected mixed quantitative and qualitative research approach by using a questionnaire which is a typical tool used in the survey method. The data were collected through personal interviews with members of the target group. In the personal interview context, an investigator asked the relevant questions from the citizens, local government employees, and local government experts directly, i.e. in a face to face interview.

3.4.2 Data Collection Procedure

In the chapters above, a literature review, theoretical framework and results from some previous relevant studies were presented as groundwork for discovering the factors that have resulted in implementation barriers for an effective eService delivery to the citizens of local government in Bangladesh. In the interviews, every respondent was asked similar questions in a semi-structured format. The greatest strength of the survey method is adaptability. *"It is a practical approach to gathering information and the most economical way in many different situations."* (Emory, C. W., 1980) The theoretical studies discussed above demonstrate the problematic issues in the local government, especially for eService delivery but without being specific what is exactly happening. The empirical research aims to find out specific implementation barriers for eService delivery in the local government.

The empirical part of the thesis thus focused on identifying specific barriers from the point of view of different respondent groups. As a sample, the author has selected 5 districts and 5 Union council information centres in each district, out of a total of 65 districts in Bangladesh. Ideally, 7% of well-chosen districts should correspond to the national average in light of considerations regarding population density and the research budget (Sagufra, P-28, 2010). Data has been collected using the selective sampling method from 3 different groups. Union council citizens are in group A, consisting of 5 districts (Bagerhat, Pirozpur, Gopalgong, Barishal, Narail,) with a total of 180 respondents. Group B consists of local government employees, especially those who are assigned the task of service delivery to the citizens, with a total of 50 respondents.

Group C consists of local government experts, especially those who are working at the policy making level, with a total of 10 respondents.

The author has selected purposive sampling for group A and B (citizens and local government employees) under the selective sampling method. Purposive sampling is known as judgemental, selective or subjective sampling. Few key elements have been selected for the samples chosen based on the judgement of the investigator. For citizens, two elements have been selected such as every respondent has been living in rural area and they are more than 15 years old. For the local government employees, a single criteria is applied which is that every respondent is living in a rural area. For the local government expert group, the author has selected expert sampling technique for collecting expert opinions on the basis of specific criteria such as working experience in the ICT field, public administration, or policy making level. Purposive sampling is useful in situations when an investigator needs to reach a target sample quickly, and where sampling for proportionality is not the main concern. Generally, a researcher considers whether a representative sample can be created, and which forms of data collection will result in saving time and money as well. In the case of group B, purposive sampling method is an effective way only when limited numbers of people can serve as primary data sources due to the nature of research design and objectives (Crossman, A., 2016).

3.4.3 Data Analysis Procedure

Data analysis is the most challenging aspect in every research. It refers to deriving the meaning of all the data collected as part of the research. In quantitative data analysis, the researcher often uses a summary of the description of the data which were collected from the field. Yin (1994) says that "*data analysis involves examining, categorizing, tabulating or otherwise recombining the collected data.*" The following is a descriptive summary of the data analysis approach. After completing the survey, data is presented by using tables and bar charts (this is often done through using a statistical software SPSS). The author has applied descriptive data analysis method to extract meaning from the empirical study. Findings are presented in tables and charts based on the answers given by the respondents. According to the conceptual framework, two actor groups can

be expected to have experienced the most important aspects of the problem and recommendations derived from their answers would be the key findings.

This section has discussed important issues such as the number of respondents, area of research, research design and data analysis procedure. The next section will present different issues in the context of the recent eService scenario in Bangladesh, including different kind of services, information sharing activities and payment methods, relying primarily on secondary data sources.

Section Four – Present eService’s Scenario in Bangladesh

The purpose of this section is to introduce recent eService activities in the government level. As the title of the thesis suggests, the author aims to present data about eService in the context of Bangladesh. In particular, the author aims to show what kind of services are available and what the situation of government offices are, especially regarding the usage of ICT, data sharing between government agencies and private organizations, and mobile payments. In this section, data has been collected from secondary sources such as different books, journals and government publications.

4.1 Types of eService in the Union Council Information Centre

4.1.1 Electronic Birth Registration System

Rajshahi is a metropolitan city and the oldest municipality in Bangladesh. Electronic birth registration system has been introduced in Rajshahi City Corporation (Ahmed, 2002) which records births electronically and provides the parents with citizenship identity. After that, identity and other required data is entered into a population database and it is shared with other government agencies. Obviously, it is one of the best eServices in the local government. However, currently in Bangladesh, a small number of Union councils are providing the electronic birth registration service.

4.1.2 Land Related Services

Bangladesh is an agricultural economy and most of the people are directly or indirectly involved in agriculture, usually working on their own agricultural land. Traditionally people go to the local land office to receive certain service such as tax calculation,

payment of taxes, collecting records, and other land-related services. It is clear that paper-based documents and handmade tax calculation offer ample possibilities for cheating, as well as illegal financial transactions and harassment. Recently, the land district office has been moving forward to calculate land tax electronically and providing services online (Karim, M. 2015). This is obviously much more cost effective as people more easily get this service from Union council information service centre.

4.1.3 Health Related Services

According to the citizen charter (Citizen's information desk), primary and secondary healthcare is a fundamental right for the citizens. People can get specialized doctor's appointment and consultations through an online service provided by the Union council information centres. This is particularly useful for people living in remote areas such as hillsides and coastal regions where people are able to contact a doctor at the district hospital through video conference. Thus, Union council information centres are providing ICT infrastructure as well as assistance to the local people.

4.1.4 Agriculture Related Services

Agriculture is at the heart of the economy in Bangladesh. However, agriculture is strongly affected by different kind of natural disasters that happen every year. Proper weather updates can help farmers in preparation for these events. Pricing is another issue where the rural level farmers don't get the correct price information because there are more than three types of intermediaries involved in the process. Ideally, the farmer should get easily the actual price from the Union council information centre through an online service. Online consultation with an agriculture specialist would be good because farmers must have knowledge to pick the ideal seeds and farming methods.

4.2 The Scenery of the Government Offices

Around 12% (Bhatnagar, 2014) of the government offices have minimum one ICT professional, either a Programmer, Network Administrator, Web Developer, Database specialist, Web Administrator, or System Analyst. According to Mr. Bhatnagar's report (Bhatnagar, 2014), around 32% of the government offices have a computer operator for

their day to day clerical and data entry services, and 30% of employees in government offices use personal computers. On the other hand, approximately 80% of government offices have a minimum of one computer. The total ratio in the government offices is 28 computers for 100 employees, and approximately 80% of government offices have at least one printer; the printer-employee ratio is 15 printers for 100 employees (Bhatnagar, 2014). Around 73% government offices especially different ministries and divisions have LAN (Local Area Network) connection, whereas 81% (Bhatnagar, 2014) of PCs are connected to the network. Approximately 96% offices (Ministries and Divisions) have an internet connection and around 65% of the PCs have access to the internet. In the government offices in Bangladesh, around 36% of officers have been using e-mail either through direct or indirect network connectivity (Bhatnagar, 2014). Mr. Bhatnagar mentioned in his study that 47% (Bhatnagar, 2014) of officers in ministries, divisions and commissions have been using e-mail. On the other hand, only 22% (Bhatnagar, 2014) of officers are using e-mail in Departments and Corporations.

4.3 Execution of eService Delivery in Bangladesh

From a global perspective, especially regarding global ICT ranking, Bangladesh is in the lowest position. According to the United Nation's e-government development index, Bangladesh has a score of 0.379 (UN E-government survey, 2016) which is called EGDI mid-level (eGovernment Development Index). EGDI refers to a combination of measurements in the ability and willingness of countries to use eGovernment for their development and this rank put together by the United Nations public administration programme (Hasan. M., P-28, 2015). In 2016, Bangladesh ranked 124 whereas in 2014 and 2012 its rank was 148 and 150 respectively (UN eGovernment survey, 2016, 2014, 2012). This indicates that Bangladesh is gradually developing. In the early stage of e-government, different government agencies mainly make websites. Around 44 public office (Bhatnagar, P-11, 2014) webpage contents are available in English while only 27% have Bengali content. Mr. Bhatnagar said that the survey reports that 70% of e-services were developed for Citizens and 12% for Business purposes. On the other hand, around 18% (Bhatnagar, P-11, 2014) of eServices were developed for Citizens and Business. Approximately 34% (Bhatnagar, P-11, 2014) of eServices are fully free while 28% are accessible via cash payment at the service centre; in comparison, 14%

require cash payment at the Bank. It is one of the most remarkable improvements that 13% (Bhatnagar, P-11, 2014) of public eService fees are paid by the mobile phone.

4.4 Information Sharing between Different Government Departments

The government has been taking various steps especially for information sharing between the public and private sector and citizens. In 2015, the government was sharing data only with 8% of private organizations and 22% of public organizations (Gieas, E., P-12, 2016). There are two major drawbacks in the public and private organizations: lack of infrastructural competence in the public organization and lack of reliability and infrastructural competence in the private organizations (Gieas, E., P-13, 2016). *“From the district level information system and the union council, information centres are connected to the open the internet and thus connect with citizens.”* (Bhatnagar, P-18, 2014). Local government offices such as Union council information centres are providing different kinds of services like health and legal services, educational services for students, job seeking for the unemployed, different types of payments, e-shopping, and e-ticketing. Around 6.7 million (Bhatnagar, P-17, 2014) mobile subscribers have paid a different type of utility bill. Approximately 45,000 railway tickets (Bhatnagar, P-18, 2014) have been sold through the mobile phone. More than 10 million people are working in different foreign countries and they are sending money (remittances) to their families through an online bank or mobile phone and around 22 public and private universities (Bhatnagar, P-18, 2014) have already been started their registration and admission procedure through online services and SMS. Bangladesh Post (postal department) has introduced mobile money orders across the country. *“Report to RAB (Rapid Action Battalion) is a mobile application and is easy to get from Google play store”* (Police week, P-22, 2016) which the citizens can use to report electronically anything they observe that's illegal.

The key finding of this section is that different kinds of eService are provided at the Union council, and that there is some ICT usage in the the government offices. However, these are relatively old statistics due to lack of more recent data. In terms of data sharing between public and private agencies, government were sharing data only with 8% of private and 22% of public organizations (Gieas, E., P-12, 2016). There are

two major drawbacks in the public and private organizations, lack of infrastructural competence in the public organization, and lack of reliability and infrastructural competence in the private organizations(Gieas, E., P-13, 2016). The next section will present the empirical part of the study and focus on key findings from the point of view of the three different actors: citizens, local government employees and local government experts.

Section Five – Empirical Study

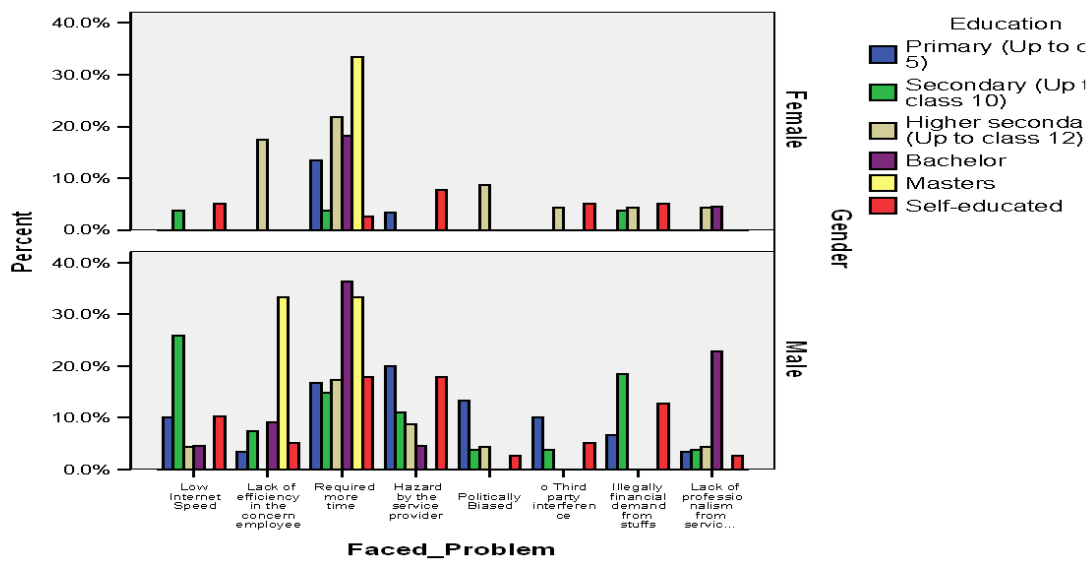
In this section, the author will present findings according to the statical analysis of data collected from the respondents. In addition, the author will present the opinions and recommendations of three different actors according to the conceptual framework.

5.1 Citizen's Aspect

The objective of this section isto present a scenario of what kind of problems have been faced by the citizens.

5.1.1 Specific Problems from the Citizen's Point of View

The central research question was what kind of problems are faced by the citizenwhen accessing eServices.Graph 3 presents specific eService related problems which have been faced by citizens in the Union council. Basically, the graph shows specific problems on the basis of respondent's age, living area, and education. Around 26% of male respondents said that internet speed was very low and their academic qualification was secondary (up to class 10), and 4% of female respondents faced low internet speed when receiving eService from the Union council information centre.



Graph3: Specific problem faced by citizens

Approximately 34% of Master’s Degree holders (Male) respondents emphasized the lack of efficiency from government employees and 18% of female respondents mentioned the same problem. Around 10% of male respondents with education level up to class five (Primary) emphasized third party interference (Broker). On the other hand, 4% of female respondents said the agent is a significant barrier for getting an effective eService. Illegal financial demand from the service provider is the greatest problem with mentions from 20% of male and 5% of female respondents. Harassment by the service provider was mentioned by around 20% of male respondents and 3% of female respondents with primary education level. Interestingly, 13% of male and 3% of female (self-educated) respondents mentioned illegal financial demand by the Union council information centre when providing the service.

According to the literature review, there are three relevant perspectives such as citizens, business, government (Reynolds & Regio, 2001) when developing a successful eGovernment. As a developing country, Bangladesh has recently started learning how to delivered services electronically to the citizens. However, there are some major challenges such as the lack of effective IT policy, lack of training, insufficient salary structure, hassle in getting the required service, widespread violation of law and order, and lack of awareness of government officials (Chowdhury and Satter, 2013). According to the theoretical framework the violation of law includes illegal financial

demand from government employees which was raised by 20% of respondents. More than 10% of respondents said that third party interference is an additional issue.

The key findings are from the Citizen's Point of View:

1. Low internet speed.
2. Lack of service provider's efficiency.
3. Harassment by the service provider.
4. Third party intervention.
5. Illegal financial demand from the Union council information centre's staff.
6. Lack of professionalism by the Union council information centre's staff.

5.1.2 Recommendations from citizens

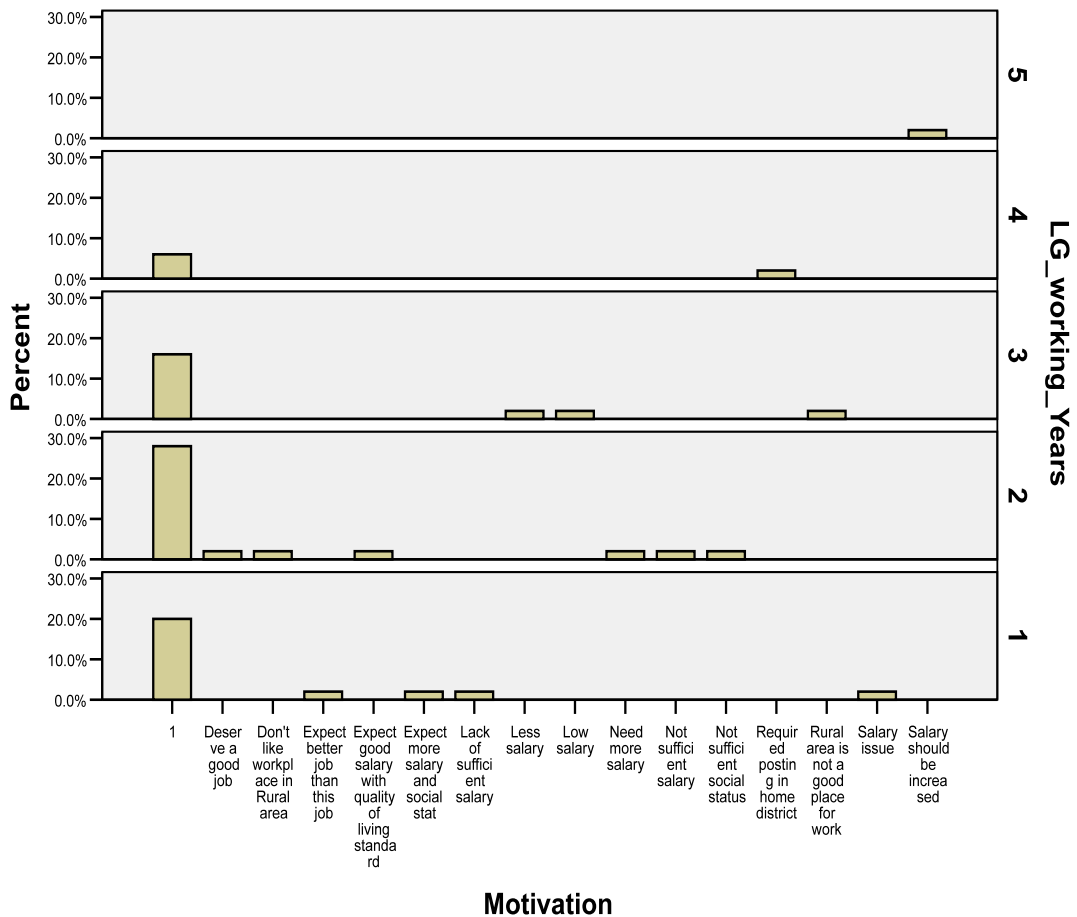
Almost every respondent are addressed barriers along with a recommendation in the open-ended question part of the interview. The author has selected ten recommendations randomly from the citizen's point of view.

1. To provide proper training to the Union council information centre's staff.
2. All recruitment processes must be executed legally.
3. Power problem is a big issue in the rural area and it's hampering the service delivery. So problems with power should be solved first.
4. Internet speed is very slow. So internet speed must be increased in the rural area.
5. Lack of professionalism among the e-service provider (Union council staff), so professionalism related course should be incorporated in the training content.
6. Illegal political party interference in the Union council information centre's activities must be avoided by the local government division.
7. Politically biased attitude from the service providers must be avoided.
8. Internal politics and grouping must be avoided.
9. ICT infrastructure should be developed in the rural area.
10. Governance should be imposed legally and transparently.

5.2 Local Government Employee Aspect

5.2.1 Lack of Motivation

The author of this thesis has tried to identify what kind of motivational factors have to be addressed among the Union council information centre's staff. Around 2% of employees preferred their workplace in their home district after approximately four years of work experience in the local government division. Graph 4 shows that more than 10% of employees who have been working in Union council information centre from one to three years were not satisfied with their monthly income. Approximately 2% of respondents expected a more handsome salary that would improve the quality of living standard in the rural area. It is highly recommended to assure a better living standard in the rural area because otherwise it would be difficult to recruit a potential employee.



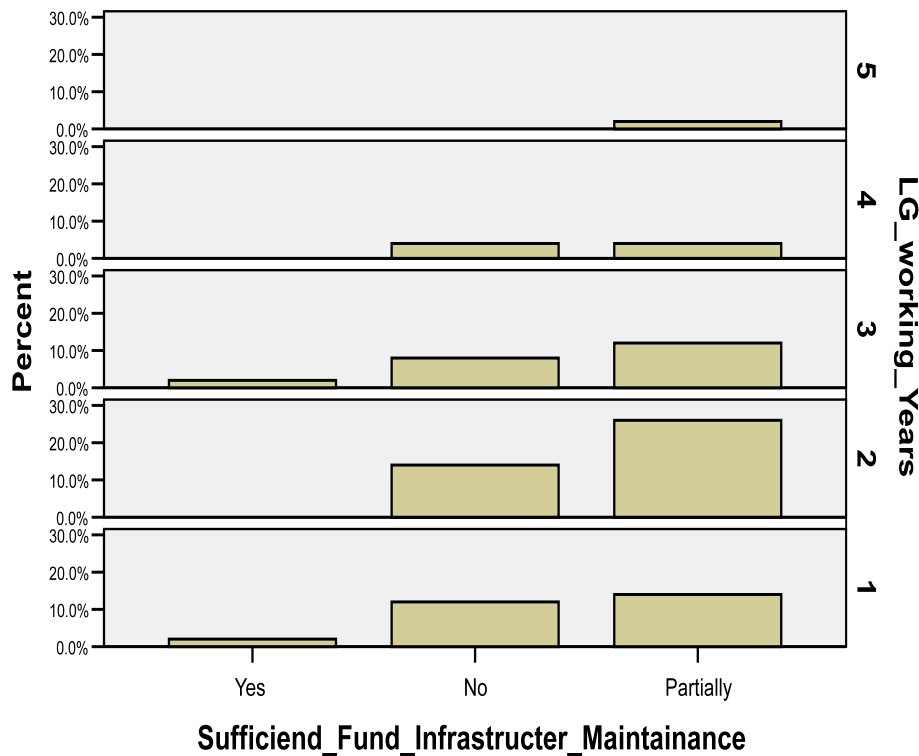
Graph 4: Lack of motivation in local government employees.

Around 2% of employees said that present job description does not carry a good social status even though they have been working for around 2 years. Around 2% of employees with 2 years of experience said they do not want to work in the rural area. According to the Chowdhury and Satter (2013), poor salary structure is an important obstacle to ensuring a good service delivery to the citizens. Most of the respondents (local government employees) agreed that a small salary is a significant issue because they are not mentally satisfied about their monthly payment. Government gadget presented that Union council, City Corporation, Municipality Corporation's staff (3rd class) are getting salary according to the 14th grade with the amount 16000 BDT (152 EUR) monthly (Bangladesh Gadget, p-322, 2014). Infrastructure such as roads, hospitals, housing facilities, shopping complexes, schools and colleges are not sufficient in the rural area – a problem raised by 3% of local government employees. Balanced infrastructure development between city and village could attract investors and professional for the development of industry (Graven, p-28, 2008). The present study shows that employees are looking for another job in other sectors and it has been hampering their professional continuity. Even newly recruited employees already mentioned that the social status of their official rank is not prestigious. This can be seen as a psychological issue which affects the delivery services because psychological dissatisfaction may influence professional attitude (Boarns, p-26, 2011).

5.2.2 Maintenance Fund

The question addressed in this section is whether the government has been allocating sufficient funds for ICT infrastructure's maintenance. Graph 5 shows that around 27% of respondent said that infrastructure maintenance budget is partially sufficient whereas

15% and 10% of respondent with 2 to 3 years of work experience said it's not sufficient.



Graph 5: Comments on infrastructure maintenance

The allocation of ICT infrastructure maintenance budget is really limited (Monir, H., p-12, 2015). The present study shows that lack of maintenance budget for the ICT equipment is hampering the delivery of services and it has been acknowledged by the current local government employee. Almost 23% of Union council information centre's printers were not working due to lack of repairing fund (Monir, H., P-28, 2015). National policy making authority or concerned ministry are finding it difficult to distribute funds rapidly to the required union council. In a developing country, the maintenance fund is very limited and due to the clerical formalities it is often not distributed within the proper time (Josef, F., p-19, 2011).

5.2.3 Illegal Practices in the Recruitment Process

Approximately 36% of respondents thought that personal contact is a good way to get a job, whereas 2% said that gift and any kind of advantage is a good way to get a job. On the other hand, 16% of respondents expressed that financial incentive is an excellent way to get a job as well (see Tables 1-4).

Incentives_Invited_Job_Interview

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	11	4.6	22.0	22.0
	No	39	16.2	78.0	100.0
	Total	50	20.7	100.0	
Missing	System	191	79.3		
Total		241	100.0		

Table1: Illegal practice for job interview

Common_Incentive_Financial_Incentives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	7	2.9	14.0	14.0
	Fair	16	6.6	32.0	46.0
	Good	3	1.2	6.0	52.0
	Very good	16	6.6	32.0	84.0
	Excellent	8	3.3	16.0	100.0
	Total	50	20.7	100.0	
Missing	System	191	79.3		
Total		241	100.0		

Table2: Job from financial incentive

Common_Incentive_Gifts_Advantages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	30	12.4	60.0	60.0
	Fair	19	7.9	38.0	98.0
	Good	1	.4	2.0	100.0
	Total	50	20.7	100.0	
Missing	System	191	79.3		
Total		241	100.0		

Table3: Job from gifts and advantages

Common_Incentive_Personal_Contact

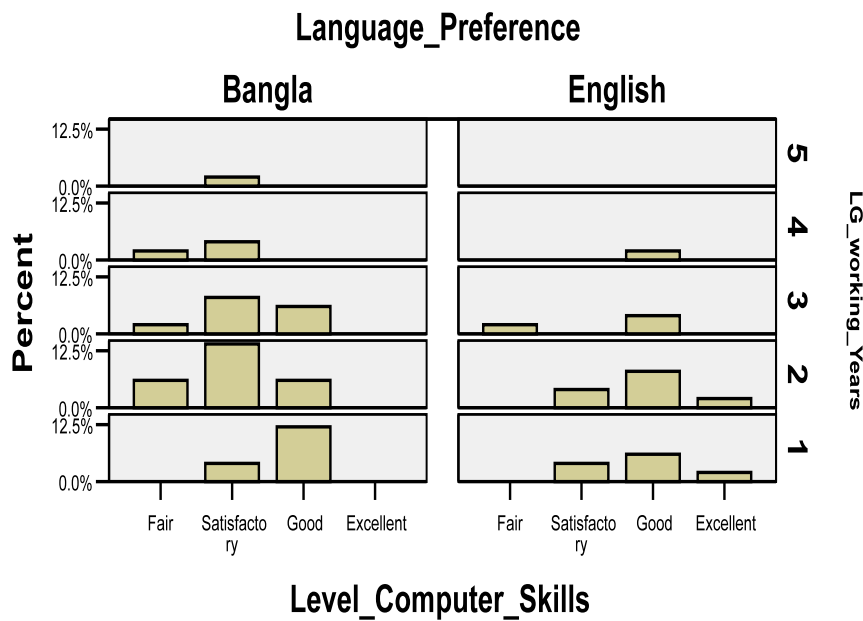
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair	3	1.2	6.0	6.0
	Good	4	1.7	8.0	14.0
	Very good	25	10.4	50.0	64.0
	Excellent	18	7.5	36.0	100.0
	Total	50	20.7	100.0	
Missing	System	191	79.3		
Total		241	100.0		

Table4: Job from personal contact

Corruption especially in the public administration is a crucial obstacle to development (Karim, M., p-9, 2010). Survey results suggest nepotism and that getting recommendations from the ruling political party or agent are conducted by a money transfer between the applicant and agent. In Bangladesh, nearly 38% of public recruitment is directly conducted through the use of money as bribe (Karim, M., p-13, 2010). As a result, illegal financial dealings or any kind of personal contact or recommendation in getting a government job does not ensure that qualified people are in the right positions.

5.2.4 Level of Computer Skills and Language Preference

Graph 6 shows that more than 12.5% of respondents said they prefer Bengali (Bangla) language and that their computer skill was satisfactory according to their basic computer training certificate. Around 6% respondents said they preferred English and that their computer skill was good.

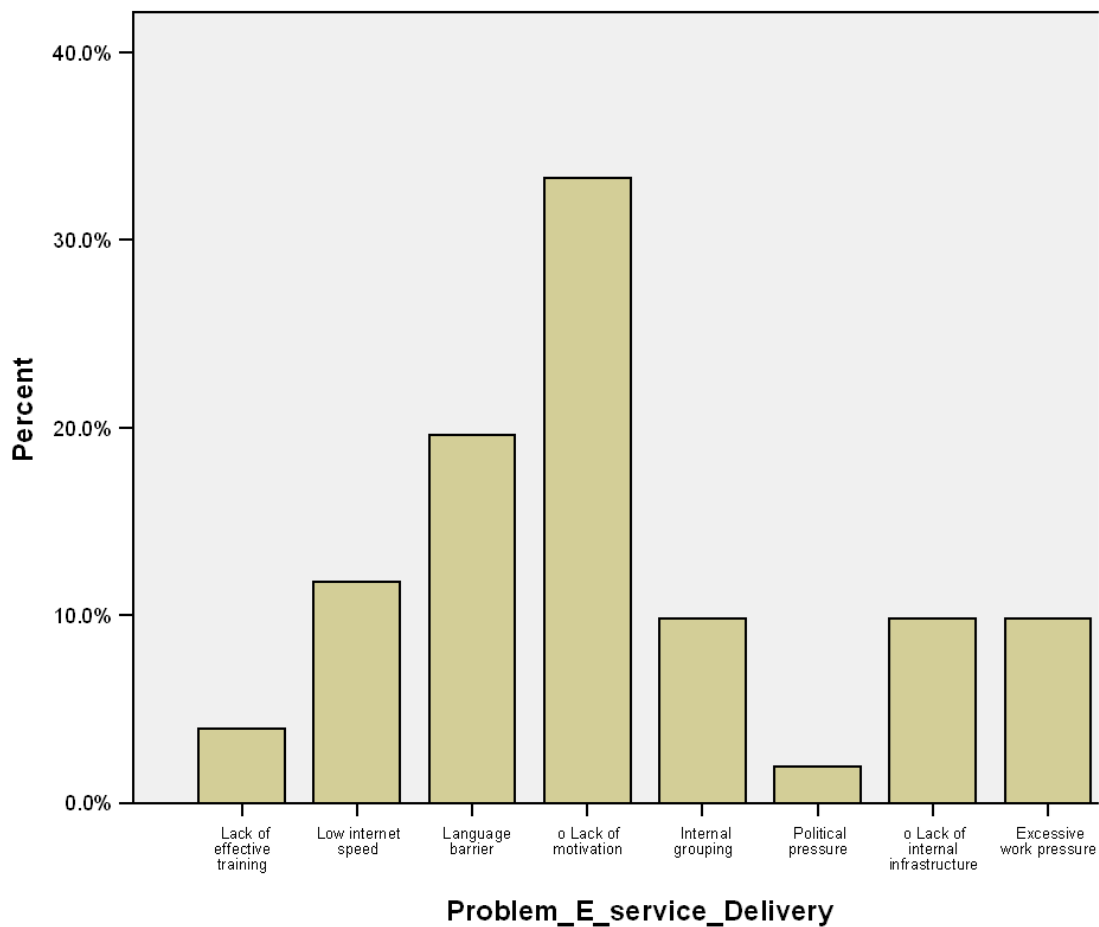


Graph 6: Level of Computer Skill and Language Preference

In the local government division, especially in union council, City Corporation and Municipality Corporation's, employees are trained in the national university with their academic language as Bengali (Karim, M., p-22, 2010). Local government system is completely in English, even though employee's academic language was Bengali. This means that the local government authority should provide additional language training for the professional staff to ensure proper service delivery.

5.2.5 eService Delivery Problems

Graph 7 shows that around 20% of respondents said that language obstacle is a major problem affecting service delivery. About 12% of staff thought that low internet speed is one of the biggest barriers, and 4% said they need more effective training because of differences in academic background. Many government offices are without internet connection or employees are using a very slow connection (Alom, 2012).



Graph 7: Specific implementation barriers indicated by local government employee

Other barriers mentioned are internal grouping, political pressure and bias (11% of respondents). Around 2% of respondents said that current elected public representatives and major opposition parties were influenced directly or indirectly when organizing service delivery in favour of their supporters. Bureaucrats in certain government agencies create problems in the implementation of projects, thereby giving rise to acrimony and legal hassles (Hossain & Saba, 2012). Approximately 33% of respondents said that lack of motivation is a significant barrier for an effective service delivery, and around 10% of staff said that excessive work pressure is hampering the service delivery due to shortage of employees and delays in recruitment in the Union council information centre. There are additional issues relating to general attitude. Job satisfaction influences the professional attitude which can potentially affect the organization negatively (Ruhul, P-8, 2010).

Key findings of the eService Delivery from the Local Government Employee's

Point of View:

1. Low internet speed.
2. Language barrier.
3. Lack of motivation.
4. Internal grouping.
5. Political pressure.
6. Lack of internal infrastructure.
7. Excessive work pressure.
8. Lack of effective training.

5.2.6 Recommendations from Union Council Employees

Union council employees raised eight barriers and recommended some points which are relevant for both policy making and further research. In particular, the author has been presented with ten recommendations through the open-ended part of the questionnaire:

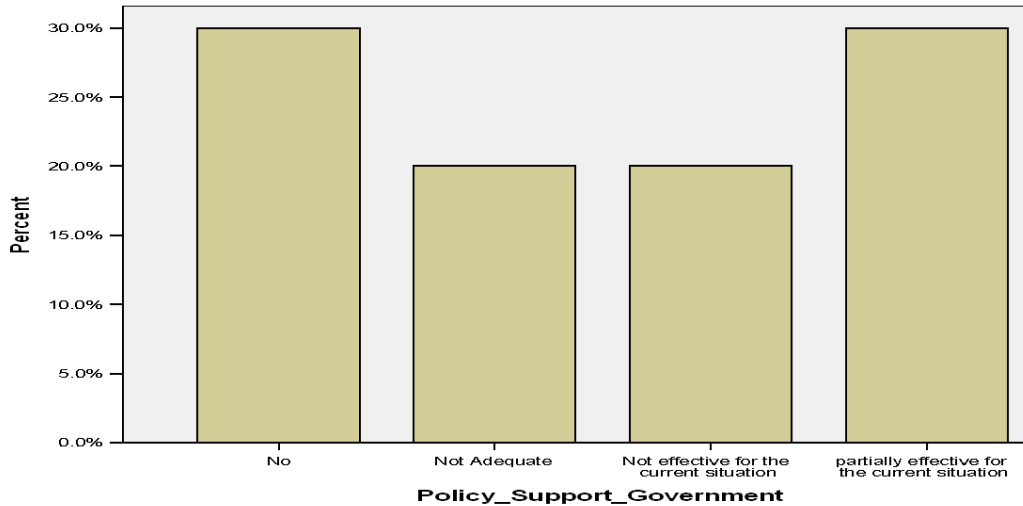
1. Political interference should be avoided.
2. Maintenance budget should be allocated at the right time.
3. Require an effective training because local government staff come from different education backgrounds.
4. Internal infrastructural capacity should be increased.
5. Require adequate staff in the service delivery section.
6. Salary and other benefits should be increased.
7. Internal politics and grouping must be avoided.
8. Internet speed and power supply continuity must be ensured.
9. Require proper working environment and sufficient infrastructural support in the rural area for family life.
10. Program language should be in Bengali because most of the employees were educated in a Bengali college.

5.3 Local Government Expert's Aspect

5.3.1 Expert's Opinion on Policy Support from Government

Graph 8 shows that 30% of experts said that the government does not provide enough policy support whereas 20% said that existing policy is not effective for the present situation. Present bureaucratic approach is not eGovernance friendly (Kabir, A., p-23, 2014). Lack of policy support from the government and intentional political interference

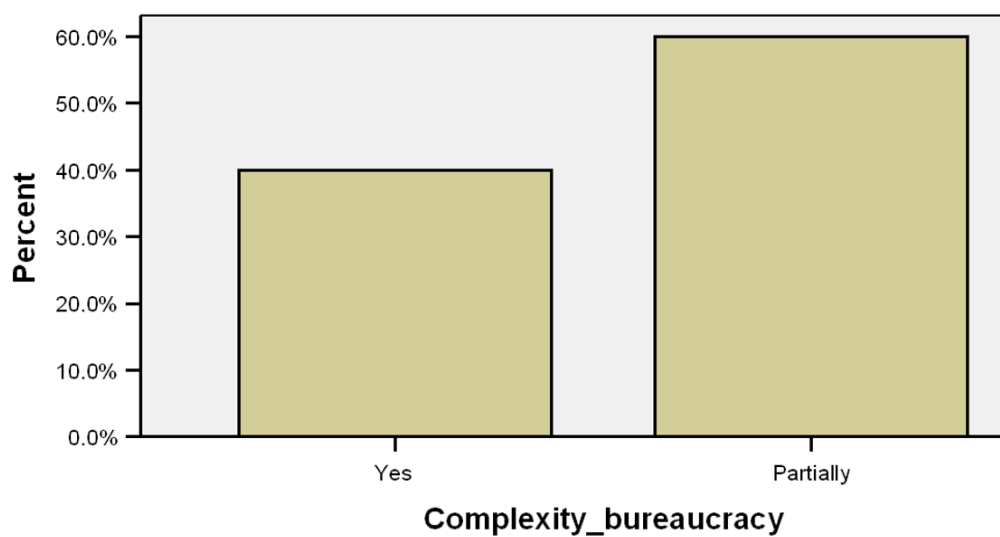
is a major obstacle for eGovernance, and fair treatment of different stakeholders are important for an effective eGovernance policy (Kabir, A., p-28, 2014).



Graph 8: Expert opinion about policy support from the Government

5.3.2 Barriers from Bureaucracy

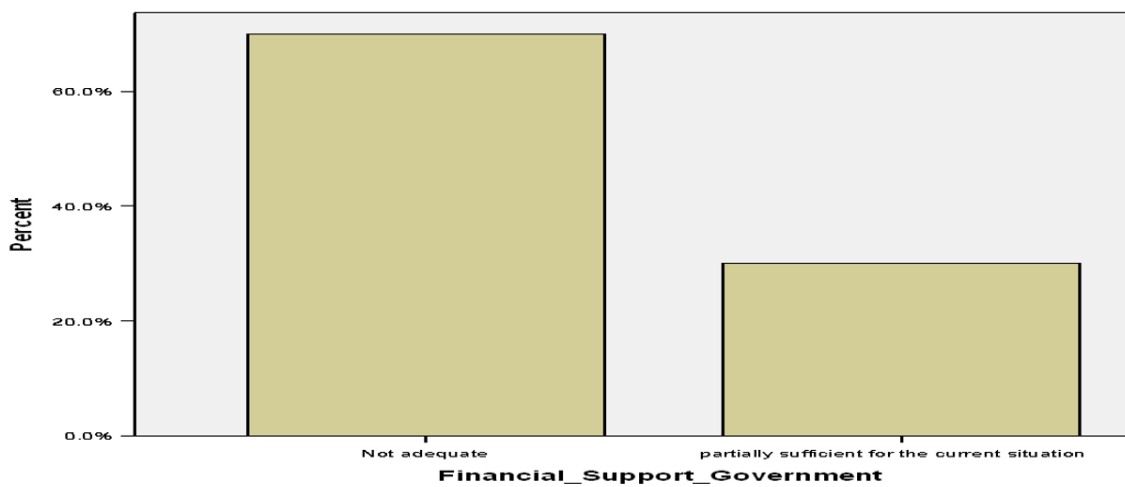
Graph 9 shows that around 40% of respondents said artificial bureaucracy is hampering the eGovernance project at the local government. In addition, there is a lack of coordination between different ministries (Sadik, S., P-13, 2013).



Graph9: Complexity from Bureaucracy

5.3.3 Financial Support from the Government

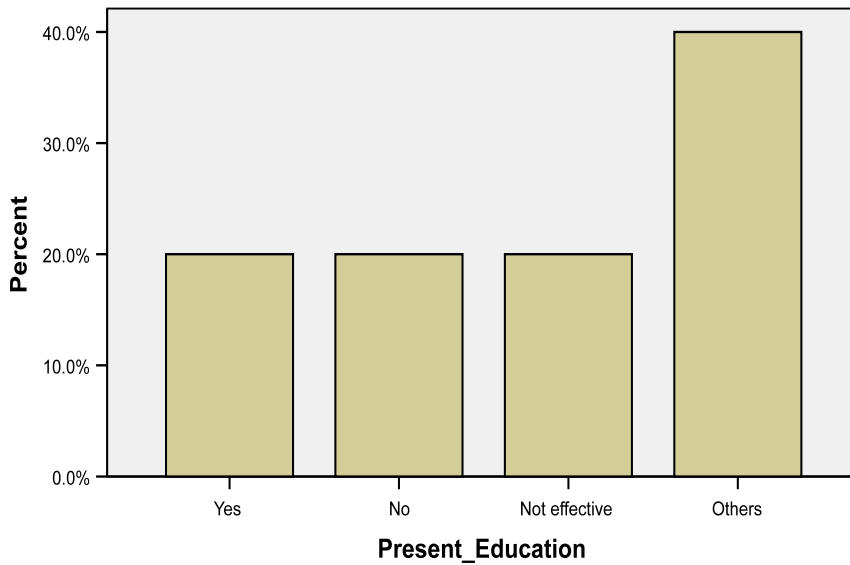
Graph 10 shows that more than 60% of local government experts said that the current financial support from the government is not adequate. It is a significant problem that the allocation of money from the ministry of finance faces various administrative impediments (Sadik, S., p-26, 2013). Most eGovernance related projects are financed by the international donor agency and international loans. Most international donor agency and foreign loans are approved conditionally and it has taken a long time to distribute money for the projects concerned (Sadik, S., p-36, 2013).



Graph 10: Financial support from government

5.3.4 Present Education

In Graph 11, the question asked concerned the present education. Around 20% of respondents said that education is not good, and 20% of respondents said that it is not being provided effectively. Lack of quality education is thus a major obstacle for the improvement of local government service delivery. Around 26% of private universities are not ensuring minimum quality while 15% of recently established public universities are providing education that is of poor quality (Satter, K., p-19, 2015).



Graph 11: Present education from a local government expert point of view

5.3.5 Skilled Project Manager

Graph 12 shows that 60% of respondents said that the government cannot provide sufficiently skilled project managers. Most of the universities are not able to provide an effective internship to the undergraduate students. Similarly, the government is not able to produce an sufficient amount of good project managers due to lack of collaboration between industry and university (Satter, K., p-28, 2015).



Graph12:Government can creating skilled project manager

Key findings addressed by the Local Government Experts :

1. Lack of policy support from the government.
2. Lack of adequate financial support from the government.
3. Lack of Skilled project manager.
4. Artificial bureaucracy problem.

5.3.6 Recommendations from Experts

The author of this thesis presented an open question to the local government experts to collect recommendations on how to improve eService at the local government, especially in the Union council. There are 10 renowned eGovernance experts in the national level. The author has selected 10 experts on the basis of their expertise such as experience in working in ICT departments and working on policy, either in the government and non-governmental organization.

Dr. Abdullha Kafi (Former joint secretary, Ministry of ICT)

Policy should be changed by the government with a special focus on primary and secondary education, as well as more ICT-based curriculum. Infrastructure development is essential in the rural area because some districts are still ignored for political reasons. In other words, political discrimination must be avoided by the ruling party.

Dr. Faruk. H. Ahmed (Former Director, R&D, BRAC)

ICT training must be ensured for the government service providers. The reality is that most of the senior employees don't know how to use computers, and some of them aren't interested in ICT training. Thus, the government should establish a policy whereby ICT training is a pre-requisite for receiving promotions or financial benefits.

Zahied Hossain (Director, Dnet)

There is a lot of mismanagement regarding the creation of the national database. Therefore, efficient project management is important to run ICT related projects. Local universities are not producing skilled professionals. Therefore, the government should focus on developing a strategy to increase the quality of higher education. This could

include establishing a higher education quality assurance commission that reports to the prime minister.

Dr. Billal Hossain (Head of the ICT department, Hazarzi Shajalal University, Sylhet)

Cyber-security is an important issue. Recently, Bangladesh has been facing some unexpected cyber-attacks from foreign countries. In Bangladesh, local public and private universities do not offer any cyber-security related programs. The government should influence the universities to offer cyber-security related programs as well as scholarshipstoboth bachelor and masters level students, especially those who are admitted to the cyber-security related program.

Prof. Dr. Safkhet Hossain (Department of ICT, University of Dhaka)

To build an effective eService delivery in the Union council information centre, we have to ensure adult ICT education. The government should prioritize adult ICT education in the national education policy. Local NGOs can be play a significant role in providing adult education in rural areas.

Prof. Dr. K. M. Abdul Bashed Mojumder (Former member, Policy and Research division; planning commission)

ICT is a vast issue with many interconnected aspects. Power is a significant issue as Bangladesh is facing an electricity crisis, especially in rural areas. Solar panels are not an effective solution in villages. Thus, the government should take initiative on how to supply electricity. Small power plant (coal-based) in the Upazila level can be an effective solution although it is true that land there may not be sufficient.

Dr. Abdul-Al-Ekream (Director, Planning section, ASA)

Public administration can play an important role in decision making, budgeting, allocation, and policy implementation. In the rural area or district level, there are many ICT projects that are not implemented effectively due to financial constraints or lengthy budget allocation. As a result, foreign agencies are dissatisfied due to inefficiency. So, public administration should be efficient and deliver more quickly.

Dr. Ali Ahmed (Former Chairmen, Public Administration Training centre)

Effective public policy and lack of skilled project manager are both the main obstacles in eGovernance related activities. The financial obstacle is not a major issue because our development partners are providing sufficient financial support. However, we are not able to run ICT project at the local government level properly. We don't have sufficient amount of skilled employees and corruption hampers the whole process. The government should empower the independence of the anti-corruption commission.

Dr. Rashed Latif (Senior Director, Bangladesh Planning Commission)

The Internet and supporting infrastructure is quite expensive in Bangladesh and there is a lack of balanced distribution between city and rural area. The government should take initiative on reducing expenses. Especially import duties and other taxes should be reduced for ICT equipment acquired by private companies. Also, Bangladesh telecommunication regulatory commission should do something about internet speed in rural areas because private internet service providers are not supplying to the rural area. Of course, in the rural area, most subscribers are not capable financially.

Dr. Ferdous Arfin (Former professor, ICT department, University of Dhaka)

Government must be prepared to create an effective policy framework for eGovernance. This policy should connect the entire education policy with ICT literature (preliminary and advanced), public administration development and training, and rural infrastructure development to empower local government authorities and the national power policy.

Section Six – Discussion and Recommendations

The purpose of this section is to discuss the findings based on both the primary and secondary data and present a summary of the key findings of the thesis. The section ends with a conclusion and some remarks on future research.

6.1 Discussion

According to the conceptual framework, the present study has identified the key barriers that are affecting the implementation of effective eService at the local government level in Bangladesh. From the citizen's point of view, around 16% of male respondents have experienced illegal financial demands from the Union council's staff. About 5% of female respondents complained about third party intervention, and more than 20% of male respondents said that they had been harassed by public officials.

An important question concerns the reasons for local government employees demanding money illegally from the citizens. The thesis found that around 32% of government employees agreed that bribing is a good way to get a job. In Bangladesh, nearly 38% of public recruitment is related to monetary bribes (Karim, M., p-13, 2010). It is difficult to say how many 3rd or 2nd class jobs in any department have been acquired through bribes as there is no academic evidence. However, the present study shows that 38% of employees said that any kind of gift for getting a job is fair, and around 36% of employees agreed that personal contact is the best way for getting a job. Personal contacts and the practice of nepotism is a major source of discrimination, and results in ideal applicants being abandoned by the employer when an employer or management receives illegal money or is pressured by a powerful person or a group. Approximately 24% of government departments receive political recommendations when recruiting (Bashed, M., P-27, 2014). As a result, it is very difficult to ensure professionalism among the employees and provide quality service because employees are using their position to earn extra money illegally to recover their investment.

Lack of job satisfaction is another significant obstacle to building professionalism (Aappa, P-16, 2010). Almost 2% of employees said that they expected a better job than

their current one. Large numbers of employees were not satisfied with their salary and social status. The thesis also found that infrastructure in rural area is not satisfactory. On top of that, lack of personal financial adequacy carries over to the professional life and has a negative effect on moral values (Sharma, S., P-68, 2009).

It is recommended that government should take initiative in improving infrastructure (roads, schools, colleges, communication facilities, and housing complexes) and public salaries to reflect the actual market price of goods. According to the expert's point of view, the ultimate barriers are lack of an effective policy support from the government which was raised by 30% of respondents. Present bureaucratic approach is not eGovernance friendly (Kabir, A., p-23, 2014). Different ministries are not informed enough due to their lack of knowledge about ICT and possible policies of improvement. Moreover, lack of adequate financial support was emphasized by more than 60% of respondents. Artificial bureaucracy problem was raised by 40% of respondents.

Some projects are supported by international donor agencies but their conditional funding approval process is quite lengthy. Present education is not supporting the eGovernance projects properly due to a lack of quality education. Around 26% of private universities are not ensuring sufficient quality while 15% of recently established public universities are providing poor quality education (Satter, K., p-19, 2015). Thus, the government should establish a common policy framework which should integrate all of the expert recommendations presented in this thesis.

6.2 Recommendations

The present thesis highlights the following recommendations:

1. High-speed internet must be ensured by the government in rural areas because citizens and Union council employees both admitted that internet speed is slow.
2. Considerable number of citizens indicated a lack of efficiency from Union council employees while the latter indicated a lack of training programs. Thus, Local Government division should arrange an effective training program carried out by trained personnel, not the top management.

3. Political intervention is indicated by all groups. Ministry of local government should act as an independent body and ruling party interference with local government must be avoided.
4. Numerous Union council employees said that they are not happy with their salary, social status, and infrastructure. Thus, the government should consider developing better infrastructure and improving salaries according to the present market prices. Financial dealings and political recommendations are significant obstacles to the recruitment process. The government should empower an independent anti-corruption commission.
5. Local government experts raised artificial bureaucracy problem. Government should thus ensure more timely and efficient resource allocation.
6. Local government experts raised concerns about present education because it is not aligned with local government needs. The government should incorporate effective ICT education in the primary level. The government should also arrange higher level IT training, especially on eGovernance project management for present government officials.

The focus of future research should be on how to solve the various barriers uncovered by the present thesis.

6.3 Conclusion

The purpose of this thesis has been to identify the main barriers to effective eService delivery at the local government level. Three different actor groups were interviewed for that purpose: citizens, Union council employees, and local government experts. It appears that the present education policy is not aligned with the demands of improving the delivery of eServices which rely excessively on the primary education level as well as self-educated population living in rural areas.

The government should consider how to provide better knowledge about and experience with ICT. To that end, the government should give more attention to adult education with ICT literacy in order to improve the quality of eService delivery. Similarly, future research should focus on how to improve education policy and how to bring ICT

literacy to both the young and adult population. Corruption in public recruitment is a big issue with almost 67% of government recruitments influenced by the dominant political parties (Sujon, P-23, 2014). Future research should focus on finding ways to tackle this problem of corruption that is having a negative impact on the general work ethic and standards in the public sector. Otherwise Bangladesh will continue to struggle with delivering public services at the local government level.

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Appendix-I

Dear respondent,

I am pursuing master's degree in Technology Governance program at Tallinn University of Technology, Estonia. My thesis title is "Present Status and Implementation Barriers of eService in the Local government of the People's Republic of Bangladesh". Below is the survey questionnaire to collect the relevant data from concern respondents. I would be grateful, if you would provide answer of the following questions which carries out my research work. Thank you for your precious time.

Group-A

1. What is your name?

.....

2. Where is your current location (with mobile number)?

.....

3. Age

Under 15 years old 15-24 years old 25-34 years old 35-44 years old

45-54 years old 55-64 years old 65-74 years old 75-84 years old

Above 85 years old

4. Gender

Male Female

5. Education

- Primary (up to class 5)
- Secondary (up to class 10)
- Higher secondary (up to class 12)
- Bachelor
- Masters
- Self educated

6. What is your profession?

- Doctor
- Teacher
- Student
- Farmer

- Self proprietor
- NGO worker
- Fisherman
- Housewife
- Others

7. How much you have been earning in a month?

- Below 7000BDT
- Above 10000BDT
- Above 15000BDT
- Above 20000BDT
- Above 25000BDT
- Above 30000BDT
- Dependent
- Others

7. Have you received e-service from Union council information center?

Yes No

8. Have you any mobile phone in your home?

Yes No

9. Have you a personal mobile phone

Yes No

9. Do you know how to use computer?

Yes No

10. Do you know how to use smart phone?

Yes No

11. Have you internet access in your mobile phone?

Yes No

12. Have you any computer at your home?

Yes No

13. Have you any computer at your work place?

Yes No

14. Do you use internet banking?

Yes No

15. Do you use mobile banking?

Yes No

15. Have you any online shopping experience?

Yes No

For local government's employees (Group-B):

1. How long you have been working in this Union council/Municipality?

.....

2. Offered or used any incentives (financial or otherwise) to be invited for the job interview for their position?

Y N

3. Offered or used any incentives (financial or otherwise) to be offered the job?

Yes No

4. Which of the following forms of incentives are most commonly used?

- Personal contracts. 1 2 3 4 5
- Financial incentives 1 2 3 4 5
- Political reference. 1 2 3 4 5
- Any kind of gifts or advantages. 1 2 3 4 5

5. What are the problematic issues which is impeding the e-service delivery to the citizens?

- Lack of effective training
- Low internet speed
- Language barrier
- Lack of motivation
- Internal grouping
- Political pressure
- Lack of internal infrastructure
- Excessive work pressure
- Lack of Citizen's cooperativeness
- Others

5.1 If lack of motivation, then please specify

.....

6. What languages should be used for e governance services to communicate with people?

Bangla English Others

This section's question is considered in 6 point scale: 1-poor, 2- fair, 3-satisfactory, 4-good, 5-excellent and 6-others

7. What is the level of your computer skill?

1 2 3 4 5 6

8. Are you satisfied of the provided internet speed?

1 2 3 4 5 6

9. Do you think enough training facilities are presented to adopt e- services providing?

1 2 3 4 5

10. Do you think current technology has been hampering to providing e-service?

Yes No

11. Are you satisfied to deliver the e-service to citizens?

1 2 3 4 5

12. What do you think that government has been allocating sufficient fund for ICT infrastructure's maintenance?

Yes No Partially

13. Have you specific recommendations how to improve service quality?

.....

For local government Experts (Group-C):

1. Do you think the government has been provided enough policy support to implement an effective e-service in the local government?

Yes No Not adequate Not effective for the current situation partially effective for the current situation others

2. Do you think the government has been providing enough financial support to develop local government?

Yes No Not adequate partially sufficient for the current situation others

3. Do you think the government has been creating enough skilled project managers for the local government especially in ICT field?

Yes No Not adequate others

4. Do you think current education system is enough to support to local government automation system?

Yes No Not effective partially effective others

5. Do you think complexity of bureaucracy from national government has been creating a barrier of the local government?

Yes No Partially

6. Have you any specific recommendations, how to develop e-service in local government?

.....
.....
.....
.....

For eService receivers (citizens): Group-A Extension

1. Are you satisfied when you received e-service from Union council or Municipality?

1 2 3 4 5

2. What kind of problems you have faced when you received e-service from Union council or Municipality?

- Low internet speed
- Lack of efficiency in the concern employee
- Required more time
- Hazard by the service provider
- Politically biased
- Third party interference
- Illegally financial demand from stuffs punishment should be imposed to the corrupt stuffs
- Lack of professionalism from service provider.

3. Have you any recommendations how to develop e-service quality in the local government?

.....
.....

Signature.....

Date.....

Appendix-II

List of Abbreviation

NGO	Non Government Organization
UN	United Nations
LG	Local Government
LGD	Local Government Division
BBS	Bangladesh Buro of Statistics
ICT	Information and Communication Technology
SME	Short and Medium Enterprise
EGDI	E-government Development Index
EPI	E-participation Index
ADB	Asian Development Bank
JICA	Japan International Cooperation Agency
LAN	Local Area Network
RAB	Rapid Action Battalion