

# **E-Governance in Public Service Delivery**

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## **A Study of Land Record Mutation Service in Bangladesh**

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# *Dedicated*

*To My Lovely Motherland Bangladesh*

*And*

*To My Beloved Father (Late), and Mother...*

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## Abstract

*This dissertation analyzes the effect of E-Governance along with few other factors in delivering land record updating service, popularly known as mutation, in AC (L) offices. The research finds that the citizens have to visit several times to offices, bear higher cost than the specified rate, and undergo sufferings for various reasons in getting mutation services. Major conflicts and litigations in Bangladesh have the root with land ownership, which have link with mutation as well. The study attempts to understand the pre-dominant factors to consider to address the problems in getting mutation service, and to promote client's satisfaction. This paper starts with background and context, research questions, explains the methodology used, reviews existing literatures, develops theoretical and analytical framework and finally presents and analyzes data. The study uses both quantitative and qualitative approaches for data collection.*

*This thesis explains the key factors affecting mutation service delivery in line with the analytical framework that identified five independent variables: E-Governance Readiness, Client Readiness, Administrative Culture, Age and Education. For this, Quantitative analysis like descriptive statistics, cross tabulation of data, Pearson's correlation, and regression analysis were performed through SPSS. The findings through quantitative analysis were triangulated by qualitative findings as well.*

*The paper reveals that among the five independent variables E-Governance Readiness, Client Readiness, Administrative Culture and Age have significant statistical relationship on mutation service delivery. E-Governance Readiness has positive relationship with service delivery. For higher level of E-Governance Readiness the service performance is better. This data supports the theory of E-Governance which is intended to foster efficiency and effectiveness in public service delivery and making public sector responsive to citizens. The study finds that with the gradual incorporation of E-Governance, public sector is modernizing itself competing with private sector.*

*The study also finds that service performance is better for administrative culture being more integrative. The above finding supports the theory of administrative culture explained by some prominent scholars March and Olsen (1989), Islam (2004) and Jamil (2007).*

*The most realistic finding is that clients of relatively higher level of readiness with better knowledge and capacity on mutation and ICT find the service performance better. This fact complies with the concept of demand side approach that client awareness can act as push factor in getting the service easily. Moreover without end-user be capable enough to receive the service coping up with technology, E-Governance is less likely to promote better service. This finding supports the concept of bridging digital divide to reach the benefits of E-Governance to the poor, disadvantaged and marginalized group of people.*

*Age shows to have negative relationship with service performance. It indicates that young aged people find the service performance better than more aged people. However, education is found to have no significant relationship with service delivery. The possible reason might be that educated people are accordingly aware of land related matters.*

*This document particularly explains how E-Governance affects service performance by reducing obstacles to service delivery and facilitating more access to information, easy monitoring of job status and easy authenticity check of documents, getting updated information of hearing date and so on.*

*This thesis also explains when and how E-Governance may not bring intended results. The paper concludes by addressing research questions and hypothesis linking with theory; and forwarding few policy implications.*

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## **Abbreviations and Acronyms**

A2I - Access to Information  
AC (L) – Assistant Commissioner (Land)  
ADB -Asian Development Bank  
ADC - Additional Deputy Collector/Commissioner  
ADM - Additoinal District Magestrate  
ADP - Annual Development Program  
ALR - Authoritative Land Record  
ANGOC - Asian NGO Coalition for Agrarian Reform and Rural Development  
ASO – Assistant Settlement officer  
ASP - Assistant Superintendent of Police  
ASPA - American Society of Public Administration  
AULAO - Assistant ULAO  
BanglaGovNet- Bangladesh Government Wide Network  
BBS - Bangladesh Bureau of Statistics  
BCC - Bangladesh Computer Council  
BDT - Bangladeshi Taka  
BS -Bangladesh Survey  
CS- Cadastral Survey  
DC - Deputy Commissioner/ Collector  
DESC - District E-Service Centre  
DLRS - Directorate of Land Records and Survey  
DPD - Deputy Project Director  
E-GEP - E-Governance Economic Project  
EGDI - E-Government Development Index  
ELRS - Electronic Land Record System  
ETS - Electronic Total Station  
G2B - Government to Business  
G2C - Government to Citizen  
G2G- Government to Government  
GoB – Government of Bangladesh  
ID- Identity Card  
IDLRS -Integrated Digital land Record system

ICT –Information and Communication Technology  
IPS -Instant Power Supply  
J.L. no – Jurisdiction List no  
LA - lad Acquisition  
LDT – Land Development Tax  
LT- Land Transfer  
MoLJPA – Ministry of Law, Justice and Parliamentary Affairs  
MoL – Ministry of Land  
MoPA - Ministry of Public Administration  
MoPTIT- Ministry of Posts, Telecommunication and Information Technology  
Mn- Million  
N.d. –No Date  
NESS - National E-Services System  
NGO – Non-government Organization  
NPM - New Public Management  
PMO - Prime Minister’s office  
RDC - Revenue Deputy Collector  
ROR- Record of Rights  
RS- Revisional Settlement  
SA - State Acquisition  
SAT Act – The state Acquisition and Tenancy Act  
SERVQUAL - Service Quality  
SMS - Short Messaging System  
SPSS - Statistical Package for Social Sciences  
TI – Transparency International  
UDC - Union Digital Center  
ULAO (Tahsildar) – Union Land Assistant officer  
UN - United Nations  
UNESCAP - United Nations Economic and Social Commission for Asia and the Pacific  
UNDP - United Nations Development Program  
UNESCO - United Nations Economic, Social and Cultural Organization  
UNO - Upazila Nirbahi officer  
UPS - Uninterrupted Power Supply  
URL -Uniform Resource Locator  
US - United States of America

# Chapter 1. Introduction

## *1.1 Background and Context*

Government, private sector, civil society, non-government organizations, media, and ultimately the citizens are key actors in a democratic state. All are interdependent on many issues, particularly the citizens and private sector have frequent interaction with the government. According to 16<sup>th</sup> US president Abraham Lincoln, *democracy* is the government of the people, by the people, for the people. As such, all activities of democratic government are meant for the citizens by whom they are elected and paid - which is often explained by principal-agent theory. According to this theory, government should act on behalf of citizens as an agent and they should be answerable to the citizens for their actions or inactions. However, 'public sector organizations perform poorly in many developing countries, in some cases they barely function at all' (Grindle 1997, p.1). Pervasive corruption and rent-seeking characterize many public sectors around the world, but the criticality of situation is clear when even well-intentioned public officials find it difficult to attend to public good (Kliggundu 1989 cited in Grindle 1997, p.1). In such situations citizens expect and demand reforms so that public resources are efficiently utilized; government activities are conducted in a transparent manner as applicable, public services are delivered in shortest possible time, with minimal cost, reduced or no hassle, and treating service seekers with due care. To meet the expectation of service seekers bureaucracy has to respond accordingly as they are the key service providers working closely with citizens.

Among many others, one of the frequently demanding public service is mutation<sup>1</sup> of land service delivered by AC (L)<sup>2</sup> under Ministry of Land. Citizens often face difficulty in getting services from government offices e.g. complexity in getting required information, unexpected delay in service delivery, paying extra cost as speed money, sufferings for various other reasons; and getting mutation service is of no exception according to various literatures in land service.

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<sup>1</sup> Mutation is the legal process of updating the title in the record (ROR) for legal transfer of land performed by AC (L) as per section 143 of SAT Act 1950.

<sup>2</sup> Assistant Commissioner(L) is in charge of upazila(sub-district) land office; keeps land records up to date, determines LDT to be demanded from each landowner, supervises *Tahsildar* to collect LDT, and inspecting their records

Bureaucracy is considered inefficient and ineffective in many developing countries like Bangladesh. Government of Bangladesh is adopting various strategies to streamline bureaucracy to ensure efficiency and effectiveness in public administration and public service delivery. The key strategy is to adopt ICT in governance system. The focus on service delivery is becoming intertwined with an emphasis on achieving cost savings and enhancing efficiency. The role of ICT in public service delivery is accordingly being revisited to enable effective inter-organizational linkages and consolidation of government systems (UN 2008). According to United Nations E-Governance Survey 2014, Bangladesh ranked 148<sup>th</sup> position regarding E-Governance Development Index out of 193 countries across the world. The political party in current regime in Bangladesh adopted the strategy of *Digital Bangladesh* in 2008 national election manifesto *Vision 2021 Bangladesh: A New Horizon*; and implementing many projects and programs to realize the concept. The broad outcome areas are human resource development to ensure better use of new technology; connecting citizens to ensure the benefits of Digital Bangladesh reach the marginalized and the disadvantaged; digital government pro-poor service delivery aspiring to leverage ICTs in all spheres of government to ensure delivery of services to those who are the least served (A2I 2011). Under the supervision of Prime Minister's office (PMO) a program named Access to Information (A2I) was initiated with the support of UNDP in 2007. The program pioneered in mindset change within Government to embrace ICTs as a powerful enabler for the nation's socioeconomic transformation (A2I Online a).

Therefore, trend towards reforming the public sector has emerged in recent years in Bangladesh like many other countries, primarily by the aspirations of citizens around the world, who are placing new demands on governments. The success of government leaders is increasingly being measured by the benefits they are creating for their constituents, namely, the private sector, citizens and communities. These 'clients' of government demand top performance and efficiency, proper accountability and public trust, and a renewed focus on delivering better service and results (UN 2008). Accordingly to modernize land sector in Bangladesh several digitization projects are undertaken for effective service delivery. Some AC (L) offices are providing services through ICT based tools to improve service performance. Assessing the performance of service delivery and factors affecting it might be worthy in adopting further measures. Particularly to what

extent E-Governance<sup>3</sup> is playing its role in enhancing service delivery gets importance in this dissertation. Hence, this study seeks to understand the predominant factors that affect mutation service delivery in AC (L) offices at upazila level.

## ***1.2 A Brief Description of Land Record Maintenance***

Bangladesh was a part of undivided India until 1947 and of the then Pakistan until got independence in 1971. The land area is 147570 square kilometers with total population of 142.32 mn being the 8<sup>th</sup> populous nation in the world (BBS 2011). As such, it is pertinent to explain the brief history of land management in Indian subcontinent. Kautilya's (350–283 BC) Arthashastra<sup>4</sup> provide some documentary evidences of land right and ownership in ancient Indian sub-continent, which indicate that the ownership of land belonged to the king, where the subjects could use land on the wish of king. During Mughal<sup>5</sup> period, the permanent settlement act 1793, vests rights to land to zamindar<sup>6</sup>.

Land ownership records are prepared through settlement survey. During 19<sup>th</sup> century, the British established an elaborate system of land surveys and registration in undivided India for revenue collection purposes. Cadastral Survey (CS) commenced in 1888, continued until 1940. It created the original Record of Rights. In 1950, the Zamindar system was abolished through the introduction of the East Bengal State Acquisition and Tenancy Act in 1950 (GoB 1950). The tenants of the zamindars became tenants of the state. The revenue department started collection of revenue directly from tenants. From 1956-62 a State Acquisition (SA) survey was conducted for CS update, though plot number and many other land details remained intact. In 1965 Revisional Settlement (RS) operations commenced, but remained incomplete in many areas (CARE 2003). Survey conducting during Bangladesh period is called BS (Bangladesh Survey) survey.

However, records prepared through survey are subject to change upon change in ownership through sale, inheritance, gift, partition/amalgamation of records, court order or in many other ways. Hence ownership changes and records to be updated accordingly which is called mutation. Many services are delivered from AC (L) offices. The study

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<sup>3</sup> E-Governance is the 'utilization of the internet and world wide web for delivering government information and services to citizens' (UN and ASPA 2002).

<sup>4</sup> The *Arthashastra* is an ancient Indian book written by Kautilya

<sup>5</sup> Mughal period started by Emperor Babar in 1526 and lasted until British came to power in Indian subcontinent.

<sup>6</sup> Zamindar was the large land proprietor evolved during Mughal period with ultimate tax collection from tenants

deals with only mutation service. Mutation can be done in two ways, one upon application from applicants and another through LT notice from sub-registry office upon registration of deed. Although it might be convenient for service seekers if mutation procedure starts automatically upon registration of land transfer, but rarely practiced considering the LT notice unclear and illegible (MoL 1990). People in most cases have to apply for mutation separately. They need to visit several times, wait hours after hours and lose their valuable working time. In addition, they have to spend more beyond normal charge. There are different sorts of sufferings to the service seekers in getting their mutation done.

Recently several projects have been undertaken for digitization of land records. Most of the digital land management projects are under implementation stage. In some areas, existing mouza maps<sup>7</sup> and khatians<sup>8</sup>, and mutation khatians<sup>9</sup> are being digitized; and there are provisions for online application facilitated by A2I project led by PMO office for getting nakals<sup>10</sup> (certified copy) of ROR<sup>11</sup> from district record room through nearby UDC or directly through internet. People need not appear in person in getting *nakals*. Some AC (L) offices have digitized their records and launched websites for providing online services to clients. However, E-Governance is a set of ICT tools spanning many dimensions, which require proper planning for effective implementation. Most of the projects (central and local) are running as pilot basis and yet to undertake an integrated and unified approach for digitization of land records and mouza maps across the country for proper realization of E-Governance. The use of ICT in service delivery is assumed a key tool to streamline government business and service delivery. There might be many other crucial factors to consider for better service delivery.

Therefore, it might be worthy to assess the performance of mutation service delivery and identify the critical factors to take care of in developing strategy for improved service performance considering the view of service seekers as well as service providers.

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<sup>7</sup> Mouza Map is a map specifying the location, area and type of land of a mouza. Whereas mouza is the geographical unit of revenue area, generally consists of one or more village; In a union there are few mouzas.

<sup>8</sup> Khatian is the record of ownership entailing owner's personal information, land information, and share etc.

<sup>9</sup> Mutation Khatian is the ownership certificate issued to new owner after mutation is complete where brief accounts of land (Mouza no, plot number, amount of land etc) are mentioned

<sup>10</sup> Certified copy

<sup>11</sup> ROR is the Record of Rights in which the information of landowner along with particulars of land are recorded

### ***1.3 Public Service, E-Governance and Mutation***

Public service is the service provided by government to people living within its jurisdiction, either directly or by financing provision of services (McGregor et al. 1982). Therefore, public service is meant as delivery of services by government entities (organizations) to citizens, business and other service recipients. In this paper land record updating service, popularly known as mutation, is chosen as domain of study. Some other public services provided in Bangladesh are delivering national ID card, issuance of passport, land transfer deed registration, car registration, building permission, driver's license, birth and death certificate, education, health care, fire service, telecommunication, water, or electricity supply service, maintenance of law and order and so on. ICT is used in delivering many public services in Bangladesh.

#### ***E-Governance***

E-Governance is considered one of the powerful tools to improve governance and service delivery across the world. UN/ASPA (2002, p.1) defines E-Governance as 'utilizing the internet and world wide web for delivering government information and services to citizens.' World Bank (2014) defines it as the use of ICT by government agencies that have the ability to transform relations with citizens, businesses and other arms of government.

Saugata & Masud (2007) defines E-Governance as the application of ICT for delivering government services, exchange of information, integration of various standalone system and services between G2C, G2B, G2G as well as back office processes and interactions within entire government framework.

UNESCO (online) defines, E-Governance is the public sector's use of information and communication technology with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. Online service can be defined as the electronic provision of services to customers (Saanen, Sol & Verbraeck 1999).

The activities of E-Governance can be demonstrated by four dimensions: i) E-services – Electronic delivery of government information and services through interaction with

public. ii) E-file management - Managing business processes and decision making through e-File system. iii) E-participation - Platform for generating public consensus through online decision forum, video conferencing, email, web etc. iv) E-commerce - Online financial transaction (Cook et Al. 2002 cited in Kabir and Baniamin 2011).

Therefore, E-Governance can be defined as the use of ICT in government offices for electronic decision making system, maintaining electronic database of records and delivering government information and services in electronic form accessible by public through World Wide Web (www), email, cell phone, fixed phone and so on.

### ***Mutation***

Mutation is the legal process of correcting/updating the title in the record (ROR) for legal transfer of land performed by AC (L) as per section 143 of SAT Act 1950. After completing mutation process a mutation khatian is issued to applicant and the records in the corresponding registers are duly updated. As per section 143 of SAT Act 1950, the collector shall maintain up-to-date ROR by incorporating therein any changes on account of (a) mutation of names as a result of transfer or inheritance; (b) subdivision, amalgamation or consolidation of holdings; (c) Lease of khas<sup>12</sup> land or land purchased by government. The procedure of mutation as per section 143C of SAT Act 1950 (GoB 1950) are:

*(i) The Revenue officer on receipt of the notice under section 89 shall open a file for mutation of record-of rights and shall issue notice to the co-sharers of the holding for mutation.*

*(ii) For this purpose the Revenue officer shall fix a date for objection if any. If no objection is raised within the stipulated period, the Revenue officer shall correct the record-of-rights accordingly.*

*(iii) If any objection is filed by any co-sharer of the holding, then the Revenue officer shall fix a date for hearing both the parties, and after hearing, the Revenue officer shall pass an order stating the reasons thereof, and the ROR shall be corrected accordingly.*

Some documents need to be attached while applying for mutation. The requirements of mutation are: i) certified/main copy of khatian (SA/RS/BS khatian/mutation khatian), ii) inheritance certificate (within last 3 months), iii) certified/main copy of deed (as

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<sup>12</sup> Government owned land

applicable); iv) via<sup>13</sup> deed since last survey, v) certificate of payment of LDT; vi) court order/decreed/verdict (as applicable); vii) trace map; viii) image of applicant/representative.

Moreover, it is to be sure that the documents collected from the transferor are correct and has possession of the land. Also the land is not listed as abandoned<sup>14</sup> property/vested<sup>15</sup> property/non leasable khas<sup>16</sup> land; there is no certificate-case<sup>17</sup>; it is not a mortgaged property/acquired property by government; there is no injunction of court on the land.

Under MOPA, office of the AC (L) updates ROR through mutation as per section 143 of The State Acquisition and Tenancy Act 1950 (GOB 1950). Union Land office(Tahsil office) under AC (L) collects Land Development Tax (LDT) and keeps accounts of revenue collection; lodges certificate case to certificate officer to collect LDT from defaulter; reports to AC (L) in mutation process through investigation; updates records according to mutation, and other related jobs. Union Land Assistant officer (ULAO) is in charge of union land office. There are several ULAO offices under an AC (L) in an upazila (Sub-district).

#### ***1.4 Statement of the Problem***

Land management system maintains land records of the public as well as of government. Mutation is a vital part of land management system by which title in ROR is updated for transfer of land. In case of land transfer through buy/sale, people need to have actual ownership information of a particular plot of land. It is supposed to be very simple matter, which people are entitled to know. However, in reality, sometimes it is very complex. Some people manage to get such information, some face administrative complexity, and some do not have enough knowledge about land. Moreover, people need application form, the requirement of mutation, cost and procedure of getting service. Here lack of access to information is the problem. Along with the application, many documents are required to be attached. Collecting those documents is sometimes difficult. Most of the

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<sup>13</sup> Deed through which the seller got ownership of land

<sup>14</sup> Abandoned property is the property of an owner who is not present in Bangladesh or whose location are not known or who has ceased to occupy, supervise or manage in person his property.

<sup>15</sup> Vested property is the property of the minority people, who left the country, confiscated by the then government while Bangladesh was part of Pakistan.

<sup>16</sup> Government owned land

<sup>17</sup> Case issued for long term due of LDT

times, these documents need to be collected from the seller - which might be faulty or fake in some cases. Verification of those documents through concerned offices like AC (L), ULAO office, district record room as well as sub-registry office is also complex. While delivering mutation service the officials enjoy high discretionary power as land ownership records are not conclusive by single document, rather khatian along with land transfer deed, via deed, mutated khatian and other documents altogether are relevant for ownership decision by a Civil Court (Mia 1996; Woodcock et al. 2008). The documents may be as old as more than 70 years old, since first record preparation through CS survey in 1940s. Hence, it is difficult to be confident about the authenticity of land ownership. Moreover, whether the land is vested, abandoned, khas or disputed property need to be ensured. For various other reasons getting mutation service is sometimes difficult. Major conflicts and litigations in Bangladesh have the root with land ownership, which have link with mutation as well. Some devious persons including some staffs might make the situation so complex that people have to visit several times and wait there for longer hours losing their valuable working time. In addition, they have to bear additional cost including extra payment and undergo many sufferings.

Sometimes people are defrauded by buying disputed land. There are about 25% of all land records, constituting about 2.35 million acres, are disputed (Barkat and Roy 2004). According to Honorable Law Minister, the running land disputes are 1.35 million in Civil Court in Bangladesh (The Daily Kaler Kantho 2015, 09 Sep). One respected DC in Chittagong Division mentioned that 80% of the disputes in Bangladesh is based on land (The Daily Kaler Kantho 2015, 28 Jul). As ownership records are updated through mutation, conflict is most likely to have relation with mutation.

Nahrin and Rahman (2009) in a paper mention that, land ownership record in Bangladesh is inefficient and incomplete. There are scope of fraud and forgery during survey and settlement, registration, and mutation process. USAID (2010) identified that in Bangladesh, 'land rights are insecure in large measure, because of an inefficient, and corruption-prone system of land titling and registration'. There are administrative complexities and massive corruption in getting land related services (TI 2011; TIB 2015).

Hazlett and Hill (2003) in a paper examine how electronic government is being used in improving public service delivery and the actual and potential problems inherent in this.

That paper argues that although there have been examples of creative use of electronic government in the public sector, there is lack of evidence to support the claim that the use of technology in service delivery results in less bureaucracy and increased quality. That paper raises the question: ‘Can E-government produce truly innovative, responsive public services, or merely exacerbate electronically, existing shortcomings?’

45 years have passed since independence and 20 years have passed since first attempt to improve service delivery in land sector through adoption of ICT. Many initiatives and projects are undertaken centrally and locally to incorporate ICT in digitizing land records, mouza maps; and bringing service delivery to the doorsteps of citizens. Many of the AC (L) offices are using ICT for service delivery of mutation and hosted websites. There is yet to develop a uniform and standardized system about how to digitize the entire land records and mouza maps in the country to make the system efficient, effective and responsive to client. In democratic governance, it is imperative to take into account the citizen’s view regarding policy implementation, public service delivery system and to reflect their expectation in policy process. There are fewer studies on role of E-Governance in service performance. Assessing current performance of service delivery as well as impact of ICT based services might reveal the gaps in policy implementation to adopting proper strategy in enhancing service performance. There may be many other factors to consider for improving service delivery.

Hence, the issue of the current study is to explore the dominant factors that affect mutation service delivery through empirical data.

### ***1.5 Significance of the Study***

Human being depends largely on land as the major source of basic need and mineral resources. People aspire to have a piece of land for shelter to survive. Bangladesh is the 8<sup>th</sup> populous state in the world where demand for land is extremely high. The record of ownership of land is maintained by government offices like registration office, AC (L) office, and district record room. Article 42 of The Constitution of Bangladesh (1972, revised 2014) sets out right to property as a fundamental right. Therefore, it is the constitutional obligation to ensure property rights as fundamental human rights in Bangladesh. These rights are protected through legal means, preparing and maintaining Record of Rights (ROR), issuing khatians, deed of land transfer, and mutated khatians as

ownership record - that establish the right to own, use, and enjoy the land. For various reasons land are transferred, accordingly mutation needs to be done. Through mutation, title and right to land is transferred to new owner, a mutation khatian is provided to him/her and ROR is corrected/updated accordingly. Therefore, mutation is important for landowners. Allegedly, there are unexpected delay, hassle and sufferings to the public in mutation service delivery in some cases. The service seekers lack sufficient information in getting the mutation service.

Paradigms of public administration identify E-Governance as instrumental for improving governance, increasing efficiency and effectiveness of service delivery. Many initiatives are undertaken centrally and locally to incorporate ICT in digitizing land management system and bringing service delivery to the doorsteps of citizens. Many of the AC (L) offices are using ICT for mutation service delivery and hosted websites. With intervention ICT there might be some observable changes in service delivery. It might be useful to understand whether ICT projects are providing short-term tangible benefits of the projects as well as making the projects scalable and sustainable in long term. However, there are fewer studies on recent status and contribution of E-Governance on mutation service delivery in AC (L) offices. It is also imperative to understand which factors critically affect service delivery. Assessing service performance might reveal the gaps in policy implementation which might be taken as policy input as well. Therefore, it is imperative to assess service performance as well as identify the critical factors in addressing the major problems in mutation service delivery in AC(L) offices.

Moreover, the interested readers, mass people, academics, researchers, practitioners, policy analysts, political scientists, above all the policy community might find the study worthy.

## ***1.6 Objective, Research Questions and Hypothesis***

### ***a) Objective of the Study***

In land management system, preparation of complete and accurate ROR<sup>18</sup> (Record of Rights) and its proper maintenance is essential. There are frequent requirement of updating and retrieval of land records, especially for land transfer, land lease and so on.

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<sup>18</sup> ROR is the Record of Rights in which the information of landowner along with particulars of land are recorded

Literature shows that people have to devote a lot of time, money and energy in getting mutation service and there are harassments to public in availing desired service from land offices. E-Governance is considered instrumental to modernize public administration in improving public service delivery. Assessing the factors affecting service might be a guiding framework to adopt proper strategy in enhancing service performance. Hence, this study seeks to identify predominant factors to look at in addressing the problem in mutation service delivery with increased client satisfaction.

### ***b) Research Questions***

To attain the objective of the study the response to the following research questions are sought:

- i) What are the pre-dominant factors that affect land record mutation service at AC (L) offices in Bangladesh?
- ii) How E-Governance affects mutation service delivery?

### ***c) Hypothesis***

The following hypotheses are formulated based on literature review, theoretical and analytical framework for investigation in addressing the research questions.

H1. The higher the level of *E-Governance Readiness* the better the service performance is.

H2. The more the *Administrative Culture* is integrative, the better the service delivery is.

H3. The more the *Client Readiness*, the better the service delivery is.

H4a. The service delivery for aged people is better compared to less aged people

H4b. The service delivery for educated people is better than less-educated people

## ***1.7 Operational Definition***

Mutation is the legal process of correcting/updating the title in the record (ROR) for transfer of land ownership.

*E-Governance Readiness* is the level of *Readiness* of AC (L) office in delivering mutation service online. It is assessed by *Online Service Delivery Status* of AC (L) offices. *Online Service Delivery Status* is measured based on some criteria including the web content,

information dissemination, downloadable forms, non-financial transaction, electronic authentication of citizen's identity, financial transaction, inter-connection to other departments.

*Administrative Culture* is 'norms and values that shape and influence bureaucratic attitude, interpersonal relationship and performance' (Jamil 2007, p.2). It is based on the integrative-aggregative<sup>19</sup> administrative practice measured by culture of *tadbir*<sup>20</sup>. *Tadbir* is the practice of request/influence by self-power and position or from any influential/powerful source or through use of money power to influence the mutation process beyond normal procedure.

*Client Readiness* is the knowledge and capacity of clients in availing the service effectively. It is measured in terms of knowledge of mutation, ICT, and file downloading; ownership of mobile, smartphone/ computer, internet and electricity connection.

*Performance of Service Delivery* is the performance measured in terms of service quality, cost savings and satisfaction from the perspective of both service seekers and service providers. Service quality is measured by reliability, responsiveness, empathy, assurance dimensions of service quality. Responsiveness is the promptness in service delivery and quick responding to client's complaint/feedback. Reliability is the accuracy in service delivery, consistency and dependability of service being able to track the progress of service easily. Empathy is the caring of individuals through easy access to officials, easy communication; and sufferings to the clients are less. Assurance is the credibility of service measured whether the system is transparent providing adequate access to information. Cost saving is considered in terms of less travel cost, less extra payment, and cost of operation less. Extra payment is meant whether any payment has to make beyond normal fee. Satisfaction is the perceived satisfaction of service providers and service seeker regarding mutation service delivery.

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<sup>19</sup> 'The aggregate role entails responding to interests of stakeholders, some of whom are quite powerful. The officials enter into exchange relationships similar to economic transactions like negotiation, coalition building, promises etc. In contrast the integrative role involves being more concerned with fairness, justice, awarding rights (March and Olsen 1989 cited in Jamil et. al 2013)

<sup>20</sup> *Tadbir* is a well-known term in Bangladesh literally meaning persuasion in getting things done. It is a popular mechanism employed frequently to get things done in public offices by bypassing, bending, breaking, or delaying what might be termed a rational approach to decision making (Jamil et. al 2013). Some kinds of people employ as many ways as necessary to get job done through this mechanism beyond normal procedure which is best explained by *tadbir*.

### ***1.8 Scope and Limitation of the Study***

This research concentrates on identifying critical factors that affect mutation service delivery; particularly the effect of E-Governance in AC (L) offices. The study is limited to only mutation service delivered by AC (L) office and geographically limited to selected areas in Bangladesh. It does not deal with other services provided from AC (L) offices.

In quantitative analysis, E-Governance Readiness is measured based on Online Service Delivery Status. As there is no agreed upon standards for measuring other indicators like Telecommunication Infrastructure and Human Capital at institutional level; these indicators has not been included in quantitative analysis. However it is assumed that Online Service Delivery Status largely explains E-Governance Readiness.

AC (L) offices with highly developed or very highly developed *E-Governance Readiness* could not be found, where more variation in dependent variable might be expected. More offices with different level of E-Governance could be taken in study. The sample size could be larger for better result where the more variation of the variables might be observed, however could not be taken for limitation of researcher.

Security issues might be taken as performance criteria in protecting land records from unexpected alteration or damage which is not considered here to avoid complexity.

### ***1.9 Organization of the Paper***

This paper is organized according to the following chapters.

Chapter one presents the background and context of the study along with overview of public service, mutation of land, and E-Governance. It includes statement of the problem, objectives and research questions, hypothesis, rationale, scope and limitation of the study along with operational definition. Outline of each remaining chapter follows.

The second chapter deals with methodology of the study, the research methods to be used in conducting the study along with data collection technique, and methods of data analysis.

The third chapter deals with the review of literature to explore the previous research findings regarding E-Governance, public service delivery and mutation. The literatures are analyzed to understand the role of E-Governance in mutation service delivery and find the scope and rationality to conducting the current study.

The fourth chapter develops theoretical and analytical framework in conducting the study based on existing theories and models. It presents matrix of variables, and indicators. The fifth chapter presents the current status of E-Governance in AC (L) offices in Bangladesh.

The sixth chapter classifies, presents, analyzes data. The data collected through survey, interview and case study methods are presented and analyzed with the aid of SPSS (Statistical Package for Social Sciences) and Microsoft Office tools; and finally presents the critical factors for E-Governance success for delivery of mutation service effectively.

The seventh chapter summarizes the findings of the study to address the research questions, objectives, and validate hypothesis. It concludes the study along with policy recommendation and suggestion for future research. References, Questionnaires are annexed at the end the paper.

## **Chapter 2. Research Methodology**

A research design is ‘a plan of proposed research work’ (Aminuzzaman 1991, p.53). This chapter provides an overview of the methodological approaches to conduct the current study. It also discusses research methods and processes, study area, sample size, unit of analysis, data collection methods and data sources and so on.

### ***2.1 Research Methods***

S. M. Aminuzzaman (1991, p.33) defines research method as ‘the functional action strategy to carry out the research in the light of the theoretical framework and guiding research questions and/or proposed hypothesis’. There are three types of research design to conduct research in social science: qualitative, quantitative and mixed approach.

Qualitative and quantitative approaches are mainly used to examine and understand the opinions of the respondents on social problems which make generalization about the problem; and examine the relation among the variables used in research to test theories, respectively, while both are considered in using mixed approach (Creswell 2008, p.8).

In the current study, a combination of quantitative and qualitative approach i.e. mixed method research approach will be conducted. Aminuzzaman (1991:43) opines that the combination of data collected through mixed methods enables to explore, unravel and understand problems, issues and relationships.

Quantitative data was collected through questionnaire survey. Content analysis, Interview and Case Study method followed for collecting qualitative data. The data collected has been triangulated and analyzed to address research objectives and research questions.

## ***2.2 Study Area***

The primary data collected from three AC (L) offices of three districts namely Chittagong, Gazipur and Dhaka among 64 districts in Bangladesh. Secondary data collected through content analysis as available in literature, journal articles, websites, books, report etc. Among the three districts, there are 14 upazilas in Chittagong district, 5 upazilas in Gazipur district and 5 upazilas in Dhaka district.

## ***2.3 Unit of Analysis***

The study is designed to understand the status of E-Governance and factors that affect mutation service delivery from AC (L) offices. Therefore, the unit of analysis of the study is the respondents of AC (L) offices at Upazila level. The selection of offices has been made through purposive sampling visiting websites of different AC (L) offices and identifying one site of each category through observation covering different level of online services from lower to higher level available; and respondents chosen through random sampling.

## ***2.4 Data Collection Methods and Sources***

The data was collected from primary and secondary sources. Secondary data was collected through content analysis. Content analysis is a research technique for objective

and systematic description of the manifest content for certain communication (Berelson 1952 cited in Aminuzzaman 1991). Principles of authenticity and principles of objectivity are two important principles of content analysis (Aminuzzaman 1991). These principles are kept in mind while doing content analysis.

Data collection methods for primary data are i) Questionnaire Survey, ii) Case Study of service recipients, and iii) Interviewing key service providers.

Survey method is used as 'it is probably the best method available to the social scientists interested in collecting original data for purpose of describing a population too large to observe directly. It describes the current practices and events. Survey also helps in establishing relationship between variables' (Aminuzzaman 1991, p. 39-40). Interview method helps to get real view of the issue under study from the experienced person or practitioners; which is not published and often not available from other sources. Interview is helpful to understand the process and practices under study. That's why interview method is used in the study.

Case study method is used for intensive examination of a single unit, such as a person, a small group of people or indeed a single organization. It enables us to explore, unravel and understand problems, issues and relationships (Ibid). A case study is a specific instance that is frequently designed to illustrate a more general principle (Nisbet and Watt 1984, p.72), it is 'the study of an instance in action' (Adelman *et al.* 1980). Case study method helps to relate facts and reality with theory. Case study helps in explaining a complete picture of particular incident in a vivid manner to explain issues with real life experience and might fit well current study. Few case study is included in the study to validate the findings of quantitative analysis.

#### ***2.4.1 Sources of Secondary Data***

Sources of secondary data are the existing literatures, websites, journal articles, books, newspapers, reports, and research works etc.

#### ***2.4.2 Sources of Primary Data***

Primary data was collected through the following methods:

- 1) Questionnaire survey: The sample size of the survey is 52. A questionnaire survey was conducted among 45 general service seekers getting mutation service from 3 AC (L) offices through random sampling and 7 service providers of different AC(L) offices. The objective of the survey is to gather sufficient data to addressing research questions and validate hypothesis.
- 2) Case study:
 

3 (three) cases have been taken with open-ended questions to explain the experience of service seekers in getting mutation service, assess the dominant factors associated with mutation service delivery and validate findings of quantitative analysis.
- 3) Interview the key officials dealing with E-Governance and/or Land related Services:
 

12 (twelve) key service providers were interviewed through open-ended questions to understand the current status of E-Governance as well as key problems and possible solutions to improving mutation service delivery in land management system. The data collection methods and sources are listed in the following table.

Data collection methods and data sources are mentioned in Table 2.1.

**Table 2.1: Data Collection Methods and Data Sources**

Data Collection Method	Data Sources	No. of respondents	Area
Questionnaire Survey	Service seeker (15 in each office x 3) and 7 Service provider ( 3 AC Land, 1 Kanungo <sup>21</sup> , 1 Mutation Assistant and 2 ULAO )	52	3 AC(Land) offices of three different level of E-Governance
Interview (Open ended question)	1 Additional Secretary, 1 Divisional Commissioner, 1 Additional Divisional Commissioner, 2 ADC(Revenue, ICT), 1 Senior Assistant Chief, 1 Assistant Chief, 2 DPD (Project), 3 IT expert (Programmer/Senior Programmer in Ministry/DC office)	12	-Do-
Case Study	General Service Seeker	3	-Do-

<sup>21</sup> Kanungo – Sub- Assistant officer under AC (land)

## ***2.5 Duration of Data Collection***

The duration of data collection was for 1 (one) month starting from 16<sup>th</sup> August to 15 September, 2015. The following chapter reviews existing literature to understand the current status of land related service delivery and findings of the literatures of different authors.

## **Chapter 3. Literature Review**

This chapter reviews literatures on land management system, mutation service delivery and E-Governance. The ultimate goal of public offices is to serve the people. For delivering better services, effective, efficient and transparent governance system is essential. Understanding the existing literatures in land management system and service delivery gives a general insight of the situation of land management system and service delivery; guide and provide scope for conducting new study. Hence the objective of this chapter is to review the findings of existing literature regarding E-Governance, land management system, mutation service; identify the scope of conducting current study and receive the findings as input to current study.

### ***3.1 Literature on Land Management System and Service Delivery***

Barkat and Roy (2004) in a study deals with land litigation causing huge public sufferings. The paper identifies that around 2.5mn operating land litigation including 1.4 mn pending cases are clogging the courts annually. The annual total amount of land under litigation is about 2.35 mn acres. This causes loss of assets by household under litigation is BDT 115,195 mn per year and the annual amount of incidental expenses related to land litigation is BDT 248,599 mn with 50% as bribe. The authors add that the actual loss might be higher if opportunity cost of time, cost of forced erosion in standards of living, physical and mental sufferings, care for health and education of family members cost of deteriorating social bondages, cost of deteriorating law and order situation within the framework of criminalized economic, political and administrative system. They marks land litigation as curse to family in litigation. This study reveals that misuse of administrative power, irregularities in registration, mutation by forged document, dispute among heirs, irregular distribution among co-shareholders; forceful possession, improper

management of khas land etc. are causes of land litigation. The study reveals the enormous public sufferings in getting land related services. This paper depicts the scenario of poor land management system and service delivery in land sector in Bangladesh.

Nahrin and Rahman (2009) in a paper find that conventional methods of land survey, preparation and updating of land records, maintenance of all related data for each parcel of land makes land administration and management incomplete and inefficient. Inadequate and improper land records make the land transfer system complicated which ultimately affects service delivery. They describe the problems of present land management system in Bangladesh like distortion of land records at various stages, corruption, and poor quality of record maintenance. They mention that conventional preparation of ROR are vulnerable to tampering and distortion; and lack of the systematic and updated source of information has made the existing land record system ambiguous that results innumerable land disputes and causing enormous public sufferings. They suggest for introducing unified land information system for incorporating land information land ownership to prevent tampering of records.

Nayem (2010) investigates the problems of implementing citizen charter for improving service delivery in Upazila land offices. The citizen charter was made effective since 2008 to make land administration transparent, responsive to citizen's demand, and accountable. The study reveals that the complexity of land management system, citizens unawareness, lack of resources, conflicting rules and regulations, backdated system, lack of training, lack of freedom of opinion, workload, lack of logistic support, corruption in land sector etc. are working as bar of Citizen Charter(CC) implementation.

Islam (2013) deals with a circular on mutation issued by Ministry of Land in 2010 to make a responsive, transparent and accountable public service fixing service process, time and fees of mutation of land records in land offices. The study finds the implementation of the circular in land offices is not satisfactory in enhancing mutation service delivery. The findings regarding the barrier in implementing the circular in land office is almost similar to Nayem (2010).

ANGOC (2011 online) deals with land use policy in Bangladesh. The study developed Land Reform Development Index (LRDI) and Land Reform Monitoring Tool (LRMT)

for monitoring the directions of land reform. This paper explores the major factors hindering the implementation of agrarian reform include: i) insufficient and confusing laws and legal dispute settlement bodies, ii) an inefficient administration system that churns out dual or multiple land ownership documents, and iii) an expanding shrimp cultivation industry that edges out small farmers in favor of big shrimp farms.

Choudhury (2008) in a study states that ‘powerful quarters, organizations having link with political parties, influential people with connections and musclemen are taking over valuable lands with forged documents with connivance of the corrupt officials and lower level staffs of Land Ministry and other government department and agencies. ... Land grabbing has been made easier because ministries and agencies don’t have complete list and proper record of land’ (p. 44-45). This paper also mentions that due to illegal occupation by land grabbers more than 150,000 acres of forestland are reported to have lost. While those grabbers sell the illegally occupied land to innocent public, they ultimately suffer in updating records in their name and possessing the land.

Mohiuddin (2008 online) focuses on land reform, land tenure of land management. It tends to provide an impression on the platform of corrupted acts, like dishonesty, bribery and fraud as the central focus of the analysis.

TI (2011) in a paper mentions that corruption that occurs in public administration and government services is a common feature in the land sector. It can take the form of small bribes that need to be paid to register property, change or forge titles, acquire land information, process cadastral surveys, and generate favorable land use plans. The paper finds around the globe that, where land governance is deficient, high levels of corruption often flourish. Weak land governance tends to be characterized by low levels of transparency, accountability and the rule of law. Under such a system, land distribution is unequal, tenure is insecure, and natural resources are poorly managed. Consequently, social stability, investment, broad-based economic growth and sustainable development are undermined.

### ***3.2 Literature on E-Governance in Public Service Delivery***

Toaha and Khan (2008) in a paper assume that land registration process is a major barrier to economic growth in Bangladesh. That paper focuses on various aspects and problems related to current system of land management. It offers an IT based land management system and opines that digitized land management system can minimize hassle, time, expenditure, and staff dishonesty.

Choudhury et al. (n.d.) have designed a modeling technique to prepare digital maps. They opine that it will add both transparency and efficiency to the current land management system and improve service delivery system. This paper presents a new modeling technique that represents data for the current land management system through a user-friendly and digitized map based system.

Recently TIB (2015) has published a paper on land management and services in Bangladesh regarding governance challenges. It deals with different aspects of land management and service system in a brief manner. This paper highlights the legal, institutional and administrative challenges in governance issue in land sector. This paper mentions that less coordinated land administration and management; fragmentation of land services; corruption and harassments endured by service recipients; frequent transfer and deputation of administrative cadre officers; inadequate professional experience and skills of AC land; inadequate field visits and monitoring; and lack of verification of field reports are some administrative challenges.

Inadequate budget allocation for the Ministry of Land, huge shortage in manpower, lack of skilled manpower, lack of effective training, deficits in infrastructure, inadequate logistics, technical equipments and transport facilities, manual record keeping and information management, fragmented and slow digitalization are identified as institutional challenges. Time-consuming land surveys, multiple steps in mutation process and corruption issue at different stages of land management are mentioned as challenges in land management system (Ibid).

Salam and Islam (2013) in a study assess E-Governance service quality of District E-Service Centre (DESC) of Bangladesh. Both the qualitative as well as quantitative

research approaches were conducted. The E-Governance service qualities are assessed by six different variables the standard of service, choice & consultation, courtesy & consultation, entrance & information, and value for money and found the positive relation with citizen's satisfaction. The study reveals that the DESC provides public services efficiently, and the DESCs are positively interconnected with effective E-Governance services.

Rokon-Ul\_Hasan (2011) in a study assesses the preparedness level of bureaucracy from the perspective of E-Governance implementation studying office of the Deputy Commissioner, Dhaka. It also identifies the critical hindrances to the implementation of E-Governance in the context Bangladesh. Both the officials and the service seekers agree to a great extent that the overall preparedness of E-Governance is quite low. The two most significant factors that hinder E-Governance implementation are 'lack of infrastructure and logistic Support' and 'weakness of policy and regulatory framework'. The study reveals that the technical skill level of the officials working at the office under consideration is reasonably low. The infrastructure and logistic support is not up to expectation. There is no incentive mechanism to motivate officials in giving some extra effort to make E-Governance implementation successful.

Baniamin (2014) in a research explores the potential of E-Governance in reducing corruption with global level data as well as micro level cases. Based on the state level data, the author infers that E-Governance can explain most of the variations of the level of corruption in the different countries. From micro level study, he explains that mere introduction of E-Governance is not sufficient to control corruption. The author explains that E-Governance can provide an alternative service delivery channel through the electronic platform. In such a case, officials lose their power to influence, as the respective process may entirely be decided automatically through the electronic platform. The discretionary power of the officials can also be affected if the accountability system can be improved.

Field *et al.* (2004) argues that e-service can play a vital role in improving the services quality delivered to its customers. Pathak *et al.* (2008) opines in a paper that use of ICT in service delivery facilitates the clients in accessing more information employment of the

Internet, minimizes the opportunities for public officials to monopolize access to relevant information.

Hopper et al. (2009) suggest that E-services can reduce corruption by reducing interactions with officials, speeding up decisions, and reducing human errors. Kudo (2010) mentions that E-government has been promoted as a strategy of public sector reform, with a focus on how it can improve the managerial process.

Gage (2002) and (Gasco 2003) mention that public services through E-Governance initiatives hope to empower citizens and improve relationships between governments and citizens to participate in their overall development.

Bhatnagar (2003) argues that online systems have not only helped achieve efficiency gains by cutting overall time to process applications but also made transactions more traceable, transparent and easier to access. Singh et al. (2010) emphasize that E-Governance eliminates discretion by removing intermediary services and allowing citizens to conduct transactions themselves.

### ***3.3 Summary of Literature Review***

The review of literatures reveals that there are number of problems in land service delivery causing enormous sufferings to people. Most of the studies focused on identifying problems in land management system and service delivery; and identified the weakness and challenges to address those problems. Some papers suggested the use of ICT to improving the governance system and service delivery. There are legal limitation, resource limitation, lack of transparency, misuse of administrative power, use of muscle power, and bribery in land management system. There are irregularities in registration and mutation by forged document, dispute among heirs, irregular distribution among co-shareholders, forceful possession, improper management of khas land, manual operating procedure, poor record keeping system, and lack of awareness of citizens in land management system and land related service delivery.

There are a number of literatures available in land management system. Recently ICT is being introduced in service delivery in some areas, which is considered as a vital tool in

improving service performance. As a result, there might be some observable changes in service delivery. It might be demand of time to understand whether ICT projects are providing tangible benefits and whether the projects are scalable and sustainable in long term. There are fewer studies on recent status and contribution of E-Governance on mutation service delivery in AC (L) offices. It is also imperative to understand which factors, in fact, critically affect service delivery. Assessing service performance might reveal the gaps in policy implementation, which might be taken as policy input as well.

Hence, current study is undertaken to assess service performance as well as identify the critical factors in addressing the major problems in mutation service delivery in AC(L) offices. The framework of analysis of current study is depicted in the following chapter.

## **Chapter 4. Theoretical and Analytical Framework**

Maintaining updated land records and delivering mutation service in responsive and effective manner is highly imperative. But in reality people have to visit offices several times, wait longer hours, bear extra cost and undergo lots of sufferings in getting this service. Many of them get implicated with conflict and litigation. On the other hand not all service seekers are sufferers; some have positive experience towards service delivery as well. Hence it is crucial to understand what causes such variation? What are the predominant factors to consider for improved service delivery? There might be lots of factors associated in this respect. However this study attempts to identify the dominant factors that affect service delivery of mutation. The performance of public service delivery is considered as dependent variable. Its indicators are identified through discussion of relevant models and theories. Framework for analysis has been developed based on the theories related to E-Governance, Administrative Culture and public service delivery. One of the independent variable is taken as *E-Governance Readiness* of AC (L) office. Some other independent variables associated with service delivery are chosen based on following discussion.

### ***4.1 Evolution of E-Governance***

Mutation is a public service and concern of public administration. The scholars, academics and practitioners of public administration sought for suitable paradigm for

effective and efficient public administration since 19<sup>th</sup> century. The paradigm changes based on the contextual factors to comply with reality. The evolution of E-Governance follows the paradigm shift of public administration in the context of global ICT revolution.

Woodrow Wilson (1887) in his essay *The Study of Administration* emphasizes the concerns of public administration as:

- i. What government can properly and successfully do;
- ii. How it can do these proper things with the utmost possible efficiency and at the least possible cost either of money or energy.

Woodrow Wilson's concept of public administration lays down the foundation of the values of public administration and goals of public service delivery.

Max Weber's (1947) bureaucratic model is characterized by work specialization, written rules and procedures, hierarchy of authority, rationality, merit based selection and impersonality to maximize the efficiency of public organization. However for various reasons, Weber's bureaucracy failed to be efficient. It lacks incentive to innovate and improve; and confiscated with complex rules and regulations. For strict adherence to rules and procedures, red-tape, slowness, waste of resources, it loses its locus and focus in achieving goal (UN 2003). Zafarullah & Siddiquee (2001) mention that in public sector there are excessive lobbying, delays in service provision, pilferage and larceny, irresponsible conduct of officials, bureaucratic overindulgence, patronage and clientelism in many countries. On the other hand, private sector's style of management proved efficient and effective putting pressure on bureaucracy to deliver services in competitive manner. These pressures and assumptions led to a gradual shift from public administration to public management - leading to emerge a new paradigm of public administration called New Public Management.

The few features of NPM as Christopher Hood (1991), Pollit (2001) and others characterize as follows: i) Flexibility/autonomy in decision making; ii) delivering high quality services like private sector style; iii) considering citizens as client; iv) performance measurement; v) managerial support system - more usage of ICT, human resource, training etc. Hood and Jackson conclude that NPM should give priority on

values of efficient task performance (Barzelay 2001). From NPM concepts, treating citizens as customer, improved human resource, usage of ICT, and performance measurement are important issues to consider for better service delivery.

With the increase in complexity of government activities, force public officials to adopt new models of governance. The traditional, hierarchical models of government are not serving the purpose. Rigid bureaucratic systems failed to address problems. NPM also became difficult to adapt in developing countries like Bangladesh.

Hence, governance issue raised much concern. According to Fukuyama (2013 cited in Jamil et. al 2015), governance means 'governments ability to make and enforce rules, and to deliver services, regardless of whether the government is democratic or not'. UNESCAP (2009) defined Governance as the process of decision-making and the process by which decisions are implemented (or not implemented). However, there are diversity and confusion in concepts of governance (Farazmand 2013). Therefore, in early 1990s World Bank, UNDP and other international agencies proposed Good Governance concept.

Good Governance is meant how efficiently and effectively public institutions conduct public affairs and manage public resources. According to the UNESCAP (2009), Good Governance is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and follows rule of law. However, this concept of good governance is more idealistic and normative; more about end, not about means; and do not clearly explain how to adapt those in developing countries like Bangladesh (Hardt and Negri 2000; Grindle 2004, Hauffman 2006; Khan 2012).

To realize the concepts of Good Governance, E-Governance is considered an important paradigm to bring transparency and making public sector efficient, effective and responsive to citizens. The momentum for thinking about online and more online dimensions to public sector operations came during the 1990s with the introduction of the Internet and reduced cost of communication and information processing (UN 2008). The idea of E-Governance, small government, open government are the product of new wave of thinking which emerged in the 80s and 90s such as NPM; reinventing government by Osborne and Gaebler in 1992. However better public service requires first a thorough rethinking and re-examination of the structure of public services and then to exploit

possibilities of creating value by working across boundaries and jurisdictions to foster potential gains of redesigned services in terms of speed and cost (Fountain 2007). According to World Bank (2014), E-Governance is the use of ICT by government agencies of information technologies that have the ability to transform relations with citizens, businesses and other arms of government. Using ICT in the form of E-Governance could yield great benefits in the reform and modernization of the public sector (Naz 2009). The E-Government framework allows public sector organizations to achieve such a gain through delivery of efficient services at national and local levels using Information and Communication Technology (ICT). Besides gaining efficiency in public service delivery through ICT, there is also evidence that demonstrates the potential of ICTs in empowering the poor (Zambrano 2008).

One of the major objectives of the E-Governance is to bring government closer to people. While ICT has been the driving force behind E-government efforts, governments globally have also realized that it is one of the important components needed for successful public sector transformation (Maio 2006). Snellen (2002) mentions that introduction of ICT applications through their control, surveillance, communications and knowledge management potential are revolutionizing the internal workings and external relationships of public administration. Hence E-Governance is considered as vital tool to realize good governance and improve public service delivery.

#### ***4.2 Maturity Models of E-Governance***

An E-Governance maturity model is a set of stages (from basic to advanced ones) that determines the maturity of the E-government web portal. The main benefit of those maturity models is to rank them. Maturity models can also serve as a guide to help agencies enhance their online service quality.

There are many models of E-Governance. Layne and Lee first developed a four stages maturity model of E-government. UN and ASPA (2002) developed five stages E-Governance maturity model which is discussed below.

##### ***UN and ASPA (2002) E-Governance Maturity Model***

Stage 1 Emerging- The initial stage where government websites are hosted on the web.

Stage 2 Enhanced – Static information is available and necessary forms/files are downloadable

Stage 3 Interactive – Citizens can interact with officials. Government websites engage in two-way communication with their citizens, including requesting and receiving inputs on government policies, regulations etc. Government websites process non-financial transactions, e.g. filing taxes online or applying online for certificates, licenses and permits, car registration, mutation of land etc.

Stage 4: Transactional - Online payment is possible. Users can actually pay for services and other transactions online.

Stage 5 Seamless – Full integration of e-services across administrative boundaries. Governmental organizations are interconnected through horizontal (among different ministries and sub-ordinate offices); vertical connections (within Ministry and its subordinate offices); and interconnection among all stakeholders. Online services and e-solutions cut across the departments and ministries in a seamless manner. Information, data and knowledge is transferred from government agencies through integrated applications. Governments have moved from a government-centric to a citizen-centric approach, where online services are targeted to citizens.

From this model, the independent variable is derived as *E-Governance Readiness* where *Online Service Delivery Status* is considered as key indicator.

United Nations (2014) measures EGDI by three indicators: Human Capital Index, *Online Service Delivery Status*, and Telecommunication Infrastructure Index. The Human Capital Index faces some criticisms especially for the ‘construct validity’ from some of the researchers (like Points and Pardo 2011; Whitmore 2012 cited in Baniamin 2014). Points and Pardo (2011:358 cited in Baniamin 2014) raised the question about the relevance of the ‘Human Capital Index’ built on the literacy rate and the gross enrolment ratio which not necessarily reflect the citizen’s capacity to operate E-Governance. Moreover, there is no agreed upon standards for measuring Telecommunication infrastructure and Human Capital at institutional level.

Hence, the current study considers only the *Online Service Delivery Status* as indicator of E-Governance based on maturity model of E-Governance for quantitative analysis.

The measuring indicators of online service delivery are information, downloadable forms, non-financial and financial transaction, electronic authentication of citizen's identity, inter-connection to other departments. The hypothesis is '**the higher the level of E-Governance Readiness, the better the service delivery is**'.

### ***4.3 Client Readiness***

Effectiveness of E-Governance depends not only on the supply of infrastructure enabling individuals to access the Internet but also on growth in the percentage of Internet users within a society (Rose 2005). The supply and demand of Internet services are determined by a country's collective, local and individual capital. Collective national capital is essential for the supply of Internet infrastructure. Low-income countries have been unable to afford heavy investment in telecommunications facilities and governments (Ibid).

Local capital is a pre-condition for supplying Internet access to a community. In the absence of Internet infrastructure, individuals do not have a choice about going on line, for the means of doing so are not at hand.

Individual capital includes ownership of computer, laptop or Smartphone individually or collectively in family, office or with friends or relatives. Easy internet access to nearby shop also can be advantageous. If there is a computer in the household or an individual has a friend using the Internet, encourages a person to go online.

Therefore, it is crucial to assess the affordability of end users in availing ICT based services, which may matter for service performance. Here comes the issue of digital divide where some people have knowledge of and access to technology while others not. This distinction may result from access to ICT devices and services like having access to mobile, computer, Smartphone, electricity as well as knowledge of ICT. Those not having access to such technology are likely to be discriminated. Moreover lack of knowledge of mutation may be discriminating as well. All these issues are considered as Clients' *Readiness* in better utilizing ICT based services, thereby affecting service delivery. The hypothesis is '**the more the Client Readiness, the better the service delivery is**'.

#### ***4.4 Administrative Culture and Demographic Factors***

Tylor (1974) defines culture as ‘that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society’. Hofstede (1991) defines it as ‘the collective programming of mind which distinguishes one group of people from another’. Individuals hold certain ideas and value-preferences which influence how they behave and how they view the behavior of other members. These norms become shared traditions which are communicated within the group (Bush 2003, p.156). Therefore culture exists at different level in the society and one culture may differ in many aspects from other culture. The different cultures exist at family, community, organizational and national level. The culture that is prevalent in bureaucracy is considered as *Administrative Culture*. Ishtiaq Jamil (2007, p.2) defines *Administrative Culture* as ‘norms and values that shape and influence bureaucratic attitude, interpersonal relationship and performance’. Keith Henderson (2005) identifies *Administrative Culture* as the general characteristics of public officials regarding shared values, attitudes and beliefs. Therefore, *Administrative Culture* is the value, belief, ideology and tradition that constitute bureaucratic behavior; influence decision-making system and service delivery.

Equality, equity and justice are the values of good governance. According to Article 21(2) as stated in The Constitution of Bangladesh, ‘every person in the service of the republic has a duty to strive at all times to serve the people’. and ‘All citizens are equal before law, entitled to equal protection of law’ (Article 27); No discrimination can be made against any citizen on grounds only of gender, cast, sex, religion, or place of birth etc (Article 28-1). Discrimination based on socio-economic position or giving unfair privilege to particular class of people may have impact on ensuring equality and equity and fairness in decision-making process, and service delivery.

One study on *Administrative Culture* focuses on deviant behavior, corrupt practices, and irregular, unpredictable behavior of bureaucrats, all of which result in unanticipated, even disastrous consequences (Islam 2004, Jamil 2007 cited in Jamil et. al 2013). Deviant behavior points to the gap between rational and non-rational behavior of bureaucracy, more specifically deviance from a certain Weberian model of legal rational bureaucracy.

Rational behavior is formal and based on rule and law; while non-rational behavior is informal and reflects personal relation and interest (Jamil et. al 2013).

March and Olsen (1989, p.119-34 cited in Jamil et. al 2013) in analyzing democratic governance, differentiate between public official's aggregative and integrative roles characterizing *Administrative Culture*. 'The aggregate role entails responding to interests of stakeholders, some of whom are quite powerful. The officials enter into exchange relationships similar to economic transactions like negotiation, coalition building, promises etc'. In aggregative process, 'rights have to be earned and not given, and official's role is to respond to the various interests and mandate these rights'. In contrast the integrative role involves 'being more concerned with fairness, justice, awarding rights; calls for moral responsibility and accountability, and honest effort to ensure public interest' (ibid).

Mutation service provides legal ownership and right to use the land; and needs to be delivered with high morality and ethical standards without being influenced by fear or favor. According to Jamil et. al (2013) *tadbir* is highly influential in decision making system and service delivery in public sector. The authors define *tadbir* as 'a popular mechanism employed frequently to get things done in public offices by bypassing, bending, breaking, or delaying what might be termed a rational approach to decision making'. 'Bribing is usually associated with this act' (Islam 2004, P.322, Jamil and Huq 2005, p.175-6). Hence *tadbir* can be defined as the practice of influencing decision making in favor of someone through various informal means like use of own power/capacity or external power/capacity beyond formal procedure. That use of power and capacity can be as high as required to get things done. Those who are able pursue in different forms might get their job done easily; e.g. through physical power, financial power, or linkage to powerful/influential group in the form patron-client relation. Gradually it gets institutional form and impacts on service delivery. This sort of practice is common in delivering many public services in developing countries like land mutation service in Bangladesh. However, those who don't have sufficient capacity to employ such practice, likely to suffer. That is why culture of *tadbir* is likely to have significant effect on service delivery.

Here *Administrative Culture* is considered as an independent variable in service delivery. It is based on the integrative-aggregative administrative behavior measured by culture of *tadbir* including influence of socio-economic position. The less the culture of *tadbir* persists, the *Administrative Culture* is more integrative. In case of aggregative culture the condition is just the reverse. The hypothesis is **‘the more the *Administrative Culture* is integrative, the better the service delivery is’**.

However, demographic factors like gender, education, age issue may be self-discriminating as well. As females, less educated or illiterate persons, aged person may suffer in getting service delivery for their own weakness or lack of knowledge. Therefore, these issues are considered as separate set of explanatory variables that may affect mutation service delivery. The hypothesis regarding demographics is **‘the service delivery for aged people is better than less aged people’**. Another hypothesis is **‘the service delivery for educated people is better than less educated people’**.

#### ***4.5 Service Delivery***

There are a number of literatures regarding service delivery. Among those SERVQUAL model has been discussed to identify the indicators of dependent variable in this study. As the objective of the study is to identify the factors that affect service delivery, therefore *performance of service delivery* is the dependent variable. The indicators are identified through following discussion.

Examples of public service are getting national ID card, getting passport, and in current study getting mutation service. There are lots of private services as well due to free market economy like production and sale of goods, different works, healthcare service, transport service, courier service, and so on. There are some basic differences between public and private services: i) the former has to comply with fixed rules and procedures, and the latter is much flexible in internal procedures and not to disobey specific laws & rules. ii) the performance of former mainly depends on abiding by rules and procedures, not on goals, whereas the latter is goal oriented. iii) Whereas the private sector is profit oriented, the public sector puts preference on welfare than profit. iv) Scope of innovation and risk taking in private sector is higher than public sector (Dittenhofer 2001). According to NPM concepts public services also need to be delivered like private sector style through innovative way. What kind of service delivery people expect in general?

Services can be standalone service or accompanied with supply of goods/products. While purchasing goods/products, services include showing/explaining the product, delivery of product maintaining quality with customer's satisfaction. From service provider's side, service has to be cost effective that requires less time and effort, and has to be satisfactory. The general expectation for commonly all services is most likely to deliver them with minimum time, cost, hassle, and delivering accurate and complete service with good conduct. If possible, the highest expectation can be to be able to choose the product/service from home, request from home, and delivery at home instantly after request/order (with no time), at free of cost, maintaining service quality and with polite behavior (if delivered by human). As a lot of citizens are approaching AC (L) offices, so instant service is apparently not possible, and delivering service within shortest possible time is desired. Regarding cost, only welfare country endowed with lots of natural resources can serve people at free of cost which may not be feasible for some public institutions like AC (L) offices in Bangladesh - as Government has to earn revenue from some potential sources like land sector. Therefore a certain amount of charge (BDT 1170/-) is imposed for mutation, but not beyond that.

Hence, the delivery of accurate and complete service with less or no physical visit, in minimum time, due cost is most likely to be the general criteria for better service delivery. To understand the performance of service, measurement of service quality as well as satisfaction from customer's and service provider's point of view is relevant. However measuring service quality and satisfaction is a subjective matter. Robinson (1999) mentions that 'it is apparent that there is little consensus of opinion and much disagreement about how to measure service quality'. One service quality measurement model that has been extensively applied is the SERVQUAL model developed by Parasuraman *et al.* 1985; Zeithaml *et al.* 1990). SERVQUAL is the most often used approach for measuring service quality and this instrument has been the predominant method used to measure consumers' perceptions of service quality. It has five generic dimensions or factors and stated as follows (Parasuraman *et al.*, 1985; Ghobadian *et al.* 1994; Curry and Herbert 1998; Wisniewski 2001, Iwaarden *et al.* 2003):

1. *Responsiveness*: Prompt service delivery and ability to deal effectively with complaints and feedback. Responsiveness can be measured by time saving and effective feedback

mechanism. Time saving can be measured in terms of fewer visits, less waiting time, reduced application processing time, and faster service delivery.

2. *Reliability*: Ability to perform the promised service dependably and accurately. Accuracy can be measured by the extent of error/mistake in service. Dependability can be measured by the ability to monitor the progress of the service so that in case of any gap might be rectified as early as possible.

3. *Assurance*: Knowledge and courtesy of employees and their ability to inspire trust and confidence. Assurance can be measured in terms of credibility of service. Credibility of service can be ensured with adequate disclosure of information, hence taking this as an indicator.

4. *Empathy*: Caring and individualized attention that the firm provides to its customers. The indicators of empathy can be easy access to service provider and easy communication. Another indicator can be reduced sufferings to customers.

5. *Tangibles*. Physical facilities, equipment and appearance of personnel.

Various scholars pointed out that SERVQUAL is a generic measure and could be applied to any service and that it needs to be customized to the specific service under consideration (Parasuraman *et al* 1985; Carman 1990; Babakus and Boller 1992).

Among the five indicators of service quality responsiveness, reliability, assurance and empathy have been taken as indicators to identify the quality of service delivery. However this model doesn't talk about cost effectiveness, which is an important parameter of service delivery. Delivering quality service at higher cost than the set price can't be said that the performance of service delivery is better. Paying extra money in getting service is prevalent in Bangladesh which is the concern of most of the literatures, particularly of TIB.

In January 2005, the European Commission (EC) launched the E-Government Economics Project (e-GEP) to develop a measurement framework to evaluate the effects of e-government. The economic study of the E-Government Unit of the European Commission (2006) aims at 'assessing the impact of the introduction of ICT in the public sector itself and on society. In particular, it provides the theoretical underpinnings of the tangible

elements presented in the measurement framework'. The basic ideology of e-GEP model is that 'E-Government programs lead to improved labor productivity in public sector (PS) and, as a consequence, contribute to a number of intermediate results, better services, cost savings etc.'

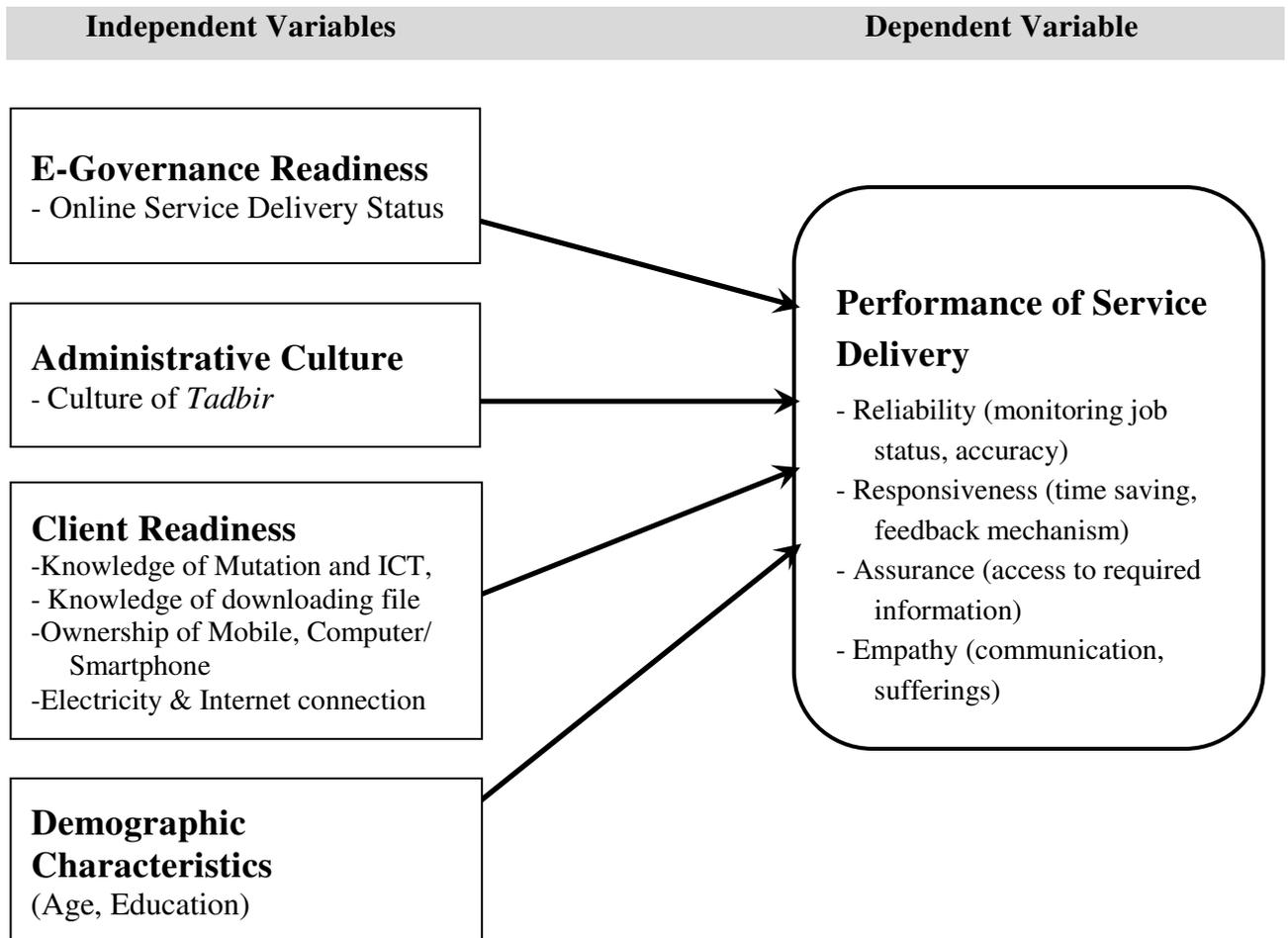
According to e-GEP project, cost effectiveness is also an important criterion for efficient service delivery. The theories and concepts of different paradigm of public administration suggests that public services are delivered with shortest possible time, reduced operating cost, and service providers are responsive to client.

After all, customer satisfaction is increasingly considered as a baseline standard of performance and a possible standard of excellence for any business organization (Mihelis et al. 2001). The concepts of service quality and service satisfaction are closely related, although the exact nature of these customer judgments and the relationship between them remains unclear (DeRuyter et al. 1997). Some scholars point out to the considerable overlap between the two concepts to the extent of conceiving the terms as synonymous and interchangeable (Gronroos 1982; Boulding et al. 1993; Rust and Zahorik 1993). Some scholars argue that quality of service leads to satisfaction (Tse and Wilton 1988). However satisfaction is a complex phenomenon and depends on service quality as well as the expectation of each individual. Hence both service quality and satisfaction can be taken as parameters of performance of service delivery.

Therefore quality of service, cost effectiveness and service satisfaction from both ends (supply and demand) perspective are the desired parameters to understand the performance of service delivery. The indicators of dependent variable can be taken as responsiveness, reliability, assurance and empathy, cost-effectiveness and satisfaction. Based on the models and concepts as discussed, the analytical framework is depicted as below.

#### 4.6 Analytical Framework

Based on the discussion made in the above sections, the analytical framework is depicted below.



#### 4.6.1 Matrix of Variables and Indicators

According to Aminuzzaman (1991, p. 11), variable ‘is a quantity that has different values for different samples of observations in a research’. The dependent variable is the one that is assumed to depend on, or be caused by other. Independent variable is a variable whose effect upon the dependent variable the researcher attempts to understand and explain. and indicators are the quantitative and qualitative expressions of variables (Ibid). The dependent variable, independent variables and their indicators are listed below.

**Table 4.1: The Dependent Variable and its Indicators**

Dependent variable	Indicators	Measuring Indicators
Performance of service delivery	Responsiveness	Promptness of service (No of visit, waiting time, delivery period, processing time) Feedback mechanism
	Reliability	Accuracy of service
		Consistency and dependability of service (easy tracking of service progress)
	Assurance	Credibility of service (Access to required information)
	Empathy	Easy access and communication; less sufferings
	Cost saving	Travel cost, extra payment, cost of operation
	Satisfaction	Perceived satisfaction with service

**Table 4.2: Indicators of Independent Variables**

Independent Variable	Indicators	Measuring Indicators
E-Governance Readiness	Online Service Delivery Status	Information and downloadable forms Non-financial transaction Electronic authentication of citizens identity Financial transaction Inter-connection to other departments
Administrative Culture	Culture of Tadbir	Perception on requirement of <i>tadbir</i> Extent of influence of socio-economic position in getting service
Client Readiness	Client Readiness	Knowledge of Mutation and ICT Ownership of Mobile, Computer/Smartphone Electricity and Internet connection knowledge of file download
Demographic Characteristics	Age, Education	Age, Education

## **Chapter 5. Status of E-Governance in AC (L) Offices**

In this chapter, present status of E-Governance in AC (L) offices is explained in brief based on content analysis e.g. website analysis, and interviewing key officials. There are 489 upazilas in Bangladesh (GoB online). In every upazila, one AC (L) office is supposed to be there. But, there is no such office in some upazilas particularly in hill districts. No literature was found about the exact statistics of number of AC (L) offices and how many AC (L) offices have web presence. Therefore, researcher contacted key officials of Ministry of Land and get informed that there are 486 AC (L) offices. Among the offices having web service, three offices have been studied physically. The offices are chosen based on level of E-Governance Readiness and given symbolic name as office A, office B and office C to maintain confidentiality of officials; whereas *E-Governance Readiness* level for office A is 1 (Very Less Developed), for office B is 2 (Less Developed) and for office C is 3 (Moderately Developed) measured in a 5 point scale. The calculation of E-Governance Readiness is shown in next chapter. The E-Governance status of AC (L) offices is explained in brief in this chapter.

### ***5.1 Digitization of Land Records and Online Service Status***

It is observed through website analysis that around 470 AC (L) offices (96%) have at least web presence under the framework of district web portal or standalone website.

Among all websites, around 25 websites (5%) found to be rich in content. Those sites have web address, have some information of second stage of UN/ASPA E-Governance Maturity Model like list of service, contact details of officials, mutation procedure, list of vested property and abandoned property, application form etc. Moreover, some of those websites have some features of third stage like online application system, online/SMS notification of service status, feedback mechanism, calculating LDT (Land Development Tax) and so on.

The status of E-Governance in AC (L) offices is yet to be highly developed. None of the websites are delivering online service in the fourth (transactional) or fifth (seamless) stage of UN/ASPA E-Governance Maturity Model.

It is observed that people have access to information and get monitor their job status through SMS/online in relatively better developed E-Governance. In some offices, khatians are uploaded to website through scanning and making those public. Clients can make inquiry about their service through website. There are online mechanisms of providing feedback, though hardly used.

The key achievements of major development projects since 1995 aiming at digitizing land management system are mentioned below from interview of key officials of the Ministry of land and DLRS<sup>22</sup> along with annual report 2014-15 of MoL.

*Computer-Based Khatian and Map Printing System Modernization* project was implemented during 1995-2000 funded by Government of Bangladesh. The key achievements are procurement of modern equipment, printing of pending khatians and mouza maps; and training for map printing.

Modernization of Land Administration Project was implemented during 1995-2001 and was funded by Government of Bangladesh and Asian Development Bank. The project achievements were: i) Comprehensive study of the existing system, legal issues of settlement operation, land record management and land registration. ii) Implementation of three pilot projects for modernizing the existing system of survey and settlement operation by using modern technology and submission of final report along with an investment project proposal to DLRS with necessary recommendations modernization of the existing system

Another project named *Modernization of land records and maps for sustainable environment management program* was funded by UNDP and implemented during 1998-2004. The key achievements are: establishing 157 permanent geodetic survey controls at Polash upazila in Narshindi district and Sonargaon Upazila in Narayangonj district; and preparing digital mouza map using the coordinates.

Recently several projects are undertaken for digital land management system under MoL in compliance with Digital Bangladesh Strategy of Vision 2021 of the present government in Bangladesh:

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<sup>22</sup> DLRS is responsible for preparing ROR, printing and publication of ROR.

- i) *Strengthening governance Management Project (Component B: Digital land management system)* with financial assistance by ADB is under implementation for preparing digital land management system in 45 Upazilas of 7 districts based on 6.5 mn khatian, mouza map and mutation khatian of last survey.
- ii) *Digital land survey, preparation and preservation of record (Phase 1: Computerization of Existing Mouza Maps and Khatian)* project in 55 districts is under implementation. It is intended to digitize existing around 45.8 mn khatians (CS/SA/RS) in district record room. A software has been prepared from A2I project named ELRS (Electronic Land Record System) and implemented experimentally in Sirajgonj, Rangpur and Kurigram. Around 1.022 Mn khatians have been computerized so far. People can apply and get khatian from Union digital center without moving to district record room.
- iii) *Strengthening Access to Land and Property Rights to All Citizens of Bangladesh* is a pilot project is under progress to establish a network among three offices i.e AC (land), Settlement, and Sub-register offices in three Upazilas in Bangladesh (Mohanpur Upazila, Rajshahi; Amtali Upazila, Barguna; and Jamalpur sadar Upazila) for automated mutation system. Few components of the project are: a) policy reform regarding national land policy, khas and char land distribution management policy and other government land management policy. b) Authoritative Land Record preparation: Developing simplified processes and forms for establishing and maintaining ALR through scanning of records in the selected upazila. c) Capacity building of the Ministry of Land d) Public education and awareness.

Procurement of 6 servers, 40 laptops, 40 printers, 40 scanners, 9 photocopiers, 9 switches, 36 UPS have been complete. For digital survey, 45 ETS machine, 4 plotter, 2 map Copier, 36 computer have been procured. For raising awareness among citizens, an NGO has been involved (MoL 2014b). The cost of the project is 106.63 crore BDT. Digital survey is under progress in 60 mouzas of three upazila. A software named IDLRS has been installed in Monirampur Upazila of Jessore district to process digital map and records. Testing and training of the software is under progress as of 15 September, 2015.

iv) With Dhaka City survey, 441506 khatians and 4089 mouza map sheets of 191 mouzas have been digitized, which is yet to be published.

The concerned officials of MoL inform that several projects have been undertaken since 1995 for modernization of land management system. Albeit there is no unified and master plan as of 15 September 2015 regarding the structure and procedure of digital land management system, cost and manpower requirement, duration of preparing complete and up-to-date ROR including mouza maps; and automation of mutation and record maintenance. Recently a project 'Improving public administration and service delivery through e-solution' is under consideration with technical assistance from Asian Development Bank (ADB).

### ***5.2 Regarding ICT Infrastructure Development***

Three AC (L) offices have been visited under this study. While interviewing AC (L) of three offices, all three mention that they don't have sufficient computers in the office. Two offices (office C and office A) have 3 computers each, another (office B) has 2 computers. Two of the offices (office B and office C) have internet connection and one not (office A). Among the two offices having internet, one (office C) has broadband internet connection and other (office B) has normal speed internet connection. Two of the offices have alternative electricity connection (IPS) beyond commercial power supply. Other office (office A) has commercial power supply only. Two of the AC (L) from office B and office A mention that the equipment and software they have is insufficient. One AC (L) from office C mentions that the equipment and software are at average level; and has its own server and public kiosk from where people can search their required information without approaching the officials. Therefore except only one office (office C), the rest of the two offices are below the average level in respect of ICT infrastructure.

In response to the question regarding ICT Infrastructure; the status of digitization of land records and mouza maps and web presence the key personnel in ICT Division, Ministry of Post, Telecommunication in reference to the *BanglaGovNet* project already implemented by BCC (2014) informed as below:

*BanglaGovNet* is a project implementing by BCC to develop a public network to connect all the government entities throughout the country under a single network. It is a dedicated government Intra-network among BCC (Bangladesh Computer Council), all ministries and divisions in Dhaka, major departments and agencies under ministries and divisions. 58 ministries/division, 64 districts and 64 upazilas, 227 departments are to be connected to fiber optic network to provide internet and Wi-Fi facility. *BanglaGovNet* has implemented national data centre for hosting all government websites, email services and web applications; Centralized control and management of the network through NOC (Network operation center). Major portion of the project is completed; particularly 64 districts and 64 upazila have been covered by fiber optic backbone network. Videoconferencing facility is also available in all DC offices.

Infosarker is the second phase of *BanglaGovNet* project to expand the government wide network to all the district and upazila level offices throughout the country. *BanglaGovNet* project was implemented by BCC builds the ICT backbone network up to the district headquarters. Infosarker extends this network up to the upazila level, connects the government offices at district and upazila level. Its scope also includes expansion of National Data Center, establishing Disaster Recovery Center, Wifi Network, distribution of Tablet PCs etc. Proper implementation of this project attempts to render E-services at the door-steps of the people.

Infosarker aims to connect all government offices on an average 55 offices for each District; on an average 30 offices for each upazila; and to expand backbone connectivity from 64 districts to 421 upazilas (except those 64 upazilas which have already been covered in *BanglaGovNet* project). Major portion of the project has been implemented.

The total number of mobile phone subscriptions has reached 131.999 million at the end of October, 2015 with 87.9% mobile penetration by connections in Bangladesh (BTRC Online). In June 2014, Grameenphone reported that 2G<sup>23</sup> coverage was 99.17% by population and 89.50% by area and that all 64 of the country's district headquarter cities are covered by its 3G<sup>24</sup> network (Lucini and Hatt 2014).

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<sup>23</sup> 2<sup>nd</sup> generation mobile technology

<sup>24</sup> 3<sup>rd</sup> generation mobile technology

Divisional Commissioner offices and DC offices are connected to Internet through high speed fiber optic connection. All other offices including AC (L) offices are to be connected to internet through fiber optic line under Infosarker II project. Therefore AC land offices are yet to be connected to fiber optic network under these projects.

### ***5.3 Human Resources and Training***

Interviewing AC (L) of three study areas two of them informed that the manpower is insufficient and one AC (L) informed that manpower is very insufficient to operate and maintain websites. Total workforce for office C is 13, while 7 officials have operating experience and one is skilled at maintenance of ICT. office B has total manpower 10, while 2 officials have ICT skill for operation and 1 have maintenance skill. Total workforce for office A is 9 with no skilled manpower for operation or maintenance of ICT. Divisional Commissioner of Chittagong informs that all operating staffs and officers got training to work on ICT based system properly. Human resources are ready to work in electronic system.

In response to the question regarding the manpower and training of human resources and through interview of key officials and from annual report 2014-15 of Ministry of Land it is found that:

In DLRS, there are 7632 sanctioned post, against which 3342 posts are filled up and 4290 post (56%) are vacant. In Land reform board, there are 98 sanctioned posts. Against which 80 posts filled up and 18 post are vacant.

In 2014-15, training had been provided to 1507 officials and 5 officials received foreign training. More 30 in-house training programs was conducted where 389 officials received training. A 2-day long training was also arranged with Additional Divisional Commissioner (Revenue) and Additional District Commissioner (Revenue) from across the country.

In DLRS, every year training is imparted for some cadre officials regarding land law, land survey and settlement, electronic total station, basic computer, data processing etc; and during 2009-13, 2105 officials received training. From the Land Administration training center, 4514 officers and staffs have been trained during 2009-13. The officers include

ADC (Revenue/General/LA), ADM, UNO, RDC, AC (L), ASP, Kanungo, Settlement officer, ULAO, AULAO, Bench Clark, Certificate Assistant etc.

In sum, 96% of the AC(L) offices have at least web address with little information but most of them are not rich in content and not updated. Few offices (around 5%) are somewhat rich in content. In some offices, there are options of applying online, but not functioning properly or not encouraged to apply online. No notice or advertisement is observed for applying online. Officials informed that there are legal compliance issues regarding online payment of court fee and other fee, as there is no such official order for online payment. In addition, there is no digital signature system incorporated. There is no such searchable database of ROR, and software for updating it. Human resources are not sufficiently developed to operate and maintain E-Governance. Internet and other infrastructural facilities are limited and mostly managed locally, according to the information from key officials. Therefore, a combination of manual and electronic processing system is involved to provide facilities to customers without violation of legal issues. The subsequent chapters present and analyze data in line with analytical framework to respond to the research questions to addressing research problem.

## **Chapter 6. Data Presentation and Analysis**

### ***6.1 Overview***

The objective of this chapter is to present data collected through different methods and analyze the data to answer the research questions and testing hypothesis. Aminuzzaman (1991, p.101) explains the purpose of data analysis is ‘to determine the broader meaning of the data to be analyzed and to produce significant inferences or insights with respect to data within the given theoretical model’. The calculation of E-Governance Readiness, demographic profile of the respondents presented first. Then the descriptive statistics of dependent and independent variables are presented through frequency, maximum, minimum, mean and standard deviation to have a general idea about the data of variables collected from field study. Then the variation in the performance of service delivery with respect to independent variables was analyzed through cross tabulation. The correlation of those dependent and independent variables are also presented and explained. Then the regression model is presented and analyzed to identify the key factors that significantly

affect service delivery. The finding of quantitative analysis is validated by qualitative data as well through interview and case study.

In continuation with previous chapter, it is observed that the status of E-Governance in AC (L) offices is yet to be highly developed. None of the websites are delivering online service in the fourth (transactional) or fifth (seamless) stage of UN/ASPA E-Governance Maturity Model. Therefore, 3 (three) offices of 3 (three) different level of E-Governance Readiness are chosen to study.

The total number of respondents in the survey is 52. Among which 17 (32.7%) respondents have been selected from the area (office A) where *E-Governance Readiness* is very less developed, 17 (32.7%) from the area (office B) where *E-Governance Readiness* is less developed and 18 (34.6%) respondents have been selected from the area (office C) where *E-Governance Readiness* is medium developed. However, no site could be found where *E-Governance Readiness* level is High or Very High developed. The names of the offices are kept confidential considering research ethics.

The calculation of *E-Governance Readiness* Index is explained below.

**Table 6.1: Calculation of *E-Governance Readiness (Online Service Delivery Status)***

Stages	Statements Regarding Online Service Delivery	Online Service Delivery Score		
		Score for office A	Score for office B	Score for office C
Stage-1	Online presence is available	1.00	1.00	1.00
Stage-2	Is your website updated?	0.33	0.89	0.89
	Are the available services published			
	Are all Acts/rules/Gazette/Circular related to this office available there?			
	Is Citizen charter available in the website?			
	Contacts no's, email ID of responsible officials available there?			
	Are procedures for getting mutation available			
	Are requirements for getting mutation well specified			
	Are the delivery period, cost of service well specified			
Downloadable forms and files available				
Stage-3	Online application submission for mutation	0.00	0.33	1.00
	Providing application number against application			
	Online/SMS notification of requirement			
	Online/SMS notification of hearing			
	Online/SMS notification of progress of service			
Facility for citizen feedback/comments				
Stage-4	Online financial transaction (e.g online payment through card)	0.00	0.00	0.00
Stage-5	Automatic validation of record	0.00	0.00	0.00
	Automatic processing of application			
	Electronic authentication of the citizen's identity			
	Inter-connected to other departments			
	Index of Online Service Delivery	0.27	0.44	0.58

Source: Author's calculation from Field data based on UN/ASPA 2002; UN 2014

*E-Governance Readiness* Index is measured by Online Service Delivery Status and presented in Table-6.1. It is measured by the ratio of scores obtained divided by total points for each stage of online service delivery and then averaging the scores. The score for each indicator is binary (1/0) based. It is observed that all three offices had web presence through a web address and passed stage-1 of UN/ASPA E-Governance maturity model. Office-A was at the preliminary stage, lacked basic information, links were not properly set and not working properly although had some features of stage-2 like some acts/rules/circulars, mutation procedure and required document for mutation. Office-B had all features of stage-2 except laws/rules/circular; and Office-C had all features of stage-2 except citizen charter though the facts are mentioned through mutation procedure.

Based on the above data, the *online service delivery index* score for office A is 0.27; for office-B is 0.44 and for office C is 0.58 in a scale of 0-1 (Very Low to Very High). *E-Governance Readiness* index is calculated by *Online Service Delivery Status*. Therefore, the above scores indicate the *E-Governance Readiness* Index. Then the *E-Governance Readiness* Index is categorized in scale of 1(very less developed) to 5(very high developed) by recoding the variable from 0 to 0.30 as 1, 0.31 to 0.50 as 2, 0.51 to 0.70 as 3, 0.71 to 0.90 as 4 and from 0.90 to 1 as 5. Accordingly *E-Governance Readiness* level for office A is 1 (Very Less Developed), for office B is 2 (Less Developed) and for office C is 3 (Moderately Developed).

Regarding demographic profiles of the respondents it is observed that majority (93.3%) of the respondents are male and only 6.7% are female (Table 6.2). Though there are female service seekers, very few of them come physically to get the service; rather many of them send their relatives or representatives to deal with the issue.

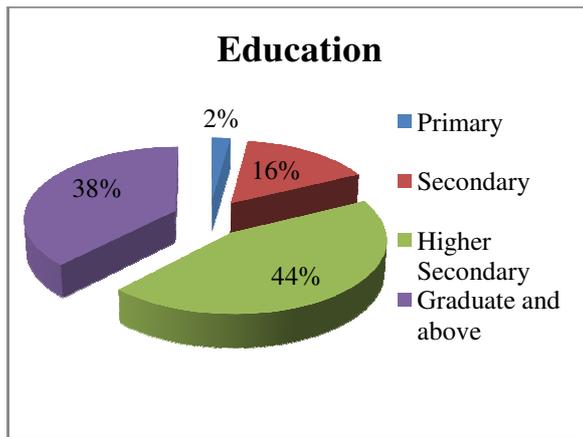
**Table 6.2 Gender Distribution of Respondents (n=45)**

Gender	Respondents	%
Male	42	93.3
Female	3	6.7
Total	45	100.0

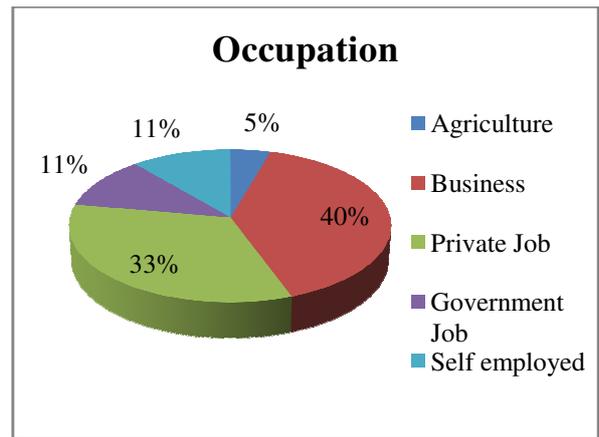
The age of majority of the respondents (73%) fall in the range of 31 to 45 years (Table 6.3). 13% of the respondents fall below 30 and 11% are above 50.

**Table 6.3: Age of the Respondents (n=45)**

Age	Respondents	%
26-30	6	13.3
31-35	11	24.4
36-40	10	22.2
41-45	12	26.7
46-50	1	2.2
51 and Above	5	11.1
Total	45	100.0



**Chart 1: Education Level of Respondents (n=45)**



**Chart 2: Occupation of Respondents (n=45)**

The education level of 18% of the respondents are secondary or below. Majority of the respondents (44%) have education of higher secondary level and 38% of the respondents are graduate or above (Chart 1). The occupation of 45% of the respondents are business or agriculture, 33% are in private job, 11% are in government service and 11% of the respondents are self employed (Chart 2)

There are variations in perceived service quality and satisfaction of the respondents. The E-Governance Readiness also varies in the study areas. Moreover, there are variations in other independent variables like Administrative Culture, Client Readiness, Age, and Education as well. As such, which factors are playing significant role for variation of service performance is analyzed in subsequent sections.

## 6.2 Factors That Affect Mutation Service Delivery

The descriptive statistics (minimum, maximum, mean, standard deviation) of dependent variable (Performance of Service Delivery) and its indicators are presented in Table-6.4 as below:

**Table 6.4: Descriptive Statistics of Indicators of Dependent Variable**  
(Performance of Service Delivery) (n=52)

Dependent Variable and Indicators	Minimum	Maximum	Mean	Standard Deviation
Index of Performance of Service Delivery <sup>25</sup> (Very Poor to Excellent)	2.25	3.69	2.95	0.383
a) Responsiveness <sup>26</sup> (time saving, feedback mechanism)	1.65	3.90	2.69	0.503
b) Reliability <sup>27</sup> (dependability, accuracy)	2.00	4.00	3.01	0.431
c) Assurance <sup>28</sup> (credibility of service)	2.00	4.00	3.13	0.561
d) Empathy <sup>29</sup> (communication, sufferings)	2.00	4.00	2.95	0.544
e) Cost Saving <sup>30</sup>	2.00	4.00	2.84	0.490
f) Extent of Satisfaction <sup>31</sup>	2	4	3.10	0.664

From Table-6.4, according to the respondent's view the mean score of performance of service delivery, ranges from 2.25 to 3.69 in a scale of 1 (Very Poor) to 5 (Excellent) with a mean of 2.95. It indicates that performance of service delivery ranges from below medium to above medium level in the offices under study. It is measured in a scale of 1 (Very Poor) to 5 (Excellent) calculating by index of scores of indicators: responsiveness, reliability, assurance, empathy, cost savings and extent of satisfaction. The score of indicators of dependent variable is explained below.

Score in respect of responsiveness ranges from 1.65 to 3.90 - it varies approximately from low level to high level. The respondents were asked to evaluate the extent they agree/disagree that the number of visit, waiting time, and service delivery speed are at acceptable level, that application processing time is reduced and that the feedback (complaints and comments) system is easier.

<sup>25</sup> In a scale of 1 (Very Poor) to 5 (Excellent) measured by index of scores of indicators;

<sup>26</sup> In a scale of 1 (Very Low) to 5 (Very High) measured by index of scores of indicators;

<sup>27</sup> In a scale of 1 (Very Low) to 5 (Very High) measured by index of scores of indicators;

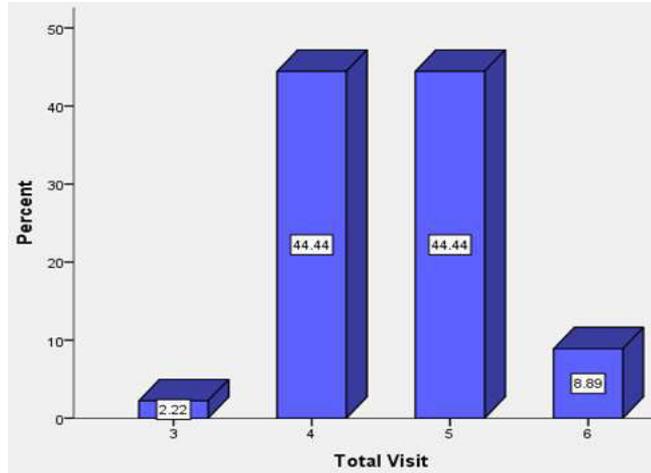
<sup>28</sup> In a scale of 1 (Very Low) to 5 (Very High) measured by index of scores of indicators;

<sup>29</sup> In a scale of 1 (Very Low) to 5 (Very High) measured by index of scores of indicators;

<sup>30</sup> In a scale of 1 (Very Low) to 5 (Very High) measured by index of scores of indicators;

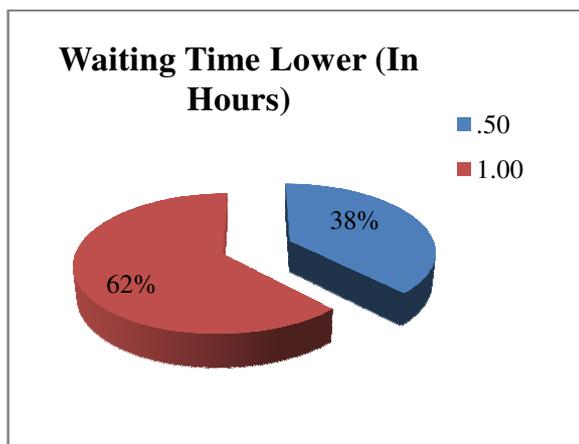
<sup>31</sup> In a scale of 1 (Highly dissatisfied) to 5 (Highly Satisfied) measured by index of scores of indicators;

Regarding how many times clients have to visit land office, field data (in Chart-3) reveals that the clients had to visit to AC (L) offices 3-6 times for mutation in general with mean visit 4.6 times. Majority (88%) of the respondents had to visit 4-5 times which is quite high for one service.

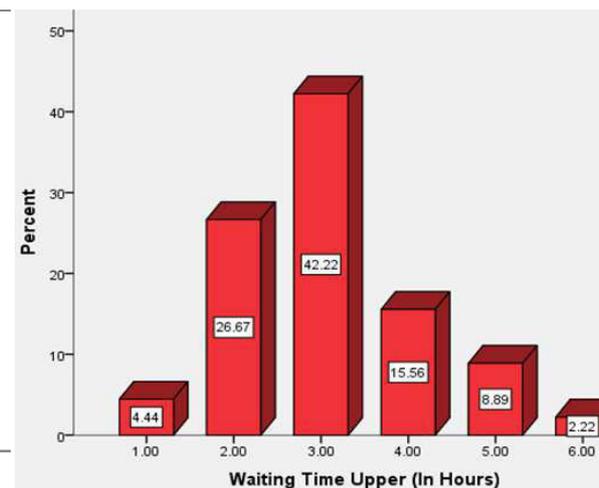


**Chart 3: The Percentage of Respondents and The No of Times They Visited office**

As the clients had to visit AC (L) office several times, they had to wait for different duration at each visit. So each client had a range of waiting time having minimum and maximum duration while visiting office. The lower range of waiting time (in Chart 4) in getting service at different stages is around 0.5 hour to 1 hour with mean 0.8 hours. 62% of the respondents had to wait minimum 1 hour for visit.



**Chart 4: The Percentage of Respondents and The Minimum Time They Had To Wait**



**Chart 5: The Percentage of Respondents and The Maximum Time They Had To Wait**

The upper range of waiting time (in Chart 5) while visiting office is 1 hour to 6 hours with mean 3.04 hours - which means that the average waiting time at upper range is

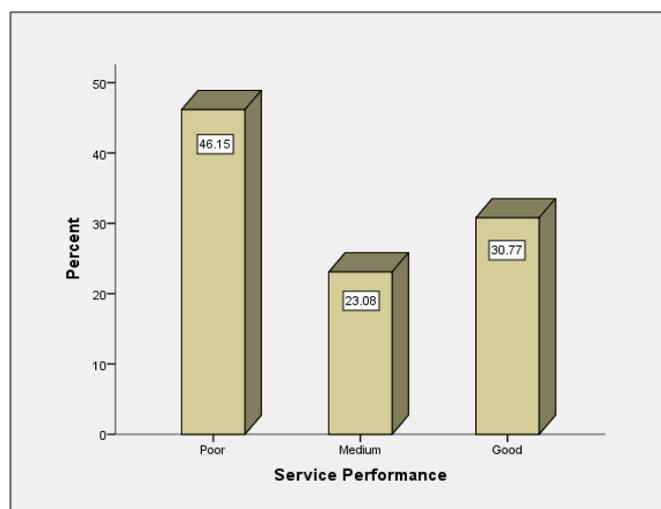
around 3 hours. Maximum (83%) of the respondents had to wait up to 2 to 4 hour and 10% people have to spend even 5 to 6 hours for visiting at some stages of service.

Reliability score ranges from 2 (Low) to 4 (High). The respondents were asked to evaluate the extent they agree/disagree that the accuracy in service is more and that the service status can be easily monitored.

Assurance score ranges from 2 (Low) to 4 (High). The respondents were asked to evaluate the extent they agree/disagree about the availability and access to required information. This is assumed to be the basis of confidence about the service. Score in respect of Empathy ranges from 2 (Low) to 4 (High). The respondents were asked to evaluate the extent they agree/disagree that the clients can easily communicate with the service providers and whether client's sufferings is less.

Cost saving score ranges from 2 (Low) to 4 (High). The respondents were asked to evaluate the extent they agree/disagree that travel cost, extra cost beyond due fee are less from client's side. From the service provider's perspective, the extent they agree/disagree that operating cost has reduced.

The index of perceived level of service performance ranges from 2.25 to 3.69 in 5 point scale (very poor to excellent). Recoding the score less than 2.90 as poor, from 2.90 to 3.10 as medium and above 3.10 as good the data shows that only 30% clients consider service performance as good, 23% are consider it as medium level and 46% consider that service performance is poor (Chart 6).



**Chart 6: The Percentage of Respondents and Overall Service Performance**

The descriptive statistics (minimum, maximum, mean, standard deviation) of Independent variables are presented in Table-6.5 as below:

**Table 6.5: Descriptive Statistics of Independent Variables**

SI		Minimum	Maximum	Mean	Standard Deviation
1.	<i>E-Governance Readiness</i> <sup>32</sup> (Very less Developed to Very High Developed in 5 point scale)	1	3	2.02	0.82
2	<i>Administrative Culture</i> <sup>33</sup> (Very Less Integrative to Highly Integrative in 5 point scale)	3	5	3.78	0.74
3.	<i>Client Readiness</i> <sup>34</sup> (Very Low to Very High in 5 point scale)	1	3	2.11	0.38
	a) Ownership of Mobile	1	1	1.00	0.00
	b) Ownership of Smartphone Computer	0	1	0.89	0.31
	c) Electric supply	1	1	1.00	0.00
	d) Internet	0	1	0.84	0.36
	e) Capacity to download file	0	1	0.38	0.49
	f) Knowledge of mutation	2	4	2.93	0.61
	g) Knowledge of ICT	1	4	2.36	0.77
4.	Age	27	64	39.60	8.61
5.	Education	2	5	4.18	0.77

Table 6.5 shows that the *E-Governance Readiness* ranges from 1 (Very Less Developed) to 3 (Medium Developed) in the scale of 1 (Very Less Developed) to 5 (Highly developed). None of the AC (L) offices falls in the category of highly developed or very high developed; and no such AC (L) office could be found elsewhere.

The *Administrative Culture* score ranges from 3 (Moderate Integrative) to 5 (Highly Integrative) with in a scale of 1 (Very less integrative) to 5 (Highly Integrative). The mean score is 3.78 indicates that average *Administrative Culture* is moderate integrative.

The *Client Readiness* score ranges from 1 (Low) to 3(Medium) in the scale of 1(Very low) to 5(Very High); the mean score is 2.11 indicates that average client awareness is Low.

<sup>32</sup> On a scale from 1 (very less developed) to 5 (very high developed); measured by scores of online service index as in table 5.2. Then it is categorized in scale of 1(very less developed) to 5(very high developed) by recoding the variable from 0 to 0.30 as 1, 0.31 to 50 as 2, 0.51 to 0.70 as 3, 0.71 to 0.90 as 4 and from 0.90 to 1 as 5.

<sup>33</sup> On a scale from 1(Very Less integrative) to 5(Highly Integrative) measured by the extent of influence of culture of tadbir. The sign of the measuring indicator was changed because lower the practice of tadbir indicates more integrative culture. Then the score is categorized into five levels from 1(Very Less integrative) to 5(Highly Integrative).

<sup>34</sup> On a scale from 1(Very Low) to 5(Very High); It is measured by index scores of indicators then categorizing the score in 5 point scale. The indicators are: ownership of mobile, smartphone/computer, electricity, internet, file download capacity, knowledge of ICT and mutation.

The respondent's ages are between 27 to 64 years with mean age 39.60, education level primary (2) to graduate and above level (5) with mean education level 4.18 i.e. mean education level of the respondents is higher secondary and above. Occupation of the respondents falls in the category of agriculture, business, private job, government job, student or self-employed.

From field study, it is observed that performance varies for various reasons. According to analytical framework the possible explanatory variables identified were *E-Governance Readiness*, *Administrative Culture*, *Client Readiness* and some demographic characteristics like age, education. Therefore, the following sections attempt to explain the variation of performance of service delivery.

**Table 6.6: Service Performance With Respect To E-Governance Readiness (n=52)**

Performance of Service Delivery	<i>E-Governance Readiness</i>		
	Very Less Developed in office A (1)	Less Developed in office B (2)	Moderately Developed in office C (3)
Poor	76.5%	52.9%	11.1%
Medium	17.6%	17.6%	33.3%
Good	5.9%	29.4%	55.6%
Total	100%	100%	100%

Table 6.6 depicts the variation of performance of service delivery for change in E-Governance Readiness. It reveals that service delivery is relatively better for relatively higher level of E-Governance. In relatively higher level of E-Governance (as in office C) 55.6% of the respondents consider that performance is good compared to 29% for less developed E-Governance (as in office B); and 6% consider that performance is good for low level of *E-Governance Readiness* (as in office A). Therefore, there might be some positive correlation between *E-Governance Readiness* and performance of service delivery; and the change in the dependent variable might be attributed to *E-Governance Readiness*, however this data may not assure that the relationship is statistically significant.

**Table 6.7 : Service Performance With Respect To Administrative Culture (n=52)**

Performance of Service Delivery	<i>Administrative Culture</i>		
	Neither Integrative nor Aggregative (3)	Moderate Integrative (4)	Highly Integrative (5)
Poor	66.7%	38.1%	20.0%
Medium	19.0%	23.8%	30.0%
Good	14.3%	38.1%	50.0%
Total	100.0%	100.0%	100.0%

From Table-6.7, it reveals that service delivery is relatively better for highly integrative *Administrative Culture* than that for less integrative *Administrative Culture*. In relatively higher level of *Administrative Culture* 50% of the respondents consider that the service delivery is relatively better, whereas the figure is 38% for moderate *Administrative Culture* and 14% for neither integrative nor aggregative *Administrative Culture*. Therefore there might be some positive correlation between *Administrative Culture* and performance of service delivery; and the change in the dependent variable might be attributed to *Administrative Culture*; however this data may not assure that the relationship is statistically significant.

**Table 6.8: Service Performance with respect to *Client Readiness* (n=45)**

<b>Performance of Service Delivery</b>	<b><i>Client Readiness</i></b>		
	Low	Medium	High
Poor	100.0%	57.9%	-
Medium	-	23.7%	16.7%
Good	-	18.4%	83.3%
Total	100.0%	100.0%	100.0%

From Table-6.8, data reveals that service delivery is relatively better for higher level of *Client Readiness*. 83% of the respondents with high level of *Client Readiness* consider that the service delivery is good, which is 18% for medium level of *Client Readiness*; and nobody with low level of *Client Readiness* consider that service delivery is good. Whereas 57.9% respondents with medium *Client Readiness* and 100% with low level of *Client Readiness* consider that service is poor. Therefore, there might be some positive correlation between *Client Readiness* and *performance of service delivery*; and the change in the dependent variable might be attributed to *Client Readiness*, however this data may not assure that the relationship is statistically significant.

**Table 6.9 : Service Performance With Respect To Age (n=45)**

<b>Performance of Service Delivery</b>	<b>Age</b>	
	<b>Age Less than 40</b>	<b>Age greater than 40</b>
Poor	42.3%	63.2%
Medium	23.1%	21.1%
Good	34.6%	15.8%
Total	100.0%	100.0%

From Table-6.9, data reveals that *service delivery* is relatively better for respondents with age less than 40 than that for respondents with age greater than 40. Only 15.8% of the respondents with age greater than 40 find that service delivery is good. On the other hand 34.6% of the respondents with age less than 40 find that service delivery is good. Therefore there might be some negative correlation between age of respondents and service delivery; and the change in the dependent variable might be attributed to age, however this data may not assure that the relationship is statistically significant.

Table-6.10 reveals that almost similar percentage of respondents with different level of education find service delivery good. 29% of the respondents with graduate education, 25% with higher secondary education and 28.6% with secondary education find that service delivery is good. Although majority of the respondents with relatively lower education find service delivery as poor. Therefore there might be some positive correlation between education of respondents and performance of service delivery; and the change in the dependent variable might be attributed to education, however this data may not assure that the relationship is statistically significant.

**Table 6.10 : Service Performance With Respect To Education**

Performance of Service Delivery	Education			
	Primary	Secondary	Higher Secondary	Graduate and above
Poor	100.0%	71.4%	40.0%	52.9%
Medium			35.0%	17.6%
Good		28.6%	25.0%	29.4%
Total	100.0%	100.0%	100.0%	100.0%

### ***Correlation and Regression***

To understand the strength of relationship between independent and dependent variables Pearson's correlation tests have been done by using statistical tool SPSS 20. Table-6.11 shows Correlation Matrix of dependent and independent variables. Bivariate correlation analysis has been done for this purpose.

The Pearson correlation test shows that *E-Governance Readiness* is strongly associated with dependent variable, the correlation co-efficient is 0.51 and p-value is significant at 0.01 level (2-tailed). *Administrative Culture* is also strongly associated with dependent variable, the correlation co-efficient is 0.33 and p-value is significant at 0.05 level (2-tailed). *Client Readiness* is also strongly associated with dependent variable, the correlation co-efficient

being 0.41 and p-value is significant at 0.01 level (2-tailed). However no significant association could be found for age and education with performance of service delivery.

**Table 6.11 : Correlation Matrix of Independent and Dependent Variables**

Independent/Explanatory variables	Performance of Service Delivery (Pearson's Correlation)
E-Governance Readiness	.51**
Administrative Culture	.33*
Client Readiness	.41**
Age	-.21
Education	.17

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

However, correlation does not explain the causal effect in variation in variables. Therefore regression analysis has been conducted to understand the causality of variation in *performance of service delivery*.

The regression model is presented in Table 6.12 considering *Performance of Service Delivery* as dependent variable; and *E-Governance Readiness*, *Administrative Culture*, *Client Readiness*, Age and Education as explanatory variables.

**Table 6.12: Regression Model of Independent and Dependent Variables**

Independent/Explanatory Variables	Performance of Service Delivery (Beta Coefficient)
E-Governance Readiness	.371**
Administrative Culture	.245*
Client Readiness	.480**
Age	-.314*
Education	-.139
Adjusted R <sup>2</sup>	0.46
Model Sig	.000

\* Significant at p<0.05; \*\* Significant at p<0.01

The beta coefficient for *E-Governance Readiness* is 0.371 significant at 0.01 level, which rejects Null hypothesis. Therefore, the hypothesis H1 stands and confirms that there is significant contribution of *E-Governance Readiness* on service delivery.

The beta coefficient for *Administrative Culture* is 0.245, significant at 0.05 level, which also rejects Null hypothesis. Therefore, the hypothesis H2 prevails and proves that there is significant contribution of *Administrative Culture* on service delivery and the higher the score the better the service performance is which is supported by theory. *Administrative Culture* score ranges from medium integrative to highly integrative. In highly integrative culture 50% of the respondents scored service performance good whereas only 14% scores service performance good in medium integrative culture. In the culture of *tadbir*, those who are powerful or have link with powerful source might get the service easily. But the poor, disadvantaged and mass people most likely lack such connection and forced to pay sufficient extra money to comply with *tadbir* culture; and those who wouldn't comply might suffer. One of the field observations may be noteworthy to mention at this point which indicates that social, economical or political position matters in getting service.

*One mutation application of a client was rejected and he made a phone call to AC (L) asking the reason of mutation mentioning his political position. The AC (L) was puzzled at that moment and told that he would inform upon checking the files. He called on the subordinates and asked to inform immediately the reason of rejection. Upon getting the information he replied instantly that his application was rejected for some minor reasons and advised to reapply assuring that it would be granted next time. The client at the end was one of influential political leader. Social or political position matters in getting service.*

The beta coefficient for *Client Readiness* is 0.48 significant at 0.01 level which also rejects Null hypothesis. Therefore, the hypothesis H3 stays and establishes that there is significant contribution of *Client Readiness* on service delivery. It is also observed that 83% of those having medium level of *Client Readiness* score service performance good; whereas only 18% of those having low level of *Client Readiness* score service performance good. In response to identify the obstacle in mutation service delivery, 48% identified lack of client awareness as problem and the same percentage of respondents suggests for raising client awareness for better service delivery. Therefore *Client Readiness* has significant contribution in mutation service delivery.

The beta coefficient for age is 0.314 significant at 0.05 level (2 tailed) which also rejects Null hypothesis. However for the beta coefficient being negative indicates that age negatively affects dependent variable. The data shows that the higher the age is, the

service delivery is poorer - which is contrary to the assumed hypothesis H4a. H4a was assumed in the sense that aged persons are likely to have more experience on land and mutation which might help them getting service with less difficulty. However the hypothesis H4a is not established rather the opposite fact is observed. The mean age of the respondents was 39.6 with minimum age being 26. Data in Table-6.3 showed that service delivery is relatively better for respondents with age less than 40 than the respondents with age greater than 40. The argument of the findings could be that younger people (age less than 40) have more *Client Readiness* (Pearson Correlation 0.29 sig at 0.05 level) which help them in getting better service. The limitation of the finding could be that this hypothesis is true for minimum age up to 26 years and not below that until further study is done.

The beta coefficient for education is 0.139 with p-value 0.275 which is beyond 0.05 level (2 tailed) which assumes Null hypothesis and rejects alternative hypothesis H4b. Therefore it indicates that there is no significant contribution of education on service delivery in AC (L) offices. This is somewhat practical that many educated persons have less knowledge about land related services like mutation; and suffer. On the other hand many less educated persons, even illiterate persons get their job done smoothly due to their experience. However further study may reveal the fact taking previous experience into account.

The adjusted  $R^2$  for the model is 0.46, i.e. 46% variation in dependent variable (Performance of Service Delivery) can be attributed to five explanatory variables (*Client Readiness, E-Governance Readiness, Administrative Culture, age and education*) in the model having first four with significant contribution. The *Client Readiness* has the highest beta coefficient (0.48) meaning its impact on service delivery is higher. Therefore among the 5 (five) explanatory variables in the study *Client Readiness, E-Governance Readiness, Administrative Culture* and Age are four factors that significantly affect service delivery.

### ***6.3 Analyzing Problems in Mutation and Relating with the Factors***

The relationship of the factors associated with mutation service delivery identified through quantitative analysis can be further illustrated by analyzing problems in service delivery. Interviewing key officials in AC (L) offices, the general problems in executing mutation cases were identified as: i) Not showing original documents to ULAO; and not appearing before AC (L) for hearing in due time. ii) No land/ not sufficient land is there in the title of transferor. iii) Someone else has already completed mutation before the current applicant. iv) Land is vested/abandoned/khas land. v) Absence of similarity between record and possession exists. and vi) Discrepancy is there in documents with record.

To show documents to ULAO and AC (L) in due time require three facts. First, the client must have required documents; second, he/she should be aware of how to collect documents; and understand that it is his/her responsibility to appear in due time with documents; third, he/she must know the date to show the documents. Here E-Governance might play facilitating role by publishing the clear procedure of getting documents. Documents of ROR, Registration deed might be uploaded to website so as to have the facility to crosscheck documents without requiring original documents. The exact hearing date might be published in the website as well as giving SMS to respective clients. Moreover, clients must have knowledge and capacity to avail the facility. Administrative willingness and empathy in facilitating service delivery is highly imperative in this respect.

One critical problem some of the clients face in getting mutation service is that another party before current applicant has already done mutation. Mutation in this situation is not possible for not having sufficient land in the title of transferor. In this case mutation of another party has to be cancelled, if cancelable, to continue with current mutation application. Such a case is depicted in Case-1 and analyzed which factors are critical for such situation.

***Case 1: Mutation Being Done By One Party Before Current Applicant***

‘A’ is 43 years old and a graduate. His home district is Brahmanbaria and had been in Dubai for long 15 years. He came to Bangladesh 5 years back and running a business. He stays in Jatrabari, Dhaka. He has a smartphone and a computer at home. His mutation knowledge is at average level but he can browse internet. Recently he purchased a land from ‘C’ with Taphsil<sup>1</sup>: the CS khatian (Symbolic number) 419, SA 132, RS-08; Plot no 14 (CS and SA), City survey 63, amount of land 31.51 decimal. From this plot he bought 13.0 decimal of land; paid the money worth BDT 2.2 mn to the seller and completed registration of deed in the sub-register office dated 06 November 2014. He applied for mutation in AC (L) office with much delay in 19 May 2015.

After around two months, he came to know that the seller had no land in his record, as another party ‘B’ already got the mutation on the same land, therefore the mutation is not possible. Consequently, his application rejected.

He asked how it could be possible. He requested to inform the details. Then he came to know that another party named ‘B’, from Donia, Dhaka already bought the same land earlier to him and did mutation. He asked how another person can buy the land, as he has bought it with full payment. Then he was informed that they had nothing to do as they can’t perform mutation from one’s record that does not have enough land in his/her own record. However, he was advised to lodge a miscellaneous case against it. As such, he had to lodge a misc case to get his mutation done by cancelling the other party’s mutation order. Since then there is no result. He attends on the hearing date, but the hearing has to be extended as on the hearing date the defendant remains absent.

In Case-1 few important issues are observed. First, the lack of awareness of the respondent is responsible for such consequences. He was very late in submitting application. He didn’t verify the documents supplied by seller before buying the land; the reason he mentioned is to avoid complexity of checking documents. Moreover, he lacks sufficient knowledge of mutation. Had he checked the documents, he might not be in trouble in mutation of land.

Second, at least one of the parties is most likely to be fake. If the party which has already done mutation is forged, then it indicates there is lack of fairness and accuracy in updating land records. If the current party is not genuine, still question can be raised how the registration of the land was allowed and whether mutation khatian of seller issued from AC (L) office was checked.

He reports that he asked the officials to show the documents of the defendant but not getting such. So he is in dark. However easy access to documents through website could be easier to check the history of the ownership of land plot. This kind of online access could facilitate the checking of documents before buying the land and might prevent oneself from such consequences. Automated verification of land records could easily

block any illegal or unfair land registration and mutation from the early stages, which might prevent public sufferings to large extent during mutation. For manual verification of land records, client readiness is also required.

Therefore, the case suggests that *Client Readiness*, fairness in land record transaction, and E-Governance are essential for better service delivery.

Sometimes it is found that land under mutation is vested/abandoned/khas land. In that case mutation is not possible and clients have to commit severe loss of whole amount paid in buying the land, let alone time and effort made in buying the land. Having easy facility to check whether a land is vested/abandoned/khas through online could be much helpful. However, clients having good awareness level can check it physically visiting office. Moreover, officials might check whether land is transferable before committing transaction.

Absence of similarity between record and possession is another problem in mutation. There are some forceful possessions which may be resolved by the assistance of law enforcing agencies and little to do with E-Governance. Still client awareness can minimize the problem by maintaining possession of land without letting it vacant. In case the officials are cordial in proper maintenance of land records, the problems may be minimized.

Discrepancy in documents with record is another critical problem in mutation. The discrepancy may be in respect of personal information of buyer/seller, plot number, land amount and so on. The following case (Case-2) explains the sufferings of one applicant for such mistake in documents.

### ***Case 2: Discrepancy in the Name of Seller***

A person named Golam Saklain bought a piece of land from a person named Saifur Islam. However while Mr. Saklain applied for mutation of land, upon scrutinizing the application through ULAO office and examining by AC(L) office, the application was rejected mentioning that there is no similarity regarding the ownership of land in the record. Mr. Saklain was very disappointed for rejection of his mutation case.

While discussing with Mr. Saklain it revealed that in registration deed of land transfer to Mr. Saklain, the name of seller was mentioned as Saifur Islam. But in the last record (Via deed and mutation khatian) the owner of the land is Saiful Islam. Therefore it creates ambiguity regarding actual ownership of the seller as the name does not match. In this situation anyone named Saifur Islam can't sell that land while the name in the record is different. AC (L) advised Mr Saklain to get corrected the name of seller in the registration deed as Saifur Islam, if he is the actual owner. In that case, current deed prevails as Saifur Islam and he could issue the mutation khatian in the name of Golam Saklain. Mr. Saklain got disappointed how he could manage to correct the registration deed which had been done more than 4 years ago, let alone the time, money and energy he might have to spend to solve the issue.

These sort of mistakes as depicted in Case-2 are sometimes observed in land registration and mutation documents. Although the primary responsibility goes to client himself/herself in checking the key facts are correctly written in the document. and subsequent clients check that documents are correct. The due care and concern from responsible officials might help to avoid this kind of mistakes to facilitate land transfer process be easier.

Furthermore, E-Governance may play vital role by preparing the registration deed as well as mutation khatian automatically from land record database and National ID Database; preventing mistakes like the case and avoiding awful consequences.

Therefore, in analyzing the problems in mutation service delivery it suggests that *Client Readiness*, fairness in land record transaction and E-Governance are essential for better service delivery which is in line with statistical analysis.

### ***6.4. How E-Governance Affects Service Delivery***

The statistical analysis depicts that *E-Governance Readiness* along with *Client Readiness*, *Administrative Culture*, and age are four factors that significantly affect service delivery. The service delivery is relatively good for relatively better developed E-Governance. On the other hand, service delivery is poor where E-Governance is less developed. The correlation and regression analysis validate the fact that E-Governance has significant

positive impact on service delivery. The findings were also supplemented by qualitative data. The following sections further explain how E-Governance improves the performance of service delivery.

#### ***6.4.1 E-Governance Reduces the Obstacles of Service Delivery***

There are number of literatures that explain how discretionary power, bureaucratic complexity, influence of middlemen, and corruption act as hindrance to effective public service delivery (Baniamin 2014; TIB 2015). Rose-Ackerman (1999) defines corruption as ‘the use of public office for private gain.’ It is the misuse of discretionary power by managers or government officials to satisfy their self-interest. Corruption includes giving or accepting bribes, gifts with ill intention, giving unethical benefit to others with misuse of power, and unfair decisions in favoring someone. Rose-Ackerman (1978, 94) and Klitgaard (1991) derived an equation regarding corruption as follows: Corruption = Monopoly + Discretion- Transparency (in governance).

The World Bank’s 2011 guide identifies corruption as ‘one of the single greatest obstacles to economic development and social development’. Bangladesh championed as most corrupt country consecutive five years in surveys conducted by TI. The ranking on the same list for 2014 was 145 and in 2013 was 136 (TI 2014). Land sector is considered one of the most corrupt sectors in Bangladesh. It is evident that there are bureaucratic complexities in many land offices where one has to move from desk to desk to get service due to hierarchical, excessive rule bound structure and process. The discretionary power of officials and crisscrossed rules are often misused causing unnecessary delay and sufferings, keeping files pending on different grounds which are often resolved if negotiated etc (TIB 2015; Mahmud 2015; Rashid 2014). This sort of complexity creates the scope of evolving middlemen, making link with lower level officials and in the name of helping in getting service who very often defraud people in many ways. Due to these issues, many innocent service seekers face difficulty in getting service. Therefore, discretionary power<sup>35</sup>, bureaucratic complexity<sup>36</sup>, influence of middlemen<sup>37</sup>, and lack of access to information are obstacles to better service delivery.

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<sup>35</sup> Discretionary power is flexibility in exercising arbitrary power for personal gain.

<sup>36</sup> Bureaucratic complexity is meant keeping files pending showing different rules; red-tapism; no clear instruction about documents, have to move from desk to desk for getting documents and get job done etc.

<sup>37</sup> Middlemen (*dalal* in Bengali) are those persons who acts as intermediary/agent in getting service in exchange of money and who have generally some kind of link with some officials

In one question, the respondents were also asked to identify the factors that act as obstacles to mutation service delivery. The opinions of the respondents are presented in Table-6.13.

**Table 6.13: Opinion regarding Obstacles in Mutation**

<i>Obstacles</i>	<i>Frequency</i>	<i>%</i>
Bureaucratic Complexity	38	73.08
Lack of Transparency	36	69.23
Client Awareness	34	65.38
Less use of ICT	25	48.08
Influence of Agent	21	40.38
Technical Complexity	19	36.54
Socio Economic Condition	14	26.92
Manpower Shortage	4	7.69
Lack of Document	2	3.85
Lack of Complete Khatian Database	1	1.92
Lack of Online Database of Documents of Sub-registry office	1	1.92
Lack of official Land Database of Citizens	1	1.92

The majority (73%) of the respondents opined that bureaucratic complexity is the problem in getting service. 69% of the respondents identified lack of transparency, 65% opined lack of client awareness, and 48% opined less use of ICT are the major problems in mutation service delivery and 40% of the respondents mentioned influence of agent as obstacle in mutation system. Lack of transparency is meant lack of access to information i.e. difficulty in getting contact numbers of responsible officers, service procedure, information regarding delivery period and cost of service; not taking complaints into cognizance. Lack of client awareness is meant not having clear idea about mutation, lack of awareness about their right etc.

One of the respondents regarding less or no change of bureaucratic complexity mentions that ‘while submitting papers told that everything is okay, after few days informed that more documents are required.’ Another respondent mentions that ‘I paid few money to one of my relatives to work for me, didn’t work. Then I myself came. They told that a lot of files have to search. The staffs don’t work unless paid.’ Another client mentions ‘one of the lower level officials informed on different grounds that the mutation is not possible, but did it later, they need to be satisfied.’ Bureaucratic complexity is relatively

less at relatively higher level of *E-Governance Readiness*. At moderately developed E-Governance, one of the respondents mentions that ‘everything runs in due process.’ However, there is bad experience as well. One informed that ‘still now there are sufferings for various reasons.’

Regarding influence on middlemen one of the respondents mentions that ‘I gave the responsibility to one, but didn’t work. He is my relative. Later on, I myself have to visit to get the job done.’ Another client mentions that ‘unless you make contract with someone, you will face difficulty to get the service.’ Dependence on middlemen is less at relatively better developed E-Governance. Regarding change in dependence on middlemen one of the respondents mentions that ‘those who have good knowledge over mutation and have knowledge on ICT and Internet can take the services themselves.’

Regarding discretionary power one of the respondent mentions that ‘if they desire they can reject any application based on different grounds.’ Another says that ‘discretionary power has not changed, you have to move upon their satisfaction.’ Other respondent mentions that ‘lower level staffs show more power than the officers.’ Discretionary power is reduced at relatively more developed E-Governance, people have to visit less with officials; and get much of their required information from website and SMS; and they are confident about their document in case there is no problem with documents, people are likely to get service easily. Regarding change in discretionary power one of the respondents mentions affirmatively that ‘now we can know the service status through SMS. Moreover all information is there over website, so we need to go to officials for limited reasons.’

E-Governance plays vital role in tackling obstacles in service delivery. In moderately developed *E-Governance Readiness*, 50% of the respondents agreed that discretionary power has reduced; whereas 24% in less developed E-Governance; and 12% in very less developed E-Governance agreed for the same. E-Governance requires less intervention of the govt. officials, less role in ultimate decision making; hence less chance of exercising arbitrary power and of making unnecessary delay. Complex and ambiguous rules result in discretionary powers of the officials. E-Governance develops standardized rules and procedures equally applicable to all.

In the moderately developed *E-Governance Readiness*, 61% of the respondents agreed that dependence on middlemen has reduced; whereas 17.6% in both less developed E-Governance; and very less developed E-Governance, agreed for the same. Regarding lack of transparency or lack of access to information, 44% in moderately developed E-Governance agree that access to information is better compared to 6% at very less developed E-Governance. Similarly in the moderately developed *E-Governance Readiness*, 44% of the respondents agreed that bureaucratic complexity has reduced; whereas the figure is 17.6% for less developed E-Governance; and in very less developed E-Governance, nobody agreed that there is change in this regard. Moreover, regarding problems mentioned in section 6.3 E-Governance explains that it might contribute in resolving most of the problems in mutation service delivery. As a result, E-Governance reduces the major obstacles in getting mutation service.

#### **6.4.2 E-Governance Plays Facilitating Role**

Empirical data suggests that E-Governance acts as a driver in improving service performance facilitating access to required information; easy information retrieval system, making authenticity check of documents easier; and informing service status through SMS/website.

In response to the question regarding ease of use of web based information and service, 50% of the respondents in moderately developed E-Governance agreed that web based information and services are well organized, easy to understand and use; whereas 33% respondents in less developed E-Governance and nobody in very less developed E-Governance agreed for the same. So higher level of E-Governance makes web based information easy to use.

In the moderately developed *E-Governance Readiness*, 44% of the respondents agreed that they have increased access to information; the figure is 17% for less developed E-Governance and it is only 6% for very less developed E-Governance. In the moderately developed *E-Governance Readiness*, 50% of the respondents agreed that the monitoring job status is easier compared to 12% for less developed E-Governance and very less developed E-Governance each for the same.

Moreover, it is observed that the awareness about existence of websites at higher level of E-Governance is higher. In response to question whether they know that there is a website of the corresponding AC (L) office, 46.7% of the respondents in moderately developed E-Governance are aware about web based service which is 26.7% at less developed E-Governance and only 6.7% at very less developed E-Governance. The reasons for higher awareness about web based service at moderately developed E-Governance might be that clients get SMS notification; moreover there is publicly accessible kiosk at that office.

Therefore, relatively better level of *E-Governance Readiness* is found to have facilitated more access to required information like getting application form, mutation procedure, required documents, delivery period and cost; easy monitoring of job status through SMS and website, facilitating easy authentication system of documents through online; and more awareness about the ICT based service. Awareness about web based service inspires to look for information in website. The following sections further explain how E-Governance plays facilitating role in improving the indicators of service performance.

### ***Better Responsiveness***

Responsiveness is the promptness in service delivery and dealing with complaints and feedback effectively. It is measured by time saving and effective feedback mechanism. Time saving is measured in terms of fewer visits, less waiting time, reduced application processing time, and faster service delivery. Statistical analysis shows that at moderately developed E-Governance the number of visit is less. In less developed E-Governance system people had to make mean visit of 4.87 times to office, whereas for relatively better level of E-Governance, people get their job done with mean visit 4.13 times. For medium level of E-Governance around 80% of the respondents had to visit 4 times or less to office - compared to 33.3% at less developed E-Governance and 26.7% at very less developed E-Governance. The data suggest that at relatively higher level of E-Governance, the number of visit is comparatively less.

In less developed E-Governance system, people have to visit more times to get application form, know the procedure, collect the required information, know their job status, hearing date, completion status and collecting final document. One of the respondents mentions that 'he had to visit several times to Tahsil office and AC (L) office; and wait until afternoon for some days; it took three months to get the service'.

Another person mentions that 'he had to wait for hours in some days'. However, in better level of E-Governance system, one of the AC (L) mentions that 'clients get the hearing date, service status through SMS, as entry is made to online register. People can get the application form, know procedure from website without visit, even can monitor the application status through SMS/online - which has reduced their number of visit.' One of the respondents mentions regarding fewer visits to office that 'application form is available from internet. Notification is given through SMS, so visit is less'.

Sometimes for less developed E-Governance, people have to visit several times for same task due to officials not available for being busy with other jobs. But at relatively developed E-Governance system, people are informed through SMS about status and in case of any change in schedule they are informed through SMS - which is of great use. Communication through phone call is also a part of service of E-Governance.

Informing the customers through SMS about the instruction or status of service, bears a lot of significance. This reflects the commitment of service providers which drives them to complete the job in due time as the actual completion of job is recorded in the system, thereby facilitates faster service delivery. There are feedback mechanisms at relatively better level of E-Governance through website, however very few respondents use this facility.

### ***More Reliability***

*Reliability* is the ability to perform the promised service dependably and accurately. It is measured by the perception of the respondents that the extent of error/mistake in service is less and by the ability to monitor the progress of the service with consistency. 50% of the respondents at moderately developed E-Governance agree that monitoring job status has been easier; whereas only 12% respondents agreed the same for less developed and very less developed E-Governance. At relatively less developed E-Governance, one of the respondents mentions that 'they have to go to office to know the service status.' On the other hand, at moderately developed E-Governance some of the respondents mentioned that they are informed the job status at different stage of service through SMS. The service status can also be monitored from website entering the application number. Lack of accuracy in land related documents may cause huge sufferings to public in which E-

Governance might play critical role in preparing documents retrieving information from database.

### ***Empathy***

*Empathy* is caring and individualized attention that the firm provides to its customers through easy access to service provider, easy communication, and less sufferings to customers. Very few of the respondents agree that communication system has been improved. Only 22% at moderate developed E-Governance agreed so and 17.6% agreed at very less developed E-Governance and only 6% agreed at less developed E-Governance that communication system has been improved. One of the reason might be that helpdesk/customer care culture is yet to develop in public offices.

Regarding client sufferings, 33% of the respondents at moderate developed E-Governance agreed that client sufferings is less and 17.6% agreed at very less developed E-Governance and only 11.8% agreed at less developed E-Governance that client sufferings is less. One of the respondents mentions that 'had to undergo a lot of sufferings.' Some others also iterated the same that on different grounds they suffer in getting the service. One of the AC (L) in relatively better developed E-Governance mentions that 'even having the facility to communicate online, service-seekers don't do communicate online'. He further adds that web based service helps people in getting their required information online and through SMS and don't require visiting office except for some specific purpose - which reduces their sufferings. Although all people are not aware of web based information, they get SMS in due time.

### ***More Assurance***

*Assurance* is the ability of service providers in ensuring trust and confidence of the service. It is the credibility of service. Credibility of service can be ensured with adequate disclosure of information. 44% of the respondents in moderately developed E-Governance mention that availability and access to required information has been easier, which is 17.6% in less developed E-Governance and only 6% in very less developed E-Governance. One of the respondents mentions regarding access to information that 'all information is available from internet. Khatians are available in internet and checked the documents of seller'. Another respondent mentions that he 'checked RS khatian, mutation

khatian and mouza map from website'. Many other respondents reiterated the same fact. On the other hand complexity in getting access to required information may lead to huge loss of time, money and energy.

### ***Cost Less***

In moderately developed E-Governance, 46.7% clients agree that the travel cost is less. 13.3% clients in less developed E-Governance and 6.7% of respondents in very less developed E-Governance agreed for the same. Some the respondents mentioned that they know the fees online and from citizen charter, have easy access to information to download form, know the required documents from website - so fewer visits had to make. It is observed that some are confident about their service and not willing to pay extra charge. In case of lower level of E-Governance, people have less awareness of web based service, lack information about procedure, requirement, getting application form and in respect of knowing the service status. So they have to visit office physically each time which costs them more. For each visit many clients have to spend for refreshment/lunch; more working days are lost as well as earning for those days.

However in moderately developed E-Governance, only 6.7% clients agree that the extra cost is less. 13.3% clients in less developed E-Governance and no respondent in very less developed E-Governance agreed for the same. This data is a matter of concern in fact. One of the reasons might be that there are complexities in determining land ownership clearly; clients might have weakness that the application may be rejected on different grounds finding anomalies as records have long history; and people might fear and not find it feasible to challenge the service providers for which they compromise. Moreover there is monopoly in mutation service delivery - as one has to get mutation from the same officials of same office unless transferred. There is no alternate way to get the service. Due to this, the officials enjoy high discretionary power - even lower level staffs. From study it is found that the *E-Governance Readiness* has little impact on this - one of the causes might be that digitization at most of the offices are still at early stage.

### ***More Satisfaction***

In moderately developed E-Governance, 50% of the respondents are satisfied with service; whereas 23.5% of the respondents in less developed E-Governance; and only 6%

of the respondents in very less developed E-Governance are satisfied with service.

Regarding satisfaction one of the respondents states that:

*Service is good. I have got clear idea about the service staying at home. I needed fewer visits to office. Travel cost is less. Client sufferings are less. The most exciting fact is that I have checked the RS khatian and mutation khatian from website; and felt relaxed finding the documents correct.*

Another respondent explains:

*Had to visit less, need not visit officials unless required, could know the mutation procedure and required documents for mutation from website. Consequently mutation process has been simpler. Therefore I am happy with the service.*

Another respondent mentions for satisfaction with the mutation service:

*Checked khatians, learned the required documents for mutation from website; therefore mutation has been easier. Had to visit less, travel cost is less, harassment is less; Above all, sufferings is less as service status is informed through SMS - therefore I am satisfied with the service delivery.*

One of the AC (L) mentions that

*Clients get to know the service status through SMS and online. They can download the khatian (RS and mutation khatian) and map online though watermark is there for not to use as certified copy. However the system not being completely digitized the working process is both manual and software based. As such workload has increased in some cases. Nevertheless the digitization system being under progress, I have satisfaction with the service delivery.*

Regarding the benefits that people are getting due to online service, Divisional Commissioner of Chittagong mentions that

*Due to web based service, people now can download and see the map, khatian and plot numbers of their own land or the land of the ancestors sitting at home. Additionally they can verify the ownership records of the land they are going to buy. As a result there is little chance to be deceived. Furthermore, it is more likely to save their time and cost both. Nevertheless, those who are not conscious of the service might be deceived by some middlemen or some other way. However until fully digitized the benefits can't be maximized.*

In moderately developed E-Governance, 55% of the respondents find that overall service performance is good (in a scale from poor to good); whereas 29% of the respondents find

the same in less developed E-Governance; and only 6% of the respondents in very less developed E-Governance find that overall service performance is good.

Additional District Commissioner (ICT and Education), Dhaka mentions that due to electronic processing of decision making system through NESS in DC office the service delivery has been faster. The Divisional Commissioner of Chittagong mentions that ‘due to digitization of land records and uploading required information in the website have reduced number of visit and the influence of middlemen; saves time and cost; and the service delivery has been faster’. Additional Divisional Commissioner (Revenue) of Chittagong reiterated the fact and emphasized on flexible leadership to inspire the staffs for participation in implementing E-Governance.

The service seekers opined for some dominant issues to consider for better service delivery as depicted in Table 6.14:

**Table 6.14: Factors to Consider in Improving Service Delivery**

<i>Driving Factors</i>	<i>Count</i>	<i>Percentage (%)</i>
Automation	42	80.77
Transparency and accountability	28	53.85
ICT Infrastructure development	26	50.00
Raising Awareness	25	48.08
Strengthen monitoring	22	42.31
Simplification of mutation system	15	28.85
Respond client’s complaint	14	26.92
Simplification of law	7	13.46
Involving private sector	5	9.62
Training officials	4	7.69
Modern equipment	2	1.92
More honesty of officials	1	1.92
Willingness of officials	1	1.92
Breaking the busy offices into small offices	1	1.92

Majority (81%) of the respondents suggest for automation of service delivery, 54% opined for improving transparency and accountability, 50% suggests for improving ICT infrastructure, and 48% opined for raising awareness of citizens for improvement of service delivery. The two major solutions they suggested i.e. automation and ICT infrastructure are major components of E-Governance. Field data suggests that E-

Governance has potential to improve transparency as well through adequate disclosure of information. If land transfer process, particularly mutation process is automated people may get their mutation done in one visit or even without appearing to office where the clients might apply online and get the khatians in electronic form with digital signature.

It is evident from previous case studies that *E-Governance Readiness* is essential to overcome many of the problems and facilitates getting land record updating service. The following case explains how ICT based information and service improves service delivery.

### ***Case-3: E-Governance as a Driver to Better Service***

‘D’ (Symbolic name) is a graduate person aged 37 lives in Hamidchar, Chandgaon, Chittagong having computer at home. However he frequently uses his smartphone to surf internet, to read newspaper online, to check stock market and so on. He bought a piece of land amounting 4 decimal in Chandgaon mouza from ‘F’ by registration of land transfer deed on June 2015 in Pahartoli Sub-registry office, Chittagong Sadar. Before buying the land he collected the documents from the seller.

‘D’ knew that he needed to apply for mutation. He also came to know that AC (Land) offices of Chittagong have websites and forms are available there. He searched by ‘AC Land office Chittagong’ in Google, found the website of AC (L), Sadar Circle and downloaded the mutation form. He also found that there are options to find the RS and mutation khatian, plot number, the map, status of mutation in the website. But the land he purchased belongs to the jurisdiction of Chandgaon office. So he searched for Chandgao circle and found the link easily. He checked the existing RS khatian and mutation khatian of seller from the website and found the documents. He felt very excited finding the documents correct.

He found the details of application procedure, requirement of documents to attach with application. Though he noticed the option of applying online, but applied manually with necessary court fee. He found a message after 2 days stating that his application has been preliminarily accepted and sent to Tahsil (ULAO) office for verification and instructed to show the main copy of documents to ULAO office.

‘D’ visited accordingly and showed the original documents, paid required LDT. In around 20 days another message came stating that his application sent to AC (L) office and to attend the hearing specifying a date which was 12 days away. ‘D’ accordingly appeared on the specified date, explained the way he received the land, showed his documents and answered the questions asked by AC (L). In 6 days he received the SMS stating the approval of the mutation application. He collected the mutation khatian paying the due fee and collected DCR from the mutation assistant. He visited 4 times to get his mutation done with average waiting time half an hour to 1 hour.

He was satisfied with the service as got necessary information online. He could check the documents (Plot number, RS and mutation khatian) online and got the status of service through SMS - therefore need not worry about the progress and was assured about the service. He got the mutation khatian at hand after 42 days of application. He was happy with the ICT based service delivery saving time and cost with reduced hassle.

The key officials in AC (L) offices explain how E-Governance helps to improving service performance through i) getting the contact numbers, application form and required documents for mutation from websites. ii) getting clear idea regarding mutation procedure

and fee from websites. iii) Facility to get mouza map, RS khatian, mutation khatian etc from archive. iv) Getting information about hearing date and getting instruction. v) Informing the status of application through SMS (Short Messaging System)/online. vi) Service seekers and service providers can easily check the ownership record to be assured about the authenticity of documents; and be confident about the land transfer process.

They explain that the ICT based service can help reduction of rejection rate by instructing the clients to attend office of ULAO in due time with required documents through SMS; informing the clients about hearing date through SMS. Higher level of E-Governance might help to check whether the land is vested/abandoned/khas/disputed land and automatically block transfer of such land. Higher level of E-Governance also might ensure that documents prepared are accurate and complete.

Major AC (L) offices are running manual system and at best have a web address. In some offices E-Governance is relatively developed. Online service facilities are limited which are insufficient to bring some radical changes in service delivery. In contrast in Karnataka, India incorporation of E-Governance in reforming land sector has been successful in bringing radical change in respect of reducing number of visit to office, discretionary power of officials, hassle and corruption; ensuring accountability and improving overall service delivery as explained in Case-4.

#### ***Case -4: E-Governance Success Story in improving Land Service Delivery in India***

Bhoomi is one of the most successful E-Governance initiatives in Karnataka, India in improving land service delivery. Before this E-Governance project became operational, land records were managed manually by village accountants (VA) through whom mutation requests had to be filed with to update land records upon sale or inheritance of land. Accountants were required to issue these notices which rarely reached to concern parties. often neither action was carried out, nor was any record of the notices maintained. In practice it could take a year or two for records to be updated. The record updating system was so much time consuming and corruption prone (Chawla, R., and Bhatnagar, S. 2004).

In India, Bhoomi delivers significant benefits to rural people. It has reduced the discretion power of village accountants barring to issue manual copies of land records. Only computerized records are valid, and they can be obtained online without any formal application for about \$0.32 at land record kiosks in 177 taluk offices. Records are now tamper- proof and are in the public domain open for scrutiny. Steps have been taken to allow farmers to submit mutation requests at the kiosks. At 20 of the kiosks, farmers can check the status of their requests using touch screens. If a revenue inspector does not complete a request within 50 days, the mutation request automatically gets escalated to a second person in the taluka designated to authorize mutation requests. Moreover, these requests are now handled on a first-come, first-served basis, thus cutting down on favoritism. All the measures limit opportunities for bribery. In addition, operators of the computerized system are held accountable for their actions and decisions through a log of all transactions. Bhoomi also makes it easier for many people particularly the poor, the illiterate, and women to obtain land records (ibid).

Bhoomi has eliminated discretionary powers of officials to a great extent by providing facility of online mutation request. According to Public Affairs Center Bangalore, India, 79% of the people did not have to meet any officials for their work except the kiosk operator; the corruption had come down from 66% to less than 3%. The Bhoomi project saved the farmers Rs 806 millions in bribes and Rs 66 millions in wages annually (Lobo and Balakrishnan 2002; Narayan 2004).

In the moderately developed *E-Governance Readiness*, there is increased opportunity for access to required information and easy tracking of job status compared to less developed E-Governance. The bureaucratic complexity, influence of middlemen, discretionary power and client sufferings are comparatively less. The clients get the required information like mutation procedure, contact number of officials, time and cost of service from website without moving to office. The clients can easily check the documents online. They get the job status by SMS at different stages of service. They can also check the status online and don't require coming to office. These facilities were absent in early times, people were in darkness and some people would take the opportunity. Therefore, most of the respondents agree that in the mentioned ways ICT based services contribute to better service quality and increased satisfaction - leading to improved service performance. The following section explains when and how E-Governance may fail to improving service delivery.

### ***6.5 Critical Factors for E-Governance Success***

From empirical data, E-Governance Readiness, Administrative Culture, and Client Readiness are predominant factors to consider for better service delivery. Hence, proper measures from concern authority need to take in this respect. Particularly when and how E-Governance may succeed or not - is briefly explained in this section. It is observed that E-Governance helps to improve service performance reducing major obstacles and facilitating more access to information.

Nevertheless, E-Governance *Readiness* in AC (L) offices is yet to reach standard level. Major records are still manual in nature, people also don't maintain all of their records. Old records in many offices are poorly preserved, sometimes they are illegible for overwriting or clumsy writing, sometimes contradictory with another record particularly with registration information; and sometimes it is difficult to verify the authenticity of documents due to lack of information and evidence. Honorable Chief Justice of Bangladesh Justice S. K. Sinha (2015) in a speech at Mumbai, India stated that 'the nature of civil disputes particularly the cases relating to claims of title over or partition of the immovable property are so complicated that the existing system does not even allow a Judge to take any shortcut approach on those matters.'

The present land management system is the legacy of colonial land administration system which started since 1940s. In the meantime most of the land plots have been transferred several times, accordingly records are supposed to be updated and new ROR to be published through survey. However, in many areas last survey had been conducted 20-40 years back. Survey with less accuracy creates new conflicts (MoL 2014a). In addition, the records, being of class B, are preserved only for 12 years and subsequently destroyed (MoL 1990). Traditional method of survey takes around 15-20 years to prepare a ROR, in the meantime record changes (Care 2003). As such the updated ROR is never available; rather records are updated through mutation for temporary basis which is ultimately less effective as it is not updating the last ROR completely, rather to be fully dependent on survey to have new ROR based on documents provided by land owners. In this situation unless the entire ROR is digitized and subsequently for each mutation the ROR is updated as final, the ultimate objective of mutation will not achieve; and the digitization of mutation process might not produce desired result.

Administrative culture and *Client Readiness* are two crucial factors for better service delivery which have to be at congenial level to extract the benefits of E-Governance. In aggregative administrative culture, E-Governance is likely to fail in improving service performance. In the current study it is found that there is significant correlation (Pearson's coefficient is -0.293 sig at 0.05 level) of *E-Governance Readiness* with *Administrative Culture*. This indicates that at higher level of E-Governance the *Administrative Culture* is integrative. Still to what extent and how E-Governance facilitates for developing integrative *Administrative Culture*; or what other issues to consider in developing such culture requires further study.

Similarly, unless clients are capable to afford ICT facilities and have knowledge/skill to avail the service, E-Governance may not produce desired result.

Without political and administrative support from the top, it's quite impossible to get the full benefit of E-Governance. Ultimately E-Governance is a set of tools for faster decision making, effective maintenance of record and delivering service in shortest possible time, reasonable cost and maximizing client satisfaction. In this regard, service performance

depends on the willingness and capacity of the implementer how these tools are being used.

For E-Governance success, legal framework has to be supportive in respect of conducting business in electronic form and electronic decision-making, maintenance of record and electronic service delivery including financial transaction. For this digital signature system, access control system (user ID/password or biometric system) has to be incorporated. Strong security measures need to be taken to protect electronic record and system from malicious software, corruption of data, or cyber attack and ultimately from irrevocable loss.

Last but not the least, the improvement of performance is a cyclic issue according to theory on performance management, and performance needs to be periodically reviewed to what extent it is achieving its goal and correcting it in next cycle of execution. Therefore, the success of E-Governance largely depends on assessing the impact of E-Governance in periodic manner and taking proper measures to minimize the gap between intended and actual performance in due time. The following chapter concludes the paper summarizing the findings of the study.

## **Chapter 7. Major Findings and Recommendations**

### ***7.1 Major Findings Linking With Theory***

The study finds that out of 486 AC (L) offices around 96% AC (L) offices have at least web presence under the framework of district web portal or standalone website. The status of E-Governance in AC (L) offices is yet to be highly developed. None of the websites are delivering online service in the fourth (transactional) or fifth (seamless) stage of UN/ASPA E-Governance Maturity Model.

The research finds that majority (88%) of the respondents had to visit 4-5 times to offices, 83% of the respondents had to wait maximum up to 2 to 4 hour for one visit and around 10% people have to spend even 5 to 6 hours for one visit in getting mutation service. Only 6% agree that they didn't have to pay extra payment beyond government rate and only 21% of the respondents agree that the client sufferings is less in getting land related services. Major conflicts and litigations in Bangladesh have the root with land ownership,

which have link with mutation as well. The study attempted to understand the predominant factors to consider in addressing problems in getting mutation service, and to promote client's satisfaction.

The analysis was made in line with the analytical framework that identified five independent variables: *E-Governance Readiness*, *Client Readiness*, *Administrative Culture*, Age and Education. For this, quantitative analysis like *descriptive statistics*, cross tabulation, Pearson's correlation, and regression tests were performed through SPSS. The relevance of the factors in service delivery was also explained by qualitative analysis.

From analysis it is observed that among the five independent variables *E-Governance Readiness*, *Client Readiness*, *Administrative Culture* and age have significant causal relationship on mutation service delivery. Accordingly, the hypothesis H1, H2, H3 and H4a were supported by data. However, hypothesis H4b was rejected, as education is found to have no significant relationship with service delivery.

Among the four key factors *Client Readiness* is found to have strongest contribution in service delivery which indicates that knowledge and capacity of mutation and ICT significantly affects service delivery. This fact complies with the concept of demand side approach that client awareness can act as key factor in getting the service easily. Moreover without end-user be capable enough to receive the service coping up with technology, E-Governance is less likely to promote better service. Hence the hypothesis: the higher the *Client Readiness*, the better the service - has been validated. This finding supports the concept of bridging digital divide to reach the benefits of E-Governance to the poor, disadvantaged and marginalized group of people.

E-Governance has significant impact on improving service performance in respect of mutation service in AC (L) office. The hypothesis H1: 'the higher the level of *E-Governance Readiness*, the better the service delivery is' has been validated by empirical data. Accordingly less developed E-Governance is less likely to produce better results in improving service performance. This data supports that the theory of E-Governance is relevant in delivering land related services to foster efficiency and effectiveness in public service delivery and making public sector responsive to citizens.

*Administrative Culture* is found to have significant influence on service performance and H2 is found to be valid in the context of land sector; which suggests that the more integrative the culture is, the better the service delivery is and vice versa. Therefore, for less integrative *Administrative Culture*, even having highly developed E-Governance the service delivery might be poor - where aggregative role of *Administrative Culture* is dominant. The above finding supports the theory of administrative culture explained by some prominent scholars March and Olsen (1989), Islam (2004) and Jamil (2007) as depicted in section 4.4.

Age is found to have negative relationship with service performance. It indicates that young aged people under 40 find the service performance better than people above 40. It might be that young aged people are much aware of technology. Although the more aged people were expected to have better service for having more experience, however data didn't support such assumption.

Moreover, no significant relationship between education and service performance could be found. This data is somewhat relevant because there is very little evidence that educated people are accordingly aware of land related matters.

## ***7.2 Major Findings Linking With Research Questions***

In respect of identifying the key factors that affect mutation service delivery it reveals that among the five independent variables *E-Governance Readiness*, *Client Readiness*, *Administrative Culture* and age have significant causal relationship on mutation service delivery. These factors need to consider for improved service delivery.

In response to how E-Governance affects service delivery it discloses that relatively better level of *E-Governance Readiness* reduces bureaucratic complexity, discretionary power of bureaucrats, reduces the influence of middlemen and hassle to public. E-Governance requires less intervention of public officials, less role in decision making; hence less chance of exercising arbitrary power or making unnecessary delay.

E-Governance facilitates access to required information like contact numbers of officials, application form, mutation procedure, required documents, delivery period and service

cost. E-Governance facilitates easy authentication of documents through online access to mouza map, RS khatian, mutation khatian etc from archive; getting updated information about hearing date, and facilitates easy monitoring of job status through SMS and online. - leading to improved performance of service delivery.

### ***7.3 Recommendations and Policy Implications***

Based on the general respondents' view and interviewing with one Additional Secretary and other key officials from the Ministry of Land; Divisional Commissioner, and Additional Divisional Commissioner (Revenue), Chittagong; Additional District Commissioner (ICT and Education), Dhaka; DPD and other key officials from DLRS, key technical personnel of ICT Division under MoPTIT and AC (L) of different offices the following issues are found crucial for proper implementation of E-Governance and improving mutation service delivery.

#### ***Legal Compliance Issue for Digital Land Management and Service Delivery***

Bangladesh introduced first ICT Policy in 2002 which has been revised by ICT Policy in 2009. The ICT Act 2006 (Amended up to 2013), and Information Technology (Certifying Authority) Rules 2010 are also formulated for the expansion and use of ICT in governance in Bangladesh. Still Digital Signature system is yet to implement. The corresponding laws and rules like the SAT Act 1950, The Registration Act 1908, Transfer of Property Act 1882, Court Fee Act 1870 etc are not favorable for rendering digital services. Hence corresponding laws and rules need to amend to legalize the digital transaction of records and digital land management system.

#### ***Preparation of Complete Digital ROR along with Mouza Map***

In many areas last survey was done 30-40 years back. In the meantime, land has been transferred several times. Dealing with records of such old period creates complexity in mutation. However conducting survey with manual records is also not an easy job. Recently survey conducted in many areas, and the Ministry of Land expressed its concern about the huge number of dispute arising out of them (MoL 2014a). Then the question arises how the sufferings of people to be minimized. While survey, the landowners have to provide the required documents in the field, which seems to be a difficult job for all

landowners across the country. Many are illiterate, many don't know land records, and many may not have documents with them. On the other hand as the documents provided by people are accepted as basis of ownership - many unscrupulous people may misuse the opportunity by placing false documents to grab the land of those landowners who don't have documents or ignorant of land system. Mere possession or presentation of isolated documents may not be conclusive to declare ownership. In respect of this issue, the survey officials should have latest records including mutation khatians with them and crosscheck with landowner's document and possession. However through interview and literature review it reveals that that AC (L) offices supply only government owned land records to survey team. Due to huge volume of land records accumulated for last 30-45 years, it is mentioned that it is very difficult, if not impossible, for AC (L) office to supply all khatians including mutation khatians to survey team. Here digitization of land records could be easier way where ROR are instantly corrected/updated and new khatians are prepared as soon as mutation is done and preserved in database. During survey, survey team can crosscheck the records with field data and possession; in case of discrepancies in record and field data, the case should be taken as dispute to be resolved as per law and prepare a new database of ROR. Then it may be expected that there will be less conflict with land in society, and the right to land be protected for all group of people irrespective of gender, age, education, ethnic identity and so on.

Some projects are undergoing to conduct digital survey and digitize existing records - but the projects are on pilot basis on selected areas in discrete manner. Furthermore, a uniform and standardized system for digitizing whole records and maps of Bangladesh is yet to plan and develop to have a complete database of digital records and maps.

Hence the field study suggests that it is prerequisite to have complete, digital ROR for digitizing the whole mutation process. Preparing and publishing complete ROR in traditional process is time consuming and takes around a decade or even more (CARE 2003). If ROR was updated at the time of mutation, then survey might be much easier and done in shortest possible time making the ROR accurate, update and sustainable in long run. In such situation the mutation service may be delivered within very short time through mutation processing software.

### ***Infrastructure Development***

High speed internet connectivity with fiber optic link up to Union Land office, stable power supply with IPS/online UPS/Generator/Solar Panel etc are essential to run E-Governance system. All of the Divisional Commissioner offices and DC offices are either connected to internet through high speed fiber optic connection or under installation phase. Some AC (L) offices have internet connectivity at their own management. All government offices at Ministry, District and Upazila level including AC (L) offices are planned to be connected to internet through fiber optic line under Infosarker II project. Still how bandwidth would be managed in connecting all government offices in one umbrella through Internet is unclear. Proper planning in this regard is highly imperative to ensure sustainable internet connectivity to all government offices.

### ***Resources***

Providing necessary computer, quality hardware, networking devices and standardized software are highly required to make E-Governance project successful. Providing sufficient manpower, training, logistics support are important issue to consider. Also sufficient budget needs to be provided.

### ***Automation***

Majority of the respondents and interviewee suggest that automation is the ultimate solution for improving mutation service. As there is huge number of khatians in each office, and on an average, a large number of mutation applications from several hundreds to thousands per month have to be handled - it is quite difficult to scrutinize each file by AC (L). Instead, he/she has to depend on the proposals submitted by lower level staffs making the scope of corruption. Online application system including online payment of necessary fee need to be developed. The electronic decision making system also need to be implemented so that interaction between AC (L) office and Union Land office are faster. In this regard requirement of digital signature system is evident.

### ***Transparency and Accountability***

Adequate disclosure of information is the key to ensure service quality, have trust on service and develop satisfaction. All status of land need to be published in the websites of all AC(L) offices granting access to concern service seeker so that they be confirmed about the ownership status as well land information. Application form or online application system, mutation procedure, delivery cost, time and other relevant information have to pre-defined, published and such declaration has to be maintained.

The SAT Act 1950, The Registration Act 1908 vest immense power to AC(L)/Revenue office, Sub-registrar office giving the opportunity of self correction of own order. This undermines their responsibility and accountability. Although this power is limited to correction of silly mistakes like spelling or numeric error as per section 150 of SAT Act 1950, still, for any silly mistakes in khatian like name spelling may cause serious problems as illustrated in *Case-2*. The error or mistake in ownership record needs to be reduced to substantive level like  $<0.0001\%$  or even zero. As this sort of inaccuracy/mistake in record escalates social conflict, creates sufferings to at least one party involved in land transfer.

### ***Monitoring Mechanism***

Monitoring mechanism for senior officials need to be developed where the activities of subordinates offices and staffs can be easily monitored. This may enhance the service performance to a great extent.

### ***Change Management***

Managing staffs with soft leadership is essential. Motivating staffs with incentives (Financial/Nonfinancial) to participate in the digitization process may be helpful in making the E-Governance a success. Different interest groups also need to be managed with proper leadership. Change should start from Ministry of Land with implementation of centralized database and software and granting access to regional offices to upload their data locally. In this way the whole land records of Bangladesh will be updated within shortest time. However some financial support would be required to implement it locally with the assistance of outsourced manpower for a temporary period. In the

meantime human resources need to be developed to run the system in a sustainable manner.

### ***Raising Client Awareness***

Awareness campaign need be conducted in periodical manner about ICT based service, enhancing knowledge about land related issues through notice board, publication in newspaper, and other print and electronic media. Culture need be developed so that people pay LDT regularly, and keep their record up-to-date. SMS notification can be incorporated in the system which is probably the best method to get people informed and connected. NGOs may be included in such awareness campaign.

Based on the above discussion the following policy implications are put forward for proper implementation of E-Governance:

- ✓ Uniform and integrated master plan from central authority is imperative to prepare electronic database of the entire ROR along with mouza maps
- ✓ Introduction of online application system, online decision making system, issuance of digital khatian and subsequent record (ROR) update through partial or fully automated mutation.
- ✓ Introduction of *digital signature*<sup>38</sup> for electronic record transaction
- ✓ Amendment of corresponding Laws/Acts/Rules to facilitate legal basis of electronic transaction
- ✓ Developing ICT infrastructure and connecting all government offices in one umbrella; facilitating low cost high speed internet penetration accessible to mass people.
- ✓ Modernizing offices with required computer and networking system, mutation software, and communication system with standardized procedure and system.
- ✓ Preparing electronic database of registration deed, providing access to AC (L) office
- ✓ Providing access to electronic land record (ROR) by registration department

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<sup>38</sup> Digital signature is an electronic signature to be used as alternative to handwritten signature to authenticate the identity of the sender of a message or the signer of a document in digital system, and to ensure that the original content of the message or document that has been sent is unchanged.

- ✓ Automatic verification of land records linking national ID database with land record (ROR)
- ✓ Persistent monitoring in keeping records up-to-date
- ✓ Developing more integrative administrative culture
- ✓ Arranging training program for officials to improve skill and standardize system
- ✓ Raising awareness among mass people to enhance their knowledge, responsibility and right to land
- ✓ Change management by leadership with flexibility in managing all stakeholders and motivating staffs with financial/nonfinancial incentives

Effective Implementation of public policy like maintenance of land records in manual system or poorly adopted E-Governance is very difficult because of its vastness of volume of activities makes the management and service delivery complex, ineffective and inefficient. In such situation, technology extends its hand to boost the performance. However, in case of strong political commitment, good administrative and social culture, honesty and integrity of the officials may still make the government functioning well in manual system. Still for bulkiness of work volume and lack of transparency there will always remain some vulnerable loopholes in manual systems or less developed E-Governance - unblocking the scope of exercising high discretionary power and creating bureaucratic complexity where citizens face difficulties at every stage in getting their service and commit loss of their valuable time, money, and energy. As such implementing full-fledge E-Governance in an integrated manner in updating land records is highly imperative.

The findings of the research have stimulated a number of possible future research issues. A standard may be developed to assess the *E-Governance Readiness* of public offices. Periodical research in every one or two years may be conducted to assess the *E-Governance Readiness* of AC (L) offices and other public offices. In studying the *E-Governance* status and impact on service delivery, more AC (L) offices with larger samples may be included in the study. Study may also be conducted on cyber security issue in protecting land records from unexpected alteration or corruption of data from hackers, malicious software, and various other sources. More study may be conducted to understand effect of Administrative Culture on service delivery. Study may be conducted to identify what other critical factors affect mutation service delivery.

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## Appendix 1



### Master of Public Policy and Governance (MPPG) North South University, Dhaka

#### Questionnaire Survey–A (For Service Seeker)

[Data collected through this questionnaire will be used for research purpose only and privacy of the respondents will be maintained. Your kind cooperation in filling up the form is highly appreciated]

#### Section A

1. Please give your personal details.

i. Gender	a) Male		b) Female			
ii. Age						
iii. Education (equivalent)	a) Illiterate	b) Primary	c) Secondary	d) Higher Secondary		e) Graduate and above
iv. Occupation	a) Agriculture	b) Business	c) Private Service Holder	d) Public Service Holder	e) Student	f) Self Employed g) Others

#### Section B

2. Which of the following ICT technology do you use?

	Statement	Response	Comments
i)	Mobile	Yes/No	
ii)	Fixed Telephone	Yes/No	
iii)	Smartphone/Computer/Laptop/Tabloid	Yes/No	
iv)	Reliable Power supply	Yes/No	
v)	Internet connectivity	Fixed line/Mobile/Don't have	
vi)	Download file from internet yourself	Yes/No	

3. Have you any experience of mutation? a) Yes b) No

If Q.2 response is yes, please continue; else please return the questionnaire to researcher.

4. How would you rate your knowledge about mutation

1= Very poor	2= Poor	3= Good	4= Very Good	5= Excellent
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Please explain in brief.

5. How would you rate your ICT skills?

1= Very Poor	2= Poor	3= Good	4= Very Good	5= Excellent
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Please explain in brief.

6. a) Do you know that AC (L) office has a website? a) Yes b) No

b) if yes, How did you come to know it i) From friends ii) relatives iii) Internet  
iv) Newspaper v) others

7. i) How did you apply for mutation? a) Manual b) Online

ii) You applied for the service by i) yourself ii) friends iii) relatives iv)  
broker/agent v) commercial shop vi) UDC (Union Digital Center) vii)others

8. Please mention the number of visits in steps in getting the mutation in service system.

	Steps (please add if needed)	Required no of visit	Waiting time	Comments
a)	For getting required information for mutation			
b)	Getting mutation form			
c)	Submission of application			
d)	payment of service fee			
e)	Getting informed about additional required information			
f)	To know the hearing date			
g)	To attend hearing			
h)	To know the progress of service			
i)	To know the completion status of service			
j)	Receiving mutation khatian and other documents			
k)	Attending for any other reason (Please mention)			

Section C

9. Do you think discretion power of officials has decreased in new service system?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please explain.

10. Do you think dependence on middlemen has decreased in new service system?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please comment.

11. Do you think bureaucratic complexity has decreased in new system (keeping files pending showing arbitrary causes, unclear instruction about required documents, have to push file from desk to desk etc)?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please give arguments in favor of your answer.

12. Do you think the socio-economic position of the client matters in getting their job done?

1= Very few cases	2= few cases	3= sometimes	4= often	5= Very often
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Please comment.

13. To what extent do you think *tadbir* is required in providing importance in service delivery?

1= Very few cases	2= few cases	3= sometimes	4= often	5= Very often
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Please comment.

## Section D

14. How will you rate the present service delivery of mutation?

Theme	Statement	Your Rating					comments
		1= Strongly disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly agree	
a)Ease of use	Web based information and content are well organized, easy to understand and use						
b)Responsiveness (Time Saving, feedback mechanism)	Requirement of frequency of visit by clients to office is acceptable	1	2	3	4	5	
	Client's waiting time is acceptable	1	2	3	4	5	
	Service delivery is faster	1	2	3	4	5	
	Feedback/complaint mechanism is easier	1	2	3	4	5	
c)Reliability (Accuracy, dependability)	Error rate decreased	1	2	3	4	5	
	Job status can be easily monitored	1	2	3	4	5	
d) Assurance (credibility)	Availability and access to required information easier	1	2	3	4	5	
e)Empathy (communication, less sufferings)	Clients can easily communicate with service provider	1	2	3	4	5	
	Perceived level of hassle is less	1	2	3	4	5	
g) Cost Saving	Travel cost less	1	2	3	4	5	
	Extra cost less	1	2	3	4	5	

15. Your overall satisfaction with present service delivery of mutation (Satisfaction in service as per expectation of client)

1= Highly dissatisfied	2=Dissatisfied	3=Neutral	4=Satisfied	5= Highly Satisfied
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Please explain.

16. In your view, what are the obstacles in delivery of mutation service properly (More than one option can be selected and identify top four issues)

- a) Lack of manpower
- b) Little usage of ICT
- c) Bureaucratic complexity(Leaving files pending for arbitrary reasons, unclear statement about required documents, have to push files from desk to desk to get job done etc)
- d) Technical complexity (identification of actual land and owner through field survey, record check etc)
- e) Influence of broker/agent
- f) Socio-economic condition of service seeker
- g) Concerned officials not available in desk
- h) Lack of awareness of clients (Unclear idea about land, Lack of awareness about the right etc)
- i) Lack of transparency in service delivery (Contact numbers of responsible officials not available; procedure of service delivery, cost of service, delivery period not clear, not taking clients's complaint/feedback into cognizance)
- j) Others (Please mention)

17. Please provide your opinion regarding improvement of mutation service delivery (More than one option can be selected and identify top three issues)

- a) Providing more manpower
- b) Development of ICT Infrastructure
- c) Automation of mutation system
- d) Arranging sufficient training for officials (Home and abroad)
- e) Strengthening monitoring system of authority
- f) Raising awareness (Regarding ICT and Land)
- g) Change and simplification of law
- h) Simplification of mutation system
- i) Inclusion of private sector in mutation service
- j) Increasing transparency and accountability
- k) Taking complaints/feedback of clients into cognizance and taking necessary action
- l) Others (please mention)

Thank You!

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Master of Public Policy and Governance (MPPG)  
North South University, Dhaka  
Questionnaire Survey - B (For Service Provider)

*[Data collected through this questionnaire will be used for research purpose only and privacy of the respondents will be maintained. Your kind cooperation in filling up the form is highly appreciated]*

Office:

Designation:

Website:

} Optional

Section A

1. Please respond to the following questions regarding ICT Infrastructure.

	Issues		Your Response	Comments
i)	Do you have sufficient computers		Insufficient/Moderate/Sufficient	
ii)	Do you have Internet connection	:	Yes/No	
iii)	What is the Internet speed	:	Slow/Medium/High	
iv)	Do you have commercial power connection		Yes/No	
v)	Is Power Stable	:	Yes/No	
vi)	Is Backup power there	:	Yes/No	
vii)	Do you have sufficient space for keeping things in order		Insufficient/Moderate/Sufficient	
viii)	Do you have sufficient equipment to implement E-Governance	:	Insufficient/Moderate/Sufficient	
ix)	Do you have sufficient software to implement E-Governance	:	Insufficient/ Moderate/Sufficient	
x)	What is the status of your website	:	Static/Dynamic	

2. Human resources

i) Do you think total manpower is sufficient for delivering online service (operation and maintenance of ICT system) properly?

1= Very Insufficient	2= Insufficient	3= Moderate	4= Sufficient	5= Very sufficient
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ii) Total manpower

iii) ICT skilled manpower for operation

iv) ICT skilled manpower for maintenance

v) ICT related Training provided to employees

### 3. Online service with static information

	Questions Regarding static Information	:	Response	Comments
i)	Is your website updated?		Yes/No	
ii)	Are the available services published	:	Yes/No	
iii)	Are all Acts/rules/Gazette/Circular related to this office available there?	:	Yes/No	
iv)	Is Citizen charter available in the website?	:	Yes/No	
v)	Contacts no's, email ID of responsible officials available there?	:	Yes/No	
vi)	Are procedures for getting mutation available	:	Yes/No	
vii)	Are requirements for getting mutation well specified	:	Yes/No	
viii)	Are the delivery period, cost of service well specified	:	Yes/No	
ix)	Downloadable forms and files available	:	Yes/No	

### 4. How will you rate regarding online interactive service delivery in AC (L) office?

	Statement	Your Rating		Comments
i)	Online application submission for mutation	Not possible (1)	Possible (2)	
ii)	Providing application number against application	Not Available (1)	Available (2)	
iii)	Online/SMS notification of requirement	Not Available (1)	Available (2)	
iv)	Online/SMS notification of hearing	Not Available (1)	Available (2)	
v)	Online/SMS notification of progress of service	Not Available (1)	Available (2)	
vi)	Facility for citizen feedback/comments	Not Available (1)	Available (2)	
vii)	Automatic validation of data	Not Available (1)	Available (2)	
viii)	Automatic processing of application	Not Available (1)	Available (2)	
ix)	Electronic authentication of the citizen's identity	Not Available (1)	Available (2)	
x)	Online financial transaction (e.g online payment through card)	Not Available (1)	Available (2)	
xi)	Inter-connected to other departments	Not Available (1)	Available (2)	

## Section B

5. Which system is running in your office for mutation a) Manual b) Online c) Mixed
6. Please mention the change in the steps of getting the mutation service from your office at present.

	Steps (Please mention if you used any other)	Required Working days	Comments
l)	Presentation of Application before AC(L) after submission		
m)	Opening Case File and Entry to Register; Forwarding to ULAO for Mutation Proposal/Report		
n)	Preparation of Mutation Proposal/Report by ULAO		
o)	Sending Mutation Proposal/Report by ULAO to AC (L)		
p)	Sending to Mutation Assisitant		
q)	Receiving comments from Kanungo/Surveyor (As required)		
r)	Issuing hearing notice		
s)	Hearing		
t)	Presentation of file before AC(L) for Decision		
u)	Approaval/Reject By AC(L)		
v)	Receiving Mutation and other Fee; Issuing Mutation Khatian and other documents		
w)	Record Correction/Update		
x)	Others		

Section C

7. Do you think monitoring system by senior officials has been easier in new service system?

1= Much difficult	2= Difficult	3= No change	4= Easy	5= Much Easy
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Please give arguments in favor of your answer?

8. Do you think discretion power of officials has decreased in new service system?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please make comments?

9. Do you think dependence on middlemen has decreased in new service system?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please give arguments in favor of your answer?

10. Do you think bureaucratic complexity has decreased in new system (keeping files pending showing arbitrary causes, unclear instruction about required documents, have to push file from desk to desk etc)?

1= Much increased	2= increased	3= No change	4= Decreased	5= Much decreased
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Please give arguments in favor of your answer?

11. Do you think the socio-economic position of the client matters in getting their job done?

1= Very few cases	2= few cases	3= sometimes	4= often	5= Very often
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Please explain.

12. Do you have to give importance in delivering service to any client due to *tadbir*?

1= Very few cases	2= few cases	3= sometimes	4= often	5= Very often
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Please explain.

Section D

13. How will you rate regarding the service delivery of mutation with introduction of web based information and service?

Theme	Statement	Your Rating					comments
		1= Strongly disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly agree	
a)Ease of use	Web based information and content are well organized, easy to understand and use						
b)Responsiveness (Time Saving, feedback mechanism)	Requirement of frequency of visit by clients to office is less	1	2	3	4	5	
	Client's waiting time is less	1	2	3	4	5	
	Service delivery is faster	1	2	3	4	5	
	Application processing time is less	1	2	3	4	5	
	Feedback/complaint mechanism is easier	1	2	3	4	5	
c)Reliability (Accuracy, dependability)	Error rate decreased	1	2	3	4	5	
	Job status can be easily monitored	1	2	3	4	5	
d) Assurance (credibility)	Availability and access to required information easier	1	2	3	4	5	
e)Empathy (communication, less sufferings)	Clients can easily communicate with service provider	1	2	3	4	5	
	Perceived level of hassle is less	1	2	3	4	5	
h) Cost Saving	Cost of operation is less	1	2	3	4	5	

14. Your overall satisfaction with present mutation service delivery (ease of use and usefulness in doing business)

1= Highly dissatisfied	2=Dissatisfied	3=Neutral	4=Satisfied	5=Highly Satisfied
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Please explain.

15. a) No of Mutation Application during April-June/2015?  
b) No of disposal of mutation application?  
c) No of cases of mutation application undisposed?  
d) Minimum and maximum duration of disposal of application?  
e) Role of E-Governance in successful disposal of application?

1= No role at all	2=Very less	3=So so	4= Important	5= very Important
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Please explain.

- f) Causes for applications undisposed or rejected?

16. In your view, what are the obstacles in delivery of mutation service properly (More than one option can be selected and identify top four issues)

- a) Lack of manpower
- b) Little usage of ICT
- c) Bureaucratic complexity(Leaving files pending for arbitrary reasons, unclear statement about required documents, have to push files from desk to desk to get job done etc)
- d) Technical complexity (identification of actual land and owner through field survey, record check etc)
- e) Influence of broker/agent
- f) Socio-economic condition of service seeker
- g) Concerned officials not available in desk
- h) Lack of awareness of clients (Unclear idea about land, Lack of awareness about the right etc)
- i) Lack of transparency in service delivery (Contact numbers of responsible officials not available; procedure of service delivery, cost of service, delivery period not clear, not taking clients's complaint/feedback into cognizance)
- j) Others (Please mention)

17. Please provide your opinion regarding improvement of mutation service delivery (More than one option can be selected and identify top three issues)

- a) Providing more manpower
- b) Development of ICT Infrastructure
- c) Automation of mutation system
- d) Arranging sufficient training for officials (Home and abroad)
- e) Strengthening monitoring system of authority
- f) Raising awareness (Regarding ICT and Land)
- g) Change and simplification of law
- h) Simplification of mutation system
- i) Inclusion of private sector in mutation service
- j) Increasing transparency and accountability
- k) Taking complaints/feedback of clients into cognizance and taking necessary action
- l) Others (please mention)

Thank You!

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Master of Public Policy and Governance (MPPG)  
North South University, Dhaka

Interview Checklist (For Service Provider)

1. Please mention what initiatives have been taken so far for digitization of mouza map and land records including ICT Infrastructure development? what is the current situation of online service delivery?
2. In which methodology mouza map and land records would be digitized - is there any integrated master plan?
3. What is the status of human resource and training in delivering land service?
4. What kind of benefits do you think people get from online service delivery?
5. What sort of changes are observed in mutation service delivery regarding access to information, bureaucratic complexity, influence of middlemen, discretionary power and client sufferings etc after introduction of ICT based service.
6. What are the obstacles in delivering mutation service online? How to overcome those problems?



Master of Public Policy and Governance (MPPG)  
North South University, Dhaka

**Case Study Checklist (For Service Seekers)**

1. Would you please tell the purpose for coming to AC (L) office?
2. Would you please tell about how you received the land on which you want mutation?
3. Did you verify documents before buying the land?
4. How did you get application form and required information for mutation?
5. How did you apply for mutation?
6. Did you observe any tangible benefits at different stages of mutation out of ICT services from AC (Land) office?
7. What sort of problems you faced in getting the service? Please explain your experience about getting mutation service from AC (L) office.