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E-SERVICE DELIVERY EXPERIENCE OF BIRTH REGISTRATION APPLICANTS: A CASE STUDY OF DHAKA NORTH CITY CORPORATION (DNCC)

A Thesis

Submitted to

Dept. of Social Science and Humanities

Independent University, Bangladesh

In Partial Fulfillment of the Requirements for the Degree of

Master of Development Studies (MDS)

Submitted by

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August 2026

DECLARATION

I declare that this thesis titled "E-Service Delivery Experience of Birth Registration Applicants: A Case Study of Dhaka North City Corporation (DNCC)" is my original work. I completed it under the supervision of Dr. Kazi Mahmudur Rahman as part of the requirements for the Master of Development Studies (MDS) degree at Independent University, Bangladesh.

I also state that this thesis has not been submitted, in whole or in part, to any other university or institution for any degree, diploma, or professional qualification. I have properly acknowledged and cited all sources of information, published materials, and ideas from other researchers according to the APA (7th edition) referencing style.

I understand that any instance of plagiarism or academic misconduct could lead to the cancellation of this thesis and result in academic penalties from the University.

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SUPERVISOR'S CERTIFICATION

This is to certify that the thesis titled "E-Service Delivery Experience of Birth Registration Applicants: A Case Study of Dhaka North City Corporation (DNCC)" was submitted by Saraba Mahmood, Student ID 2531182. This work was done under my direct supervision in partial fulfillment of the requirements for the Master of Development Studies (MDS) degree at Independent University, Bangladesh.

To the best of my knowledge, the work in this thesis is original and has been completed satisfactorily. The candidate has met the academic requirements set by the University for this thesis submission.

I recommend that this thesis be accepted for examination.

Dr. Mr. Kazi Mahmudur Rahman

Professor

Department of Public Policy and Governance

Independent University, Bangladesh

Date: _____

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All the praise goes to the Lord of the Universe for his strength, wisdom and perseverance in finishing this research successfully.

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ABSTRACT

Digitalization is an integral part of government reforms for better performance, transparency, accountability and customer satisfaction. The birth certificate serves as an essential public utility that confers upon people their rights of citizenship; it also facilitates their access to educational facilities, health care facilities, social security programs. To modernize this process, the Government of Bangladesh launched the Birth Registration Information System (BRIS) to enable citizens to register for birth registration online. However despite this progress, there are still some problems related both operationally as well as technologically which might affect customers' experience of it.

The paper deals with e-service delivery experience of birth registration applicants at Dhaka North City Corporation (DNCC). It also covers issues such as accessibility for applicants, user-friendliness features; availability of data; processing times; and collaboration with employees. This paper also considers services' qualities through servel model (reliability, responsiveness, assurance, empathy, tangibility) as well as issues that affect people's experience while registering for this service.

Mixed methods are used for this study. Quantitative data were collected from 100 birth registration applicants using a structured questionnaire, while qualitative insights were planned through Key Informant Interviews (KIIs) with relevant officials. Statistics descriptive, reliability test, correlation test as well multivariate regression models are used for statistical analysis of this dataset with help of software package 'SPSS'.

These results show that most respondents found it easy to use for accessing BRIS services. The service quality variables such as reliability, responsiveness and assurance had a strong positive correlation to customer's satisfaction levels. Nevertheless, some of these issues were noted by customers such as paperwork problems; sporadic failures due to technology malfunctioning; internet connectivity problems; and delays with services provided. Improving administration effectiveness; improving technology infrastructure; increasing people's digital literacy; and enhancing organizational collaboration can also enhance birth registration e-services quality.

This paper is an extension of existing researches concerning digital government management as well as e-services provision for bangladeshi citizens through integration

of servelq with TAM models. Also it provides actionable suggestions to policymakers, public administrators as well as information technology (itc) experts who want to improve citizen-centric digital public services and implement the Smart Bangladesh Vision 2041.

Keywords: Birth Registration Information System (BRIS), E-Service Delivery, Citizen Satisfaction, Digital Governance, SERVQUAL, Technology Acceptance Model (TAM), Dhaka North City Corporation (DNCC), Bangladesh.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The birth registration has been recognized worldwide to be an inherent right of every individual; it's also one among those that governments officially acknowledge when they register their citizens' lives on paper. This is an official registration for naming children legally; it records their names (including gender), dates and places where they were born along with information about families. An infant's birth certificate isn't just bureaucratic paperwork; this document forms a basis to various aspects like civil liberties, social statuses; economic opportunities etc. Lack of birth registration may result from individuals not having access for schooling; medical care; welfare benefits; property rights including citizenship (j) passports and national identity card along with voting privileges. Birth registration studies around world are attracting much interest because they form part and parcel of civil registration and vital statistics (CRVS) system. Universal birth registration is important to safeguard children's rights, and promote their inclusion through various programs run under United Nations Children's Fund (UNICEF). Article 7 of the Convention on the Rights of the Child of the United Nations (UNCRC) clearly states that each child recognizes the right to be registered at the time of birth and to have a name and a nationality.

Also, the Sustainable Development Goals (SDGs), in particular SDG 16.9, focus on promoting inclusive and accountable institutions to advance the goal of providing legal identity for all, including birth registration. But there are many developing nations where this cannot be achieved easily enough for all births. People are not given their birth certificate on time because there is a lack of administration efficiency; people's ignorance about it; distance from them geographically along with economic issues like unemployment etc. Challenges are much better defined at this stage when it comes to cities which have been growing fast due to high rates of immigration while also having increased pressure on their infrastructure for providing services like healthcare and education etc. Over the past 20 years, Bangladesh has made significant progress towards strengthening and improving its birth registration system. One of these events that helped to establish an legislation for it is the Births and Deaths Registration Act, 2004. Then they made some alterations so that this was easier to access, faster and better at reporting on birth rates. One of them are Birth Registration Information System (BRIS), which is an internet based software application that will

allow you to access and maintain birth registration information throughout your country. BRIS policy and program is a component to be digitalized by Bangladeshi people under ‘Digital Bangladesh’. Digital Bangladesh was launched with an objective of transforming public administration, governance and service delivery by means of information and communication technologies (ICTs) when it was launched in 2009. It’s an effort towards moving away from paper based and towards electronic government service which is user-friendly, fast and easy-to-use by citizens. E-governance is what we are trying for achieving this goal today.

E-governance is the use of digital technologies by a Government institution to better serve citizens, businesses, and other stakeholders. E-governance can facilitate citizens' participation, foster greater accountability, streamline service delivery processes, and aid governments in reducing administrative costs. E-governance allows citizens, in relation to birth registration, to apply online, check the status of their application, upload documents online, and get services without touching the person directly. Citizens' relationship with public institutions has taken a completely new shape with e-service delivery systems. Citizens had to have many appointments and submit paperwork to various government agencies, and wait in long queues before being treated. Digital platforms have meant much less of these burdens because it is possible to attend services remotely and at convenient times. As a result, the delivery of services via electronic means is becoming progressively seen as one of the expected tools for enhancing public sector performance and citizens' satisfaction. However, experiences and perceptions of users are playing a significant role in the efficiency of the delivery of e-services, despite all these developments.

Deploying digital services is not just a matter of technology; it also requires a user-friendly user interface, (high-speed) internet services, an efficient administrative environment, flexible support mechanisms, and knowledge and skills training for citizenship in digital environments. If these conditions are not in place, individuals could feel frustrated by the experience, which would have an adverse effect on the projected gains of digital transformation. Although birth registration has been introduced through electronic systems in Bangladesh, there remain many challenges with respect to operation and administration. Issues that are commonly mentioned by citizens with the websites involve problems of functionality, server downtime,

processing delays for applications, document verification procedures, unclear instructions, and availability of services and support by service providers. Furthermore, the differences in understanding how to use digital technology and internet access among some groups could make it difficult for them to successfully engage with online services. Such challenges can have a negative impact on users' satisfaction and on the level of trust placed in government bodies.

The problem is more important from one perspective in the context of urban local government institutions like Dhaka North City Corporation (DNCC). The DNCC is one of the biggest city corporations in Bangladesh, having a population with various socio-economic characteristics and dynamic changing population structure. Access to birth registration services has risen significantly as cities grow, population moves, and there is greater awareness of the critical role of legal identity documents in people's lives. This raises a tremendous challenge for DNCC to provide efficient and timely service without compromising on the quality of service.

DNCC has taken up several steps to enhance birth registration services using digital technology and administrative changes. However, service users are still facing issues with wait times for processing, reachability of the system, some documents being required, and communication fails. Citizens' experiences and satisfaction may be impacted by these issues. Such experiences are critical as they will form an important gauge for quality of service to citizens and also the performance of the institutions. In an era of public administration, the satisfaction of the citizens is a major determinant in assessing the effectiveness of governmental operations. In the contemporary governance model, user-focused approaches based on citizens' needs, expectations, and experiences are significantly stressed. Citizens' perceptions of government activities are based in part on characteristics of services: Reliability, Responsiveness, Accessibility, Assurance, and Empathy. Taking the context of birth registration services as an example, the experiences of applicants could give insights into the strengths and weaknesses of the current e-service delivery mechanisms. Theoretical approaches to citizens' participation in digital Government services are presented. Perceived usefulness and perceived ease of use are key factors in the acceptance of the technology by the users (Dimoka, 1993; Suh and Gallupe, 1987; Teo and Lia, 1992), according to the Technology Acceptance Model (TAM). Likewise, the SERVQUAL model draws

attention of the dimensions of service quality that also influences customer satisfaction. These are important frames for understanding citizens' perceptions of online birth registration and issues they face in the effective use of this service.

Despite the studies on e-governance, digital public services, and citizen satisfaction in Bangladesh, there is little research dedicated to stakeholders specifically about birth registration e-services of city corporations in Bangladesh. Current studies tend to focus on a country's policies or technology or on public service delivery in general. There is therefore a major gap in knowledge at the local level that needs to be filled to understand the citizens' experiences of birth registration services at the local level for services e.g. in the context of DNCC. Accordingly, this study aims at filling this gap by exploring the experience of e-service delivery in applications for birth registration in Dhaka North City Corporation. The research is centered on the experiences of the applicants, challenges faced when registering, satisfaction levels at registration and avenues for improvement of the service provided to them. The study is designed to offer empirical evidence from the user's perspective, which would help bring the agenda forward on improving birth registration services and to contribute to the broader objective of improving digital governance in Bangladesh. Finally, the systems that enable citizens to register and form the basis of their core civil identity are crucial to individuals and to the development of the Nation. High-quality birth registrations enable population planning, public health management, educational planning, targeting of social protection benefits, and evidence-based policymaking. Thus, the enhancement of the registration of births through better quality and availability of the services will be an essential measure in realizing inclusive governance, enhancing citizen rights and fostering sustainable development of Bangladesh.

1.2 Statement of the Problem

Providing effective, accessible and people-centered public services is an essential duty of contemporary governments. Recent decades have seen an increasing trend toward the use of Information and Communication Technologies (ICTs) in governments in an effort to provide better public service delivery, increase administrative efficiency, and increase transparency and accountability. This has

resulted in the birth of e-governance women to smoothen the interaction between government and citizens by means of electronic means. Birth Registration is one of the most basic albeit important government functions as it provides legal identity, which is the basis for utilizing other social, economic and political rights. The registration of births has long been seen as a fundamental right of all human beings and a necessary part of civil registration systems. It grants an official recognition of a person to the law, and gives them access to education, health care, social protection programs, work, passports/ID cards, and voting. In Bangladesh, the birth registration issue has been gaining significance as the registration of births is now a requirement for many public or private services. Therefore, prompt and efficient birth registration is important not only for the welfare and development of the birth, but for the nation as well. The Government of Bangladesh has been running a series of reforms to undertake gradual modernization of the birth registration system on the ground of legal identity and service delivery efficiency. The implementation of the Births and Deaths Registration Act, 2004, and the introduction of the Birth Registration Information System (BRIS) represented some of the milestones made in transitioning registration from paper to electronic systems.

Citizens can apply through BRIS platform, upload supporting document, find out the status of the application, and utilize services from local government institutions. These are in line with the government's Digital Governance Agenda of Digital Bangladesh. As birth registration services are digital, there are opportunities for increased administrative efficiency, and many challenges remain that impact on outcomes of the services. Although moving from paper to electronic service systems has significantly reduced inefficiencies, not all service system inefficiencies have been eliminated. Citizens frequently face challenges in technology, process, bureaucracy and communications. This means that the design goals of "digital service delivery" are not always met. In the face of online platforms, applicants have to wait a long period to receive their certificate. There are cases where verification procedures take longer than expected or they are not followed; administrative delays; annotation disruptions; lack of adequate administration; or delays in coordination with related authorities. It can also cause major inconveniences for citizens needing paperwork for school, passport applications, social safety net programs and more. Many citizens also have difficulties

with the application of the online registration, if they do use it. Digital platforms are set up to make the process of accessing services easier, but not everyone has the digital literacy skills to fill in on-line applications without assistance or support. People with low technological literacy may be hindered on application requirements, document upload, error correction or application development progress. These challenges are especially applicable to developing countries where digital access and technological literacy gaps are still large.

Another key qualification challenge is usability and access to e-service platforms. Users' experiences can be influenced negatively by technical issues like website malfunctions, server downtime, slow response time, and connectivity problems. Because of electronic services, applicants may have to attempt multiple times to complete the online submission process or come to local offices for assistance. Thus, inefficiencies that arise due to technological and operational challenges may limit the gains from digital transformation. Another factor that affects the applicants overall experience is the quality of services that they get from the applicants. Citizens are often in need of information on paperwork, paperwork processes, correction requests and updates on their paperwork. If the communication is ineffective or services are lacking, then the applicant can have some confusion and will not be happy. Responsive mechanisms of administration support, therefore, are as indispensable to effective service delivery as is technological infrastructure. Particularly, the problems of birth registration services are significant in urban local government institutions like, DWAC, Dhaka North City Corporation. DNCC's population is largely educated, income rich and digitally literate and multicultural, with a huge, diverse population. The continuous growth of population is imposing high stress on administrative system and service providers for birth registration. There are numerous applications involved, and it's not easy with big sets of applications to keep them accurate, efficient and citizen-friendly. While DNCC has made use of digital systems in order to enhance service delivery, issues like delays in processing time, limitations related to the technology, document verification procedures, and accessibility of the services are however reported by applicants. As governments become more dependent on birth certificates for the delivery of services to their populations, there are multiple implications of these problems. Citizens' registration delays and inefficiencies can delay their access to

education, health care services, social protection, and other vital services. Moreover, the success of e-service delivery should not be assured based only on the aspects of a technological implementation. Service users' views and experiences are also significant markers for the quality of services and the performance of institutions. The aims of e-governance could not be realized if the use of a digital platform is perceived by the user as difficult, inaccessible, and unreliable. It is crucial therefore to have an understanding of citizens' experiences and level of satisfaction to test the success or failure of digital public service initiatives. Literature on e-governance and digital governance in Bangladesh has mostly concentrated on policy development, technological advancement as well as institutional transformations. The following studies give valuable insights into the development of digital governance systems, but there has been comparatively little research on actual citizen experiences with digital public services with a specific service we examine here is birth registration. Existing studies generally focus on the service delivery problems without discussing the interaction between applicants and the on-line birth registration system at the local government level. Further, there is an evident scarcity of empirical studies to address the topic specifically on Dhaka North City Corporation. Findings from other regions or institutions might not represent the reality of their service users in DNCC due to the distinct situation of DNCC as an area, its administration and certain technology. Therefore, there is a great need for research on the problems encountered, perceptions and satisfaction of persons applying for birth registration in the DNCC context. It is essential to fill this gap for a variety of reasons. Firstly, insight into users' experiences can inform areas where there are weaknesses in the operation, which could be a problem in terms of service delivery. Secondly, findings based on the evidence can help those tasked with designing targeted interventions in order to enhance service quality design by policymakers and administrators. Third, improved BIR services help to promote general outcomes of digital governance, administrative modernization and citizen empowerment. Lastly, better access to legal identity facilitates the implementation of the national commitment to Sustainable Development Goal 16.9, to ensure legal identity for all. In this context the present study wants to look into the e-service delivery experience of birth registration applicant in the DHNCC, Dhaka. In particular, the purpose of this study is to understand the problems confronting the applicants, the extent of satisfaction with the quality of services, the factors influencing the availability and usefulness of services

and recommendations for improving the problem of birth registration. This research will aim to achieve practice-based insights that can enable better, more responsive and citizen-centered public service delivery outputs within the context of DNCC and elsewhere. To sum up, although the efforts for digitization of Birth Registration Services in Bangladesh are significant, there are still a number of concerns about service efficacy, accessibility, satisfaction, and administration efficacy in relation to this. These challenges continuing to endure show the need for systematic investigation of applicant's experience and perception. This study, therefore, raises a significant policy and research question that focuses on the citizen's experience of birth registration e-services in DNCC, and how these might be strengthened to enhance service delivery outcomes.

1.3 Research Questions

Research questions are the basis of the study and they direct them on what data they must gather, analyze and interpret. They draw inspiration from research problem identified and they are designed to investigate their experience about applicants who use the birth registration e-services under Dhaka North City Corporation (DNCC). With the expansion of the role of digital public service delivery in Bangladesh, it is important to understand the perception and experience of citizens towards digital public services for assessing the effectiveness of the ongoing e-governance initiatives.

The following research questions to be answered by this study:

Main Research Question

- What is the experience of the users in relation to e-services delivery process of birth registration in Dhaka North City Corporation (DNCC)?

The following sub-questions will investigate this big question: Specific Research Questions.

Research Questions

What is the overall experience of e-service delivery to the birth registration applicants of Dhaka North City Corporation (DNCC) and what are the factors associated to their satisfaction regarding the service?

SPECIFIC QUESTIONS FOR RESEARCH

RQ1: How do the applicants perceive the accessibility and quality of birth registration e-services of DNCC?

RQ2: How do the applicants perceive the usefulness and ease of use of the online birth registration system?

RQ3: How do applicants perceive the costs, payment procedures and transparency of financial information involved in the birth registration process?

RQ4: What are the main technical, administrative, procedural and communication problems faced by applicants during the birth registration process?

RQ5: What is the overall level of satisfaction of the applicants on the birth registration e-services offered by DNCC?

1.4 Research Objectives

The transformation of public administration to digital management has revolutionized the relationship between the public administration and citizens. Over time, governments are shifting from paper-based service delivery to technology-based service delivery and look forward to enhanced transparency, efficiency, accountability, and accessibility through digital service delivery platforms. But the results and impact of these can't be judged simply on the number of services digitized or applications processed electronically. In fact, they are more likely to be effective if citizens interact with government institutions in this way. One of the earliest and most important points of contact that citizens have with the State is being registered on their birth. It is the first act of recognition for the legal identity of one individual and a means to acquire many rights, protections and opportunities during their lifetime. A birth certificate is not only an administrative formality for parents and guardians, but also a fundamental document that would help them secure their child's future right to study, receive health care services, enroll in a child care program, get a passport and a permit for a national identification card, or land a job. The concept of digital-born birth registers has been introduced in Bangladesh in the context of e-governance and modernizing of public administration and service delivery. While such reforms have helped to reduce

paperwork, reduce processing time, enhance accessibility and facilitate quicker delivery of services, applicants have complained of technical problems, complexity of procedures, payment difficulty and delays in getting services, communication difficulty and errors on certificates issued. There therefore is a need to go beyond the institutional understanding and understand 'citizen's perceptions' of these services. The analysis of the experiences, perceptions, expectations and challenges of the applicants gives a more rounded picture of the success and weakness of the current service and confirms evidence to support improvement of services in the future.

1.4.1 General Objective

The overall aim of this research is to investigate the e-service delivery experience of birth registration applicants in Dhaka North City Corporation (DNCC), focusing on service quality, technology acceptance, operational difficulties, and overall applicant satisfaction.

Based on these theoretical frameworks, measurable variables were identified and a structured questionnaire was developed to assess applicants' perceptions of e-service delivery. The collected data were analyzed descriptively to examine the applicability of the TAM and SERVQUAL dimensions in the context of digital birth registration services.

1.4.2 Specific Objectives.

- Assess their knowledge about accessibility and service delivery by DNCC's online birth registration system.
- For evaluating perceived utility and accessibility of users' online birth registration services as per their perception.
- Investigate applicant's experience regarding costs for services; payments made by them; transparency of information about finances while registering babies at birth.

- For identifying major technological, managerial, operational and communications problems encountered by applicants while registering for a child's birth.
- Assess customer's experience to evaluate their level of satisfaction regarding DNCC's online birth registration service (BRIS).

1.5 The Significant of the study

Birth Registration Importance is greater than just birth certificate. A birth registration procedure involves recording of a child's birth along with giving them an identity number. It may also deprive them to access fundamental rights and facilities that are taken as a given by others. Thus improving birth registrations isn't only an issue of government and people's identification; it's more to be a part of their nationality, socialization process along with growth and wellbeing. Although there is a lot going on with regard to digitization of government services here (Bangladesh), very little attention has been paid towards analyzing how people utilize these facilities at their locations. Although there are more programs for digital government development within Bangladesh country however there is no emphasis upon evaluation of people's experience with these services when they receive them directly from govt officials. Previous studies have been focused primarily towards technological evolution, policies and institutions whereas there was little attention paid to user experiences. The paper adds to current research through focusing on people's experiences with access to birth registrations; their perceptions regarding its usefulness, affordability and results. Moreover, this research contributes towards discussions of citizens' services delivery; public administration; government management; information technology and development).

Policy

The government spends a lot of money on developing an online platform for services as it is believed that this would help simplify things considerably by means of technological advancements alone. Changes to policies will have little impact unless it's possible for people to understand them; it isn't enough that technology alone nor its

adoption by individuals either. This research outcome will be useful for policymakers to know whether they are effective at providing services and support as per their policies implemented on them; it would also reveal any discrepancy between what was supposed to happen according to policy implementation versus actual experience experienced by people seeking these services. This research may also assist us with sustaining our country's initiatives towards improving electronic administration of government services for people's sake.

Administrative

This research is going to help managers and services providers at DNCC understand how they deliver services through citizen's eyes rather than institution's perspective. Number of application processed/average time taken for processing can also serve as an indicator of administration on applicant's experience (delay, communication and procedure). Results may help administration identify bottlenecks and deficiencies within organizational operations that need improvement for better productivity; enhancements along with improved transparency mechanisms and enhanced responsiveness capabilities amongst institutions.

Social

Birth registrations have an intimate connection with social integration and equality of opportunity availability. School enrolment, a passport, accessing social protection programs, opening a bank account and proving legal identity may be difficult for those individuals without a birth certificate. They may also affect poor people more so that inequality increases significantly. Thus better birth registration should also be considered as an issue related with social equity and inclusiveness; it's also an indicator for good administration performance. Development

A complete birth registration system is an important part of development planning. Population data is useful for government to formulate educational system; health care system; vaccination program management; social security scheme implementation and crisis management. Furthermore, birth registration is a key to achieving sustainable development goals like target 16.6 ensuring legal identity for

everyone. Birth registration improvement is beneficial for country's growth and global developmental goals.

- Scope of the Study 1.6.
- This research was conducted for determining its extent.

The research work was conducted by us for those who are registered as birth-registered citizenship holders under dhkc's jurisdiction (Dhaka North City Corporation). Its limited by location within some districts of DNCC that have been digitized for birth registrations are done electronically on-line and also through their regional offices (administrative centers). This research is about a person's experience with applying for jobs.

- Accessibility of services;
- What happens to your action upon receiving an email.
- Works within budget; and
- Communication and support strategies.
- Name, email address and telephone number.

Defects of construction; and Customer's experience of their services.

Trade license services, tax collection of taxes and death registration services aren't covered by this research project. These samples are people that have registered for themselves again as birth registrations, they know what it's like to do this process on their own. There are some limitations to this research work.

This research has its own some limitations. Limitations of this research include special attention for maintaining quality of methods (though certain constraints cannot avoid). This research project was conducted over an approximately two-month span within an educational institution; however, it has been restricted by being conducted at one point during this short duration period where information gathering occurred only once. The findings are based on applicants in just one corporation (DNCC) so they may not necessarily reflect the experiences of applicants in other city corporations or those in rural areas where administrative procedures and technical infrastructure could have been different. This is a subjective report because it's based on people's perceptions and experiences, and may be affected by memory lapses, expectations and, or recent experiences. Sensitive issues, like unofficial payments, are dissatisfactions with officials, or negative experiences of service, may not be reported by some respondents,

due to discomfort ability. Moreover, there may also exist limitations on access by employees for accessing management personnel and data from inside an institution because of organizational policies and secrecy issues. Finally, however, digital services are constantly changing. Modification of changes to information collected might affect services' environment and future operations research on certain findings. Though this research will not cover all areas but we hope it's helpful for understanding what goes on during births registration services implementation and also how better respond able and accessible government institution can be developed within bangladesh.1.8 Operational Definitions

In research, the operational definitions play an important role, as they give clear and precise definitions of the key concepts in the research. They define the meaning, comprehension and measurement of key terms in a research in a specific context. Concepts like e-service delivery, citizen satisfaction and e-governance can be interpreted differently on various research fields and happen in distinct circumstances, for this reason the operational definition ensures common understanding of data collection, analysis and interpretation. For this study the operational definitions of the following terms are:

1.5.1 E-Service Delivery

The provision of government services to citizens through the use of electronic and digital services, such as the Internet, Internet portals, databases and communications. The main goals of e-service delivery are to increase accessibility, efficiency, transparency, responsiveness and convenience in public service delivery, and reduce the amount of bureaucracy and direct, face-to-face service provider-service recipient interactions.

This study focuses specifically on e-service delivery as the process used to apply for birth registration, upload supporting documents, communicate with authorities about the issue, track the status of applications, receive notifications, and receive birth registration certificates through IT-based systems of Dhaka North City Corporation (DNCC) and the national Birth Registration Information System (BRIS).

From operations point of view, the successful delivery of e-services in this research relies on the perception of the applicants regarding the accessibility of service delivery, the user-friendliness of the service, the timeliness of service, the responsiveness of service providers, information accuracy, the complaint resolution processes and the overall quality of the service provided.

1.5.2 Birth Registration

The perpetual, compulsory and universal informal recording of the event of birth and its characteristics based on the law of a country's civil registration system. It is the official recognition of a person's existence in the eyes of the state, and is a foundation for establishing a person's legal identity, nationality, age and family relations. Birth registration itself is deemed to be a fundamental human right globally, and is key to access to education, healthcare, social protection programs, passports, national identity documents, inheritance rights, and many other publicly provided services. The Birth Registration Act 2004 regulates birth registration in Bangladesh and the system of birth registration is maintained by the local governments under the digital Birth Registration Information System (BRIS). In the context of this study "birth registration" is defined as the application for, the issuance, correction or updating of a birth certificate by using the online birth registration system and related administrative procedures with Dhaka North City Corporation.

1.5.3 Citizen Satisfaction

The level of satisfaction of Citizens is the extent to which they feel a public service is delivered to their satisfaction or above, in terms of their needs, expectations and requirements. Citizen satisfaction is seen as an important aspect of the evaluation of service quality, institutional performance and responsiveness of public administration.

Citizen satisfaction is similar to that of customers in the private sector, in terms of fairness, transparency, accountability, access to public institutions and their trust. Citizens judge the quality of public services based on the results and the quality of

service delivery based on service delivery process which involves process interaction, administrative process, waiting time, communication and treatment received.

The satisfaction of citizen's in the context of this study means the holistic judgment of his/her interaction with the birth registration services of DNCC offered to him. This includes perceptions about the convenience, efficiency, timeliness, cost of the services, behavior of staff, the correctness of the information, transparency of procedures and the general performance of the services provided.

1.5.4 E-Governance

By 'e-governance' the use of such information and communication technologies (ICT) in Governmental activities to improve service delivery to citizens, the effectiveness of Governmental administration, transparency and accountability and to increase the interaction between Governmental activities and citizens, businesses and other parts of the community is meant.

E-governance is a departure from the traditional bureaucratic way of governance to a more responsive and efficient, participative and citizen-centric approach. It seeks to simplify administrative procedures, reduce transaction costs, reduce opportunities for corruption and improve access to government services. The concept of e-governance has gained much traction in Bangladesh in recent years, in accordance with the government's objective of digital transformation and modernization of the public service sector.

Online issue of birth registers is one of these broad changes in the digitization. The use of e-technology and e-platforms for administration and delivery of birth registration services in DNCC and public service modernization in Bangladesh in general is considered as e-governance in respect to this study.

1.6 Organization of the Thesis

The thesis is divided into six chapters. Chapter One is the introduction to the study that includes background, problem statement, research objectives, research

questions, significance of the study, scope and limitations, operational definitions and organization of the thesis. Literature review, theoretical frameworks, conceptual framework and research gap is presented in Chapter Two. The research methodology is explained in Chapter Three which includes the research design, study area, study population, sampling procedure, data collection methods, questionnaire design, variables, data analysis techniques, ethical considerations and methodological limitations. In Chapter Four, the institutional context, service process, stakeholders and issues of the birth registration e-service system in Dhaka North City Corporation (DNCC) are introduced. The findings from the survey and descriptive analysis of the survey data are presented and discussed in Chapter Five, which includes the characteristics of the respondents, technology acceptance, service quality, payment and cost experiences, governance and administrative experiences, challenges and citizen satisfaction. The major findings are discussed in relation to literature and the theoretical framework in Chapter Six and the conclusion, recommendations and suggestions for further research are presented in the same chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Currently, Information and Communication Technology is growing rapidly which affects government's delivery of services to citizens. The digitalization is gradually becoming an integral component for global government's agenda towards improving effectiveness; openness and responsibility along with citizens' involvement significantly. It is called e-government which means that it will help us to make our administration more efficient through information technology. The digital administration has not been fully developed yet; government bodies have moved towards paper-based systems but are now exploring e-services like telemedicine, banking etc. along with customer-friendly services.

The government's initiatives towards digital transformation, in Bangladesh under the Digital Bangladesh Vision 2021 and Smart Bangladesh Vision 2041 have stimulated the development and application of e-governance in public institutions. A lot of government services like birth registration, social security schemes, land administration and taxation are now online for better accessibility and efficient management transfer ability. These initiatives are designed for changing governmental procedures; increasing public confidence through transparency, efficiency and accountability within governments.

Birth Registration Information System (BRIS) is an important achievement towards e-government development for Bangladeshi people. A birth certificate provides an individual with citizenship rights such as access to schooling, medical care; welfare benefits like unemployment insurance; and voting privileges among others. Online application process is simplified - no paperwork and streamlined administration - with birth register. However, despite this advancement there are still some problems with technology like delays while submitting paperwork for verification; lack of communication skills between customers and their services. The problems impact people's lives, their happiness with delivering services to them.

Research findings show that there is an importance to technology features, perception by users regarding services' accessibility, usability reliability and response time as part and parcel while developing an effective system called 'e-government'. Nevertheless, people's readiness for trying out and utilizing electronic government

services are quite high provided that they feel due. Thus speaking from experience with people's lives would matter much more if that was an important factor when we consider how effective are they at evaluating impacts on their society through electronic government services.

This paper's literature review provides an overview for those studies related to it. The text is about e-government, e-services provisioning; digitalization of birth registration system. This section is a literature review on customer satisfaction, usability and service quality; it discusses theoretical framework and research gap that this paper aims to fill. Literature review was used for developing concepts and theories regarding customers' perceptions on, about their experience with service delivery services (sd) while registering children's birth certificates under DNCC.

2.2 Concept of E-Governance.

Information and communication technology was used by government officials for administration CONTBY ELECTRONIC GOVERNANCE. This is an alternative form for governments that are based upon bureaucracy cycle transparency accountability technologies unlike current systems which have been around for decades now. The e-government differs significantly with that of conventional administrations, communication and coordination along with service delivery through electronic means that improves effectiveness of administration and accessibility for citizens' needs.

According to world bank, e-governance refers to change its government's interaction with people, companies and other governments (World Bank, nod). Also, according to United Nations definition of e-governance, it's about using technology for better government management; enhancing people's democracy through their involvement with governments (United Nations, n. Definitions emphasize that e-governance isn't just technological; it's all about improving administration by providing better services to people with higher participation rates among them.

Scholars talk on many issues related to e and in government administration (eg). Heeks defines e-governance as "the use of information and communication technology by government to improve organizational performance and decision-making". Fang states that e-governance is a tool to improve government-citizen interaction through

electronic means. e-governance as described by Layne and Lee is a maturing stage from electronic communications of information to the integration of electronic government services.

They also indicate an integrated concept of e-government that includes technology development programs; organizational reforms; management improvements; and public participation.

There are basically four components to e and as governance.

- Government-to-Citizen (G2C) digital services are important for citizens, birth registration, passport services, paying taxes, applying for a license.
- Government-to-Business (G2B) The Internet-based exchange of information between government agencies and businesses, such as registering a business, making tenders and complying with regulations.
- Government to Government (G2G) Electronic communication and information sharing between government departments to coordinate and administer better.
- Government to Employee (G2E) Management of the government employees through an online human resource platform, payroll and administration.

The present study will focus on the first one - Government to Citizen (G2C) Birth Registration is a citizen oriented public service in the digital environment, due to these dimensions. Some benefits for implementing e-government electronic government system (eg) can be listed here. Reduces cost of administration CONTBYM; reduces processing time; increases transparency; minimizes opportunities for corrupt practices; improves accessibility to management; enhances public's perception on government service delivery. Social media platforms are, could also help us better reach out people especially where there is an increased need for services like cities do. In addition, it improves information integrity of a record system, which helps to make better policies based upon them. Nevertheless, there is also some problems associated with implementing e-government system like those that exist among developing nations. In is poor ICT facilities; there's a gap between people's availability for accessing computers and internet services; low levels of computer skills among citizens. In Bangladesh, e-governance has grown to be one of the core issues of the public sector reform. With the slogan 'Digital Bangladesh', some Government services have been digitized for efficient service delivery and administration. But the success of

these programs rely not just on the technologies available but also citizens' experiences using the digital services they are delivering. Therefore, measuring user experiences of e-government services will provide information on strengths and weaknesses of the existing e-government practices and provide significant value for user experience research.

2.3 Concept of E-Service Delivery

E-service Delivery is the delivery of government services over the electronic platforms using Information and Communication Technologies (ICTs). It provides citizens with the capability to utilize public services on demand from all over the world at any time without much physical interaction with government offices. This experience has made e-service delivery a key aspect of e-governance that contributes towards making services accessible, efficient and convenient for citizens, while decreasing the administration burden.

According to the Organization for Economic Co-operation and Development (OECD), e-service delivery is the provision of government information and services through electronic technologies (OECD, n.d.). Similarly, the United Nations sees e-service delivery as an important part of e-governance as it enables governments to deliver services more efficiently, and enhance transparency, accountability and citizen participation (United Nations, n.d.).

Various aspects of e-service delivery have been highlighted by researchers. For Brown (2006), e-services need to be user centered and reliable, accessible and responsive to citizens needs for to be successful. From Al-Hujran et al. (2015), citizens' acceptance of the digital public services is significantly affected by perceived usefulness, ease of use, trust and perceived service quality. These viewpoints suggest that having a successful e-service delivery is not only technical; it must also be a matter of citizens' experiences as they journey through the service process.

These are some of the essential characteristics of successful e-services:

Accessibility on online platforms at any time. Easy to use and easy to apply applications. Digital systems that can be relied on and are secure.

- Timely service processing.

Good communication and monitoring of status.

- Efficient complaint-handling mechanisms.
- The security of users' personal information.

The features are crucial for a positive user experience and for improving citizen's satisfaction.

The quality of e-services delivery is influenced by a variety of factors such as: usability of the website, reliability of the e-services system, accuracy of information, responsiveness of the service providers, communication of a technical support, efficient administration processes. A good performance of these components means that people feel digital government services are more convenient and trustworthy. On the opposite side, AC Techno can lead citizens to experience technical issues, the delay of system response, unclear instructions, communication issues, etc. that may prevent or make it difficult for citizens to access online government services.

In the case of Bangladesh, the growth of e-service is very fast, amazing and remarkable in the past decade. Any services like online birth registration, considering application for passport, e tax filing, land applications, utility payments have come into a picture gradually. Since the launch of the Birth Registration Information System (BRIS), the registration of births has become much easier and Registration Officers are now able to receive applications electronically, upload documents and view the status of applications online. However, there are still challenges such as internet connectivity, institutional capacities, citizens' political literacy and administrative coordination, which influence the quality citizens enjoy in their interactions with citizens' services.

The applicants' experiences with the Birth Registration process in Dhaka North City Corporation is the context of this research and hence the concept of e-service delivery provides context to the understanding of the relation of the citizens with digital public services in the areas. The concept of e-service delivery is found to be helpful as a lens of the study since the context of the current study deals with the applicants of birth registration from Dhaka North City Corporation and the citizen's experience with digital public services is analyzed. The assessment of these experiences is helping to identify what needs to improve and also, an e-governance system citizen centered in Bangladesh can be developed.

2.4 Digital Public Service Delivery in Bangladesh

The use of digital public service delivery has been an important part of Bangladesh's public service delivery reform agenda and the government's efforts to enhance governance through Information and Communication Technologies (ICTs). In the last decade, the Government of the People's Republic of the Bangladeshi government has made many efforts to redesign its public administrative system into an effective, open and people's oriented system. The use of digital technologies has not only altered the way governments communicate with all of its citizens, it has also allowed governments to deliver a service faster, made their administration easier and provided citizens easier access to key government services.

The Digital Bangladesh Vision 2021 was a big step towards digitalization in present Bangladesh. The vision was presented in 2008 and realized in the context of the National ICT Policy, and subsequently through various e-governance programs with the view to realizing a knowledge-based society by embedding ICT in public administration, education, health care, agriculture and economic development. Taking these to its next level, the government came up with the vision of Smart Bangladesh 2041 with the aim to create an intelligent, technology oriented and innovation oriented public administration system which can provide inclusive and sustainable public services.

Digital public service delivery – a set of transactions between governments and citizens in the context of information and electronic applications, payments, monitoring and receiving public services online. The digital transformation of public services has helped to break the reliance on paper-based processes and to eliminate the need for unnecessary time-consuming "paper travel" to government offices. Citizens can therefore avail of the provision of government services more easily with respect to geographical or office hours.

There are several examples of the successful digitization of public services in Bangladesh in various sectors. They encompass online passport applications, electronic tax filing, land record management, trade license issuance, payments for bill collection,

social safety net programs, National Identity (NID) services, birth and death registration and local government services. Access to digital services has also been further increased through the proliferation of Union Digital Centers (UDCs) to offer the local presence of digital, public and private services to citizens, especially in remote or rural areas. Such programs have contributed greatly to diminishing digital divide and to the use of public services inclusivity.

There are a number of benefits for the citizens and government institutions related to Digital public service delivery. Digital platforms can shorten wait times, decrease in transaction costs, increase access, and offer greater convenience for the citizens' perspective. Many administrative frequently can be finished, and done online, without great traveling or lengthy lines. Digital systems provide benefits to the government, such as increased administrative efficiency, better record management practices, the sharing of data between institutions, minimizing paperwork and improved transparency and accountability. In addition, they create much useful administrative data, which contributes to evidence-based planning and policy making.

However, though Bangladesh has made so much progress towards digitalization in providing public services, there are still a few challenges. Lack of digital literacy, access to the Internet, poor ICT infrastructure, digital system failures, cybersecurity threats, or lack of institutional capacity are still big challenges to successful service management. Sometimes, also limited government agency coordination and staff training and organizational resistance to change may affect the quality of services and slow service delivery. These issues are especially significant for institutions of local government as there are cases in which citizens' experiences are different due to different technical capacities and level of resources available to local governments. Other research findings have revealed that apart from the technological infrastructure, citizens' satisfaction with digital public services is influenced by the quality of the public services, system reliability, responsiveness, ease of use, transparency and the efficiency of administration. Citizens are more likely to trust and use digital government services if they connect to them with ease, reliability, security and resilience to meet

their needs. Therefore, assessing citizens' experiences has become a key part of measuring the effectiveness of digital services to citizens.

In broader perspective, Online birth registration is one of the most critical digital public services in Bangladesh. Leaving birth registration records digital, of higher quality and efficiency should be a national priority because it creates legal identity and allows access to many public services. Comprehending the experiences of applicants of online birth registration service thus gives valuable insights into the strengths and weaknesses of the current phase of digital governance reforms in Bangladesh.

2.5 Birth Registration System in Bangladesh

Birth registration is one of the most basic civil registration service provided by the government. It is the government's official statement of when a child was born, is a legal identification of child's age, nationality and family relations. Birth registration has legal connotations as a fundamental document of identity but also a social aspect and is a right of all human beings, and a prerequisite to accessing education, health and social protection programs, financial services, passports and a political right to vote. It also provides the governments with accurate and trustworthy information on populations, which is important for national planning, for public administration and sustainable development.

Bangladesh has been implementing concrete measures to modernize the birth registration system recognizing the crucial role that universal birth registration plays. Initially, birth registration was done manually using paper based systems, and these systems were frequently marred with long birth registration delays, incomplete forms and duplication of information, as well as low levels of coordination between government agencies. The crises impacted on the efficiency of administration and the generation of government documents.

The Government of Bangladesh has seen the need for a detailed legislation for birth and death registration throughout the country, so it has introduced the Birth and Death Registration Act, 2004. The responsibility was given to the local government bodies, namely, City Corporations, Municipalities, Union Paris had and local

government bodies initiated, to implement birth registration and make it compulsory. Later changes further bolstered the legal regime, including with the introduction of simpler administrative processes and increased digital registration processes.

The Birth Registration Information System (BRIS) was one of the key steps towards the modernization of birth registration. Citizens can submit their applications online and upload documents supporting their applications, and can monitor the application process and obtain their Birth Certificates electronically from a digital centralized platform (BRIS). The system has considerably streamlined administrative arrangements by cutting down on paperwork, avoiding duplication of documentation procedures, verifying data and improving the coordination between the different registration authorities.

Numerous administrative and social benefits have been achieved by digitization of birth registration. Electronic records do not have the same issues as paper records, such as being duplicated, entered incorrectly, or forged or altered. Digital registration also makes it possible to deeply integrate data throughout the system for effective coordination in providing public services by government agencies. Online applications for citizens reduce travel costs, time and help to straighten out the tedious application process by allowing most of it to be completed online.

However, despite these advances, the birth registration system is experiencing some challenges in its operation, which are undermining the success of this instrument. Those applying may be required to wait for documents to be verified, technical problems with the web application used to apply, difficulty with instructions on how to apply and lack of communication about the status of applications between local authorities and the applicant. These challenges may reduce citizens' confidence in the digital public services and may affect citizens' trust in the registration process.

Technological infrastructure is important but so are the institutional capacity, administrative efficiency, service quality, citizen experience in the functioning of the birth registration system. Especially for assessing the performance of local government bodies—like Dhaka North City Corporation—where hundreds of thousands of people are using digital birth registration services each year, it is crucial to understand these factors.

2.6 Legal and Institutional Framework of Birth Registration in Bangladesh

Lastly, the birth registration system in Bangladesh is underpinned by a comprehensive legal and institutional framework in place, which aims at universal registration, guaranteeing citizens' legal identity and enhancing the quality of civil registration services. A collection of constitutional commitment, laws, government policies, institutional arrangements and international agreements that all play a role in ensuring the effective management of birth registration throughout the country.

In the national context the Birth and Death Registration Act, 2004, is the main legislation related to birth registration in Bangladesh. The Act requires all people to register their births and provides for the role of registration authorities, the procedures for registering births and issuing birth certificates. Later, amendments and implementing rules have tightened up the process of registration, added two new digital registration systems, lowered the amount of administrative steps and raised the institutional coordination.

The implementation of the Act is for the most part in the hands of the Office of the Registrar General, Birth and Death Registration (BDR) of Ministry of Local Government, Rural Development and Cooperatives (LGD). The City Corporations, the Municipalities (Pourashavas) and other designated registration offices provide birth registration service, etc., at the local level. It is duty of these institutions to receive applications, accept supporting documents, check documents, register and keep official registrations.

In developing the institutional framework, the creation and operation of the Birth Registration Information System (BRIS) has created a national database of electronic records, which has helped the work of the Birth Registration Management. The establishment and proper functioning of the Birth Registration Information System (BRIS) has been further strengthened the institutional framework with the introduction of a national electronic database to support the process of Birth Registration. BRIS is designed to help to submit online applications, keep electronic birth records, share data between agencies, and verify electronic birth records. It also enhances the transparency of administration through allowing applicants to check the status of their applications

and minimizing the risk of duplicate applications being made and affected by fraudulent registration.

The act of birth registration also has international responsibility under the Bangladeshi law. Bangladesh is a State Party of the United Nations Convention on the Rights of the Child (UNCRC) that has recognized the right of every kid to be registered and to have a legal name at birth. Likewise, Sustainable Development Goal (SDG) Target 16.9 seeks to guarantee delivery of legal identity for all, including birth registration, through the promotion of inclusive and accountable institutions at all levels of government everywhere. These bilateral agreements have prompted Bangladesh to further upgrade civil registration system and timely provide digital public services to enhance registration coverage.

Although all the laws are in place, there are some institutional difficulties to the implementation of the laws effectively. Poor administrative capacity, insufficiently trained staff, technical equipment and uneven implementation of the services, and citizens' digital skills deficiencies can affect the quality and effectiveness of the services provided. The challenges faced during implementation highlight the importance of implementing legal measures in parallel with institutional coordination, in-service training of regular staff and citizen’s awareness for successful birth registrations.

Clearly grasping the legal and institutional framework is critical for the present study as its legal and policy context determines how Dhaka North City Corporation is able to provide a Digital Birth Registration service. Reflections on experiences of applicants can help to gain a deeper understanding of the role of legal provisions, institutional arrangements and administrative practices in the quality, availability and effectiveness of the delivery of e-services.

2.7 Citizen Satisfaction and User Experience

A key measure to assess the effectiveness of public service delivery is the satisfaction of the citizens. In the context of e-governance, Citizen satisfaction is a measure of how easy, efficient, reliable, transparent and good quality the e-government service is to the citizens. Citizen satisfaction measures citizens' perceptions and

experiences instead of traditional citizen satisfaction indicators which mostly look at admin output. It is a very important factor to citizen-centered governance.

According to Oliver (1980), satisfaction is a psychological reaction that takes place when people's expectations are met by their experiences. When users' perceptions of a service are equal to or greater than their expectations, they will probably be satisfied, and when their perceptions are less than their expectations, they will probably be dissatisfied. The expectation-confirmation theory has proven to be widely applied for assessment of public services, such as digital government services.

Citizen satisfaction is a consequence and an evaluation of the performance of the government in public administration. Osborne and Gaebler (1992) claimed that public administration should not only be efficient but 'share the citizens' needs and values – it should be perceived of them as valuable, accessible and responsive'. Similarly, the Organization for Economic Co-operation and Development (OECD) gives high priority to citizen satisfaction as an indicator of good governance because it reflects the Government's responsibility for citizens' needs.

The notion of "user experience" (UX) is closely related to citizen satisfaction. User experiences are the combination of an individual's perceptions, feelings, attitudes and reactions toward a digital system or service. According to the definition of user experience by the International Organization for Standardization (ISO) 2019, user experience is the perception and reactions of users when using or expecting to use a product, system or service (International Organization for Standardization [ISO], 2019). However, the role of user experience in e-government goes beyond usability and functionality of digital platforms to encompass the elements of communication, visual design, navigation, responsiveness, accessibility, trust and emotional satisfaction.

Easy to use interfaces, simple instructions, simple navigation, quick feedback, reliable transactions, and a smooth system operation are all part of positive user experience. Conversely, complex procedures, technical problems, confusing user interfaces, slow processing times and inadequate information communication negatively affects the users' experience and the probability of using digital government services.

There are several empirical studies that clearly show how user experience is related to citizen satisfaction. Data from the research reveals that if government websites are easily navigable with usable information, fast to respond to citizens' requests, and have protection measures for data security, citizens are more inclined to be satisfied and continue using digital public services. Websites that display a high degree of transparency and reliability and are efficient users of the Web also build trust in government institutions.

Citizen satisfaction in developing countries is affected by other contextual factors such as internet connectivity, digital literacy, organizational capacity, infrastructure and socioeconomic factors. These are the factors which impact not only on access to digital services, but also on citizens' ability to interact with online government services. Improving the user experience must not be limited to technology, but also require institutional changes, training of staff, raising public awareness, and designing services to consider everyone.

Various elements have been identified as influencing citizens' satisfaction with birth registration services in Bangladesh: ease of online application, clarity and transparency of the registration process, responsiveness of registration authorities, information accuracy, process of verification of documents, waiting time to register, overall administrative support. Applicants are more likely to have positive perceptions of government services when processing, communication and digital systems are best practices. On the other hand, it is possible that the insufficient service quality- such as technical issues, administrative delays, unclear instructions and inconsistencies in how services are delivered- may lower citizens' trust to digital governance projects.

These are taken as the primary variables which are significant to measure the efficiency of e-service delivery in Dhaka North City Corporation in the present study, as citizens' satisfaction and user experience. Data on the experiences of applicants can give insight into the positive and negative aspects of the current digital birth registration system and serve as evidence to show how death registration can be improved to be more responsive to citizens' needs.

2.8 Service Quality in Public E-Services

The concept of service quality has become a basic concept for the measurement of the effectiveness of electronic public services today. While the idea of public administration as a niche for technical management, accountability for which has generally been about effectiveness and efficiency, current public administration studies take due account of the importance of citizens' perceptions of the quality of their experiences of public services. As a result, service quality has emerged as one of the most critical drivers in citizens' satisfaction, trust and preference for digital government services.

The service quality is the gap between customers' expectations and what they have perceived in the service they received, according to Parasuraman et al. (1988). This perspective focuses on the quality of the services being delivered that remain at or above the expectations of several aspects of the users. While designed for the private sector it is now much used within public administration and even e-government research as citizens depend more on governments to adopt the same level of efficiency, responsiveness and reliability that is expected in other service sectors.

The quality of the Public e-services is not dependent on the quality of the technologies. This covers how effective the complete service delivery process is, such as the usability of websites, quality of the information, reliability of system(s), responsiveness of service provider(s), security of information, accessibility, transparency and efficiency of administration. Citizens evaluate digital public services not only by their ability to complete a transaction, but also by the ease, convenience and trustworthiness of the service.

The researchers have identified many dimensions of service quality that have been erved and are relevant to digital government services. Reliability is the government systems' capacity to consistently deliver accurate and reliable services. Responsiveness involves readiness of service providers to help citizens and respond quickly to citizens' concerns. Assurance is about people wanting to be able to trust government representatives and digital systems. Empathy can be interpreted and valued as special treatment rules and understanding of citizens' needs, and tangibility as calculable and understood at the level of digital interfaces, technology infrastructure

and supporting facilities. These together constitute a strong set of dimensions to measure the quality of public service delivery.

New service quality dimensions have become more pronounced as key in a digital environment. The quality of the services perceived by users is greatly affected by the management of information accuracy, website usability, system availability, data security, protection of privacy and interoperability among government agencies. If the process is technically sound, but the information is outdated, or the process is confusing or the communication with the applicant is lacking, then the applicant will be dissatisfied.

Improving the quality of services has been a major concern of digital governance reforms in Bangladesh. The focus of the transformation of government services to digital is to reduce the complexity and opacity of government processes, reduce opportunities for corruption, and streamline citizens' interactions with government. However, quality of services is not uniform in service delivery departments across the government, because of institutional weakness, lack of technical infrastructure, inadequacies of serviced personnel, and different procedures used to deliver a service. Operational difficulties like shortage of human resources, less technical assistance, and growing demand of services from local governments can impact the quality of the digital public services.

In the context of service quality in digital public administration, the Birth Registration Information System (BRIS) is an example of opportunities and challenges. The process is now more streamlined and efficient, but there are still potential delays in the document verification process, computer and communication problems, and registration office mismanagement of documents that may cause applicants to experience frustrating delays. These concerns directly impact on the perception of service quality and satisfaction of applicants in general with digital birth registration services.

The service quality is important in this study because it gives an analytical approach to understand the effect of service quality on the experience of the applicants in the Dhaka North City Corporation (DNCC). Evaluating these can help identify strengths and gaps in services that can guide future digital public administration development.

2.9 Theoretical Framework

2.9.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) proposed by Davis (1989) is one of the most popular theories that explain user acceptance and user adoption of information systems. The proposed model presented by TAM indicates that two constructs, namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) have the greatest impact on the intention to use a technology. Perceived usefulness is the subjective evaluation of a person that using a particular system will be useful to him or her in order to perform tasks. In terms of the BRIS phenomenon in online birth registration, applicants will be more likely to have a positive attitude if these are seen as positive attributes of the BRIS. The ease of use concept describes the ease an individual feels he or she must apply a system. Digital platforms that require little instruction, have intuitive navigation, user-friendly interfaces, and straightforward application processes are generally easier to use for users. These perceptions have a positive impact on users' acceptance of e-government service. TAM proposes that these two constructs influence the attitudes of the users towards technology, which will likely influence their behavioral intentions in using the system and their actual use of the technology. A lot of research has confirmed the use of TAM in different areas such as electronic commerce, healthcare information systems, online public services and e-government. The perceived usefulness and perceived ease of use have been shown to consistently account for citizens' use of digital government services. Although TAM has proven to be a valuable tool, there are some drawbacks to it. The model gives little consideration to the factors of organization, institutional, social and cultural influences that can impact technology adoption and focuses primarily on the individual perception of technology. Other factors that are closely linked to the citizen's perception of public services are trust in government, service quality, legal environment, digital literacy and administrative support. Therefore, there are many researchers recommending that TAM should be blended with other theories so that it can have a thorough understanding of an individual's use of digital public services. For purposes of this study, TAM is used as an appropriate theoretical framework for analyzing the perceived (in terms of usefulness and ease) of the Birth Registration Information System by applicants. These perceptions have an

impact on their experience of the digital birth registers services, and affect their satisfaction with the delivery of e-services.

2.9.2 SERVQUAL Model

Parasuraman et al. (1988) created a service quality measurement model, known as SERVQUAL. Based on the gap between the customer's expectations of the services and customer perceptions of what services were delivered, the model hypothesizes that customer service quality is set based on the gap. The model is based on the assumption that the service quality is the difference between the customer's service expectations and the customer's perceptions of the services received. A narrower gap means people feel the service is of a higher quality, a wider gap signifies dissatisfaction and lower quality of the service provided. SERVQUAL notes five important points of service quality namely: Tangibility – refers to the physical facilities, technological infrastructure and digital interfaces. Reliability – services that are accurate, dependable and consistent. Responsiveness – the capacity of service providers to respond to citizens in a timely and effective manner. Assurance: The competency, professionalism and confidence expressed by providers of services. Empathy – how personal the government is and how well they respond to the citizens' needs. SERVQUAL was actually designed for private sector but has been extensively used for public administration and e-government research purpose. The model offers a structured approach to assessing the citizen's perception of the quality of public services as well as specific areas that need improvement. SERVQUAL has been used in the context of digital government services to quantify the aspects of online service delivery, for example, the usability of the website, quality of information, system reliability, security, accessibility, and communication effectiveness. These factors are particularly important for services that rely on citizens' and government agencies' interactions through electronic means. There are a number of limitations of TAM, and this study is focused on SERVQUAL, which complements the study on service delivery quality. TAM is used to understand why citizens are adhering to the online birth-registration process and to decide on the quality of the services that are offered in the service process, SERVQUAL can be used to assess citizens' impression of the quality of services that are received during the processes. Such a blend of the two theoretical

viewpoints offer a holistic picture on the applicants' stories of interaction with the birth registration services in DNCC, Dhaka North City Corporation.

2.9.3 Conceptual Link to the Present Study

Moreover, the current study integrates both theories, TAM and SERVQUAL, to study the e-service delivery experience of the applicants for birth registration at DNCC. The perceived usefulness and ease of use are used to explain the acceptance and use of the BRIS platform by the applicants, and the perceived service quality is used to assess the quality of service delivery, which is measured using the dimensions of service quality such as reliability, responsiveness, assurance, empathy and tangibility. These frameworks create strong theoretical underpinning to understand the applicant's experiences, analyses applicant's factors that influence citizen's satisfaction with digital birth registration and recommend actions to enhance the services of digital birth registration.

2.10 Empirical Literature Review

The empirical literature can be used to gain practical knowledge about how and what e-governance and digital public services work in various countries. There are several previous studies that have investigated citizens' preference for e-services, e-service quality, e-service satisfaction, technology acceptance and institutional barriers concerning the digital governance. Literature review activity was conducted to find out the existing knowledge, methodology adopted and gaps in the research field relevant to the present study. This section reviews the empirical studies done at the global level, at the South Asian level and at the Bangladesh level to provide the context for scholarly research to understand the experience of e-service delivery for applicants for birth registration in the District of Dhaka North City Corporation (DNCC).

2.10.1 Global Studies

E-governance went through an explosive rate of development and has garnered much academic attention instead internationally. Nations have studied the elements of

a successful digital public service delivery mode, including technological readiness, institutional capacity, quality of services, citizens' trust and citizens' satisfaction.

The study by Carter and Bélanger (2005) addressed the analysis of citizen use of e-government services in the United States and the conceptual frameworks that looked at the dynamics of acceptance of e-government services. Carter and Bélanger (2005) used the models of the Technology Acceptance Model (TAM) and Diffusion of Innovation Theory (DOIT) to explore the adoption patterns of citizens of the United States with regard to e-government. They found that perceived usefulness, perceived ease of use, and trust in the government had a significant impact on citizens' intentions to use online public services. It concluded that technological efficiency is not sufficient, governments should build public trust to make the digital use of services more understandable and encourage it.

Similarly, Venkatesh et al. (2012) revised the Unified Theory of Acceptance and Use of Technology (UTAUT) and showed that social-influence, facilitating-condition, and user-expectation factors greatly impact technology acceptance in various cultural environments. They said that organizational support and citizens' digital competencies are necessary conditions to ensure solutions of the e-government initiatives.

Al-Hujran et al. (2015) studied e-government services in Jordan and found that trust, perceived security and usability of the website were the most significant factors influencing citizens' attitudes toward e-government services usage. The researchers emphasized the importance of designing a user-centered service for the government to increase users' trust in digital platforms and the importance of strengthening cybersecurity measures.

Each UNDS survey (2020, 2022 and 2024) found that more digitally advanced Governments had higher administrative efficiency, transparency and citizen engagement. But the reports also singled out the ongoing threats in developing countries such as digital inequality, lack of internet access, lack of digital literacy and a lack of institutional capacity. The results indicate that the technological innovation will need to be accompanied by organizational change and becoming more inclusive in digital policies.

The study of the notion of service quality in the context of digital governance has also produced valuable insights in European countries. Shareef et al. (2016) found that the usability, responsiveness, reliability and information quality of websites is statistically significant to the satisfaction of government services by citizens online. They said governments should “regularly track users' experiences to drive up the performance of digital services”.

Although these are important contributions, most global studies are on developed countries with relatively stable and sophisticated digital infra and institutional capacity. Thus, their findings might not reflect the overall situation of Bangladesh as the socio-economic and administrative system and overall digital literacy level are quite different. It is clear there is a gap for in-country research studies on citizens' interactions with digital public services in contexts of a developing country.

2.10.2 South Asian Studies

South Asian countries have made major progress in the past two decades to achieve e-governance. Both in India and Pakistan governments have launched many digitally-enabled public goods aimed at increasing the efficiency of administration, decreasing corruption, and growing citizens' ability to access government services. Aside from Pakistan, there are a number of digital government public goods launched in India, Sri Lanka, Nepal and Bhutan with the aim of increasing the efficiency of administration, reducing corruption, and increasing the ability of citizens to access government services. There is, however, statistical evidence that implementation issues still exist which have a negative impact on service quality and citizens' experiences.

In India, the utility of the use of e-governance schemes was investigated by Gupta and Jana (2003) and they found that the transparency, administrative efficiency, and accessibility of the services were improved. They also identified that the lack of digital literacy and infrastructure issues, and resistance to organizational change, were important barriers to effective implementation.

In India, Kumar et al. (2018) looked at the satisfaction citizens felt towards digital public services and reported that system reliability, usability, responsiveness and trust made significant contribution to the overall satisfaction. It recommended

enhancing the usability of user's interfaces and to create more robust technical assistance and platforms to boost citizens' experience.

In this context, Ahmad and Khalid (2017) conducted a survey in Pakistan and found three key factors that significantly affected citizens' attitudes towards the use of digital government services: institutional factors, internet access, and citizens' awareness. The study has led to a conclusion that e-governance can't be achieved by investing in ICTs alone and improvements in administrative capacity and citizen education ought to be followed.

The importance of organizational preparedness and service quality was also highlighted in other research in Sri Lanka, and is crucial for successful digital governance. Even though the technology investment seemed large, inadequate coordination between governmental agencies and inadequate staff training were reported to decrease the effectiveness of online public services.

These overlaps are found throughout South Asia, with issues of non-availability of Internet connectivity, institutional coordination, bureaucratic complexity, organizational resistance and digital literacy often cited as common tackle
s. Meanwhile, literature shows that in the case of creating e-governance services to meet citizen’s needs, it can improve transparency, cut down administrative costs and increase citizens' satisfaction.

While South Asian studies offer important insights into the region, there is a relative dearth of research in South Asia that singles out digital birth registration services or peoples' experiences through local government e-services. The majority of studies tend to examine e-government adoption in general, without looking at applicants' experience in the e-go service delivery process. This restriction opens up possibilities for more in-depth studies in the South Asian context.

2.10.3 Bangladesh Studies

However, since the introduction of the idea of Digital Bangladesh, Bangladesh has made good strides in the field of digital governance. Many empirical studies have assessed the use of the DPS' effects on the administrative efficiency, citizen satisfaction,

transparency, and governance reforms. But studies particularly focused on the birth registration e-services are relatively limited.

Sarker (2021) studied the application of e-governance in Bangladesh and noted that there was a high level of accessibility of services, efficiency of administration and transparency of institutions. The study revealed that it reduced the processing time and also increased the citizen's accessibility to the government services through digital platforms. But there were still t a c k l e s to overcome in the area of digital literacy, or technical infrastructure and organizational capacity limitations to implement it.

Ahsan and Rahman (2022) conducted a study on citizen perception of online public services and found that service quality, responsiveness, ease of use and trust in the systems significantly affected the citizens' satisfaction. The study recommended strengthening of the technical infrastructure, better communication with service users and improved staff capacity to better serve the overall amount of service quality.

The Governance Innovation Unit (a2i) has gathered experiences of success in the digitization of government services through the online medium, government information systems and Union Digital Centers. These have expanded the reach of citizens to public services, and have minimized administration and boosted transparency. But the implementation reports also highlight ongoing hurdles to digital inclusion, infrastructure differences, and institutional coordination.

Some research also has taken a look at how local government institutions perform in providing digital public services. The findings show that the Internet has improved administration effectiveness, but the quality of the administration has not been improved.

Research on birth registration has tended to concentrate on legal systems and birth registration coverage, child rights and civil registration systems. The results of the research are generally positive and show that the introduction of Birth Registration Information System (BRIS) has contributed to a substantial improvement in record management, reduced duplication and improved administrative coordination. They also highlight barriers to operation like time needed to complete document verification, technical system interruptions, lack of uniformity in operational practices, and awareness about procedures to follow in relation to document registration.

While these roles are significant, there are few if any empirical studies exploring the lived experience of citizens engaging with digital birth registration services, especially in regards to Dhaka North City Corporation (DNCC). Most previous studies focus on the administrative performance or the policy implementation, and not on applicants' perceptions, satisfaction and experiences while going through the service delivery process. Furthermore, the concepts of technology acceptance, service quality and citizen satisfaction are hardly used in combination in the analysis of the birth registration e-services.

Thus, the current study aims to fill this research gap, analyzing the processes of e-service delivery to applicants for birth registration in DNCC. The study provides valuable inputs to the existing literature on digital governance and citizen-centered public service delivery in Bangladesh, based on the applicants' perception of accessibility, quality of service, responsiveness, usability and satisfaction level of the services.

Table 2.1: Comparative Overview of E-Governance and Digital Birth Registration in South Asian Countries

Country	Major E-Governance Initiatives	Birth Registration System	Key Achievements	Major Challenges	Lessons for Bangladesh
India	Digital India Programmed, UMANG, DigiLocker, Aadhaar integration	Civil Registration System (CRS) with online registration in most states	Improved accessibility, digital identity integration, reduced processing time	Digital divide, varying implementation n across states, rural internet access	Integrating birth registration with digital identity systems can improve service efficiency and interoperability.
Pakistan	Digital Pakistan Initiative, National Database and Registration Authority (NADRA)	Computerized birth registration managed by local governments and NADRA support	Strong national identity database, improved record management	Administrative coordination challenges, unequal provincial implementation n	Centralized databases and institutional coordination enhance service delivery and data accuracy.
Nepal	Digital Nepal Framework,	Online Vital Event Registration	Improved local-level digital	Limited ICT infrastructure, geographical	Capacity building and infrastructure

Country	Major E-Governance Initiatives	Birth Registration System	Key Achievements	Major Challenges	Lessons for Bangladesh
	Local Government Digital Services	System (VERS)	registration and record management	barriers, low digital literacy	Investment is essential for effective local digital services.
Sri Lanka	e-Sri Lanka Programmed, Lanka Government Network	Electronic Civil Registration under Registrar General's Department	Better administrative efficiency and digital record preservation	Institutional capacity constraints, system integration challenges	Continuous staff training and inter-agency coordination improve digital public service delivery.
Bhutan	Digital Drukyul Initiative, G2C Service Portal	Civil Registration and Census System (CRCS)	High service integration, citizen-friendly online portal	Small ICT workforce, dependence on government capacity	Citizen-centered service design and integrated portals improve user experience.
Bangladesh h	Digital Bangladesh, Smart Bangladesh 2041, a2i Programmed, Union Digital Centers	Birth Registration Information System (BRIS) managed by the Registrar General	Nationwide online registration, improved accessibility, centralized database	Technical issues, document verification delays, digital literacy, inconsistent local implementation n	Further improvements in service quality, user experience, institutional coordination, and technical support are needed to enhance citizen satisfaction.

Source: Compiled by the researcher based on published literature on digital governance and civil registration systems in South Asia.

2.10.4 Comparative Analysis

As can be seen from the comparison, all the countries in South Asia have been working towards digital governance as part of their public sector modernization agenda. Although the solutions vary from country to country, the ultimate goal is to make public services more accessible to citizens, make administration more efficient, and make it more transparent (Gupta & Jana, 2003; Ahmad & Khalid, 2017). The use of digital identity and civil registration in combination is significant in India and Pakistan, and in Sri Lanka and Bhutan, integrated government service portals have been created. In addition to infrastructure-related challenges, Nepal has also focused on building the

capacity of local governments to provide digital services (Ahmad & Khalid, 2017). The experiences show that digital governance is not only about investing in technology, but also about building institutional capacity, coordinating and raising citizen awareness.

The Birth Registration Information System (BRIS) is a good example of Bangladesh's digital initiatives and has helped to improve birth registration and administrative record management. Like other developing countries in Asia, citizens' access to digital public services (DPS) is still impacted by issues of digital literacy, technical infrastructure, institutional coordination, and service quality (Sarker, 2021; Ahsan & Rahman, 2022). Further strengthening of Bangladesh's digital birth registration system could be achieved by implementing more system integration, regular staff training, user-friendly service design, and enhanced inter-agency coordination. Experience from neighboring South Asian countries indicates that institutional development and citizen-centered service design are necessary in the context of technological development (Gupta & Jana, 2003; Ahmad & Khalid, 2017).

2.11 Research Gap

The literature searches at global, regional and national levels reveals that there has been considerable research on e-governance, digital public service delivery, technology adoption, service quality and citizen satisfaction. A number of factors have been examined to explain why citizens accept and use e-government services, including perceived usefulness, perceived ease of use, trust, service quality and technological infrastructure (Carter & Bélanger, 2005; Al-Hujran et al., 2015; Venkatesh et al., 2012). Similarly, studies on the implementation of digital governance in South Asian countries have identified issues of digital literacy, institutional capacity, infrastructure, internet connectivity, and citizen awareness (Gupta & Jana, 2003; Ahmad & Khalid, 2017).

The past studies in Bangladesh have primarily been on the roadmap and goals of Digital Bangladesh, e-governance reforms and digitization of public services. The impact of online government services on administrative efficiency, transparency, accountability and accessibility has been studied (Sarker, 2021). The legal and institutional aspects of the Birth Registration Information System (BRIS) have also been addressed, and research has shown its contribution to the enhancement of civil registration, record management and administrative coordination.

While these valuable contributions have been made, there are several research gaps.

First, most of the previous studies have been about technological and administrative issues of e-governance, not about citizens' experience in accessing digital public services. While usability, reliability, responsiveness, trust and service quality have been noted as key factors influencing digital service use and satisfaction (Al-Hujran et al., 2015; Shareef et al., 2016), the experiences of applicants towards the quality, accessibility, responsiveness and usability of birth registration e-services have been comparatively less studied.

Second, the existing research on birth registration in Bangladesh has been mainly concerned with legal compliance, registration coverage, child rights, civil registration systems and policy implementation. The current studies suggest that BRIS has helped to improve record management, minimized duplication, and enhanced administrative coordination, but the problems of delays in document verification, technical interruptions, inconsistent practices, and lack of awareness have continued to impact service delivery. Few studies, however, have focused on applicants' satisfaction and user experience during the digital service-delivery process.

Third, although some studies have explored the adoption of e-government services based on the Technology Acceptance Model (TAM) (Davis, 1989; Carter & Bélanger, 2005), and other studies have examined service quality based on the SERVQUAL model (Parasuraman et al., 1988), relatively few studies have integrated these two theoretical frameworks to analyses digital birth registration services. The combination of technology acceptance and service quality offers a wider analytical lens as it takes into account the technological aspect of the use of digital services as well as the service delivery aspect of citizens' experiences.

Fourth, most studies on digital governance have focused on the national or ministerial level. Empirical studies on local government institutions are limited, especially on Dhaka North City Corporation (DNCC) that has a significant role in providing birth registration services to a large urban population. National level studies may not necessarily reflect the local institutional, administrative, technological and operational conditions in DNCC that can present specific challenges and opportunities.

Finally, there is very little research that has explored the association between the specific dimensions of service quality (reliability, responsiveness, assurance, empathy, and tangibility) and overall satisfaction of users of the online birth registration service. These are the dimensions of perceived service quality (Parasuraman et al., 1988) identified by the SERVQUAL framework. Knowing these relationships is crucial to designing evidence-based and action-oriented interventions to enhance the effectiveness of digital public service delivery.

To fill these research gaps, the present study investigates the e-service delivery experience of birth registration applicants in Dhaka North City Corporation (DNCC) based on the Technology Acceptance Model (TAM) and the SERVQUAL model. The study explores the perception of the system usability, perceived usefulness, service quality, responsiveness, accessibility and overall satisfaction of the applicants. The study also considers these dimensions together, which adds to the body of evidence on e-governance and citizen-centered digital public service delivery in Bangladesh and offers evidence-based recommendations for enhancing the digital birth registration service.

Table 2.2: Summary of Research Gaps

Existing Literature	Identified Gap	Present Study's Contribution
Focuses on e-governance implementation and digital transformation.	Limited emphasis on applicants' actual service experiences.	Examines the e-service delivery experiences of birth registration applicants.
Examines legal frameworks and administrative reforms.	Limited assessment of citizen satisfaction and user experience.	Evaluates applicants' perceptions of satisfaction and usability.
Applies TAM or SERVQUAL separately.	Few studies integrate both models.	Integrates TAM and SERVQUAL into one analytical framework.
Mainly national-level studies.	Limited research at the City Corporation level.	Focuses specifically on Dhaka North City Corporation (DNCC).
Measures administrative performance.	Limited analysis of service quality dimensions.	Investigates reliability, responsiveness, assurance, empathy, and tangibility in digital birth registration services.

2.12 Conceptual Framework

A conceptual framework is a framework that shows the relationships between the key concepts or variables in a research project. It clarifies the theoretical constructs and how they are expected to function in relation to the research problem and guides the process of data collection, analysis, and interpretation.

The two well-known theoretical models used in the present study are the Technology Acceptance Model (TAM) developed by Davis (1989) and the SERVQUAL model proposed by Parasuraman et al. (1988). The two models are combined because the acceptance and experience of digital public services is not only related to citizens' acceptance of technology, but also to the quality of the services that can be provided via technology (Davis, 1989; Parasuraman et al., 1988).

The two constructs of the Technology Acceptance Model (TAM) that are relevant to this research are:

Perceived Usefulness (PU): Perceived usefulness refers to applicants' beliefs that using the online birth registration system will improve the efficiency, convenience, and effectiveness of completing the birth registration process (Davis, 1989).

Perceived Ease of Use (PEOU): Perceived ease of use is a measure of how easy applicants find the BRIS platform to understand, learn, navigate and use without too much effort (Davis, 1989).

The perception of technology can shape the attitudes of applicants to the use of digital birth registration services and in turn impact their experience and willingness to use the system (Davis, 1989; Carter & Bélanger, 2005).

According to Parasuraman et al. (1988), SERVQUAL is a model that measures service quality based on five dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

Tangibles: The physical facilities, technological infrastructure, digital interfaces and other supporting facilities used in the delivery of the service.

Reliability: Capability of the birth registration system and service providers to provide accurate, dependable and consistent services.

Responsiveness: The readiness and capacity of service providers to offer timely responses and assistance to applicants' needs and concerns.

Assurance: The competence, professionalism, knowledge and trustworthiness of service providers, which adds to the confidence of applicants in the service.

Empathy: Providing individualized attention, understanding, and support to applicants based on their needs (Parasuraman et al., 1988).

The service quality dimensions are expected to affect the applicants' perception of service quality and their satisfaction with the digital birth registration service. The previous studies have also shown that service quality, responsiveness, reliability, usability and trust are among the factors that influence citizens' satisfaction with digital government services (Al-Hujran et al., 2015; Shareef et al., 2016).

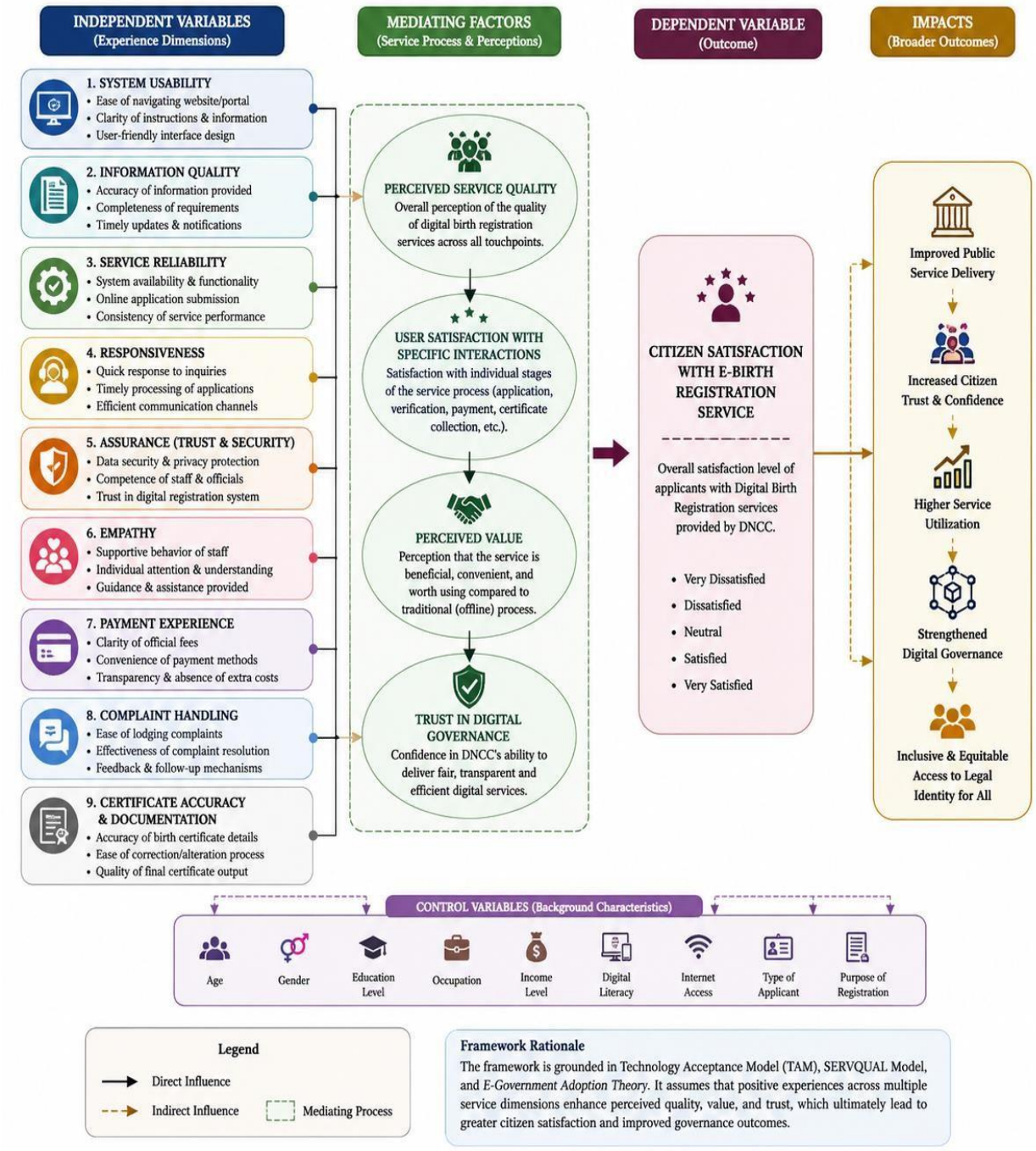
Hence, the conceptual framework of the present study is a combination of TAM and SERVQUAL to analyze the experience of e-service delivery for birth registration applicants in Dhaka North City Corporation (DNCC). TAM reflects the technology-related aspects of the applicants' experience (perceived usefulness and perceived ease of use), while SERVQUAL reflects the service-delivery aspects (tangibles, reliability, responsiveness, assurance, and empathy). These constructs collectively offer a thorough approach to analyzing applicants' perceptions, service experiences, and satisfaction with digital birth registration services.

These service quality dimensions directly affect the satisfaction and perception of the overall service experience of the applicants.

The hybrid of TAM and SERVQUAL gives an overall framework to analyses the technological element and the service element of online birth registration. The framework is founded on the belief that positive views of usefulness and ease of use together with high service quality will result in citizens' satisfaction and a better e-service delivery experience.

2.13 CONCEPTUAL FRAMEWORK

The framework illustrates how different dimensions of e-service delivery experiences influence citizen satisfaction with Digital Birth Registration services in Dhaka North City Corporation (DNCC).



Framework Rationale

The framework is grounded in Technology Acceptance Model (TAM), SERVQUAL Model, and *E-Government Adoption Theory*. It assumes that positive experiences across multiple service dimensions enhance perceived quality, value, and trust, which ultimately lead to greater citizen satisfaction and improved governance outcomes.

2.13 Chapter Summary

The theoretical and empirical literature reviewed in this chapter was relevant to the study of the e-service delivery experience of the applicants of birth registration in Dhaka North City Corporation (DNCC). The review brought together concepts, theories, and empirical evidence that would enable the understanding of digital public service delivery and its impact on citizen satisfaction and service quality.

The chapter began by providing an introduction to e-governance and its significance in the context of transforming public administration with the help of Information and Communication Technologies (ICTs). It highlighted the possibilities of e-governance in enhancing administrative efficiency, transparency, citizen participation and accountability on the electronic platform (Heeks, 2006; Fang, 2002; Layne & Lee, 2001). The discussion also revealed that technological development is not enough to make e-governance successful, institutional capacity, organizational preparedness and citizen participation are also important (Venkatesh et al., 2012).

The chapter then discussed about the importance of e-service delivery in e-governance. It explored the ways in which digital public services can enhance the accessibility, convenience and administrative efficiency of citizens' access to government services via electronic platforms. The literature also showed that system usability, reliability, responsiveness, security, information quality and citizen-service provider interaction quality are among the factors that affect the success of e-service delivery (Brown, 2006; Al-Hujran et al., 2015).

The digital public service delivery in Bangladesh highlighted the shift towards digital governance in the country with the initiatives related to Digital Bangladesh Vision 2021 and Smart Bangladesh Vision 2041. The introduction of innovative public service delivery tools like online public service portals, Union Digital Centers, and the Birth Registration Information System (BRIS) has helped modernize public service delivery and improve citizens' access to public services. The review also revealed ongoing issues regarding digital literacy, ICT infrastructure, institutional coordination, and service quality, which can impact citizens' experiences of digital public services (Sarker, 2021; Ahsan & Rahman, 2022).

The chapter also explored the birth registration system in Bangladesh and its legal, administrative and developmental importance. Birth registration was recognized as a basic civil registration service that creates legal identity and enables access to education, health care, social protection and financial services, among other public services. The discussion highlighted how the implementation of BRIS has helped to enhance registration processes, electronic record management, and administrative coordination. However, operational issues such as delays in document verification, technical issues, communication challenges and administrative inconsistencies can still impact the quality of services received by applicants.

Legal and institutional aspects of birth registration were also explored. The chapter covered the Birth and Death Registration Act, 2004, the amendments and rules, and the duties of the Office of the Registrar General, Birth and Death Registration, and the local government institutions like City Corporations and Municipalities. The review also took into account the international commitments of Bangladesh such as the United Nations Convention on the Rights of the Child (UNCRC) and Sustainable Development Goal (SDG) Target 16.9 which emphasizes legal identity and birth registration (United Nations, n.d.).

The chapter also examined the notions of user experience and citizen satisfaction and how they relate to the effectiveness of digital public services. The literature showed that the satisfaction of the applicants can be affected by several factors such as accessibility, ease of use, responsiveness, communication, transparency, reliability and service quality (Oliver, 1980, Al-Hujran et al., 2015, Shareef et al., 2016). In this context, service quality is a significant indicator of citizens' perceptions and evaluations of government services. According to Parasuraman et al., (1988), there are five dimensions of perceived service quality, namely reliability, responsiveness, assurance, empathy, and tangibles.

Two important theoretical models that were relevant to the study were also explored, namely The Technology Acceptance Model (TAM) and the SERVQUAL model. TAM was developed by Davis (1989) and is used to explain the factors that affect an individual's acceptance and use of information technology, namely perceived usefulness and perceived ease of use. The SERVQUAL model by Parasuraman et al. (1988) offers a systematic method to evaluate the quality of the service perceived by

the customer based on five dimensions: reliability, responsiveness, assurance, empathy and tangibles.

Furthermore, the empirical studies reviewed in this chapter included studies on e-governance, digital public service delivery, technology adoption, service quality, and citizen satisfaction in the global, South Asian, and Bangladeshi context. The literature on technology adoption, administrative reform and digital public service implementation has contributed a lot to the understanding of these topics. Perceived usefulness, perceived ease of use, trust, security, usability, and service quality are among the factors that have been identified in international studies as important factors that affect citizens' adoption and satisfaction with digital government services (Carter & Bélanger, 2005; Al-Hujran et al., 2015; Venkatesh et al., 2012). Research in South Asia has also identified issues of digital literacy, access to the internet, institutional capacity, infrastructure, and organizational readiness (Gupta & Jana, 2003; Ahmad & Khalid, 2017).

The literature review identified, however, some significant gaps in the research. The literature on existing research has largely been about technology adoption, administrative reform, policy implementation and institutional performance, with relatively little attention paid to citizens' experiences in the digital public service-delivery process. Specifically, there is a lack of empirical studies that investigate the experiences of birth registration applicants with respect to the usability, accessibility, responsiveness, service quality and satisfaction of the system.

Moreover, existing studies on birth registration in Bangladesh have focused mainly on legal aspects, coverage of birth registration, child rights, administrative procedures and policy implementation. Less focus has been placed on applicants' perceptions and satisfaction with the digital birth registration process.

Thus, the present study aims to fill these gaps by analyzing the e-service delivery experience of the applicants of birth registration in the DNCC using an integrated framework of the Technology Acceptance Model (TAM) and the SERVQUAL model. The study centers on the perception of usefulness, ease of use, accessibility, service quality, responsiveness, and satisfaction of the applicants. The study is designed to give a holistic picture of citizens' experiences with digital birth registration services and to develop evidence-based recommendations for enhancing

citizen-centered digital public service delivery in Bangladesh by integrating these dimensions.

CHAPTER THREE

RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research methodology which was used to explore the e-service delivery experience of applicants for birth registration in Dhaka North City Corporation (DNCC). Research methodology is the backbone of a systematic and credible research which describes the process of gathering, analyzing and interpreting research data. It is also a tool to make the research process transparent, reliable and able to solve the research problem and questions.

This study aims to explore the applicants' experience of the digital birth registration services and the factors related to the service quality, user satisfaction and the effectiveness of the e-service delivery. The chapter introduces the philosophical assumptions that underlie the study, the research approach, research design, the study area, the target population, sampling procedures, data collection methods, research instruments, data analysis techniques and ethical considerations. It also tackles the reliability and the validity of the research instrument and recognizes the limitations of the study in terms of methodology.

The methodological framework has been designed to ensure that the results of this study would be aligned with the experiences of the birth registration applicants as well as generate evidence-based recommendations to enhance digital public service delivery in Dhaka North City Corporation. The study aims to generate reliable and meaningful results based on a suitable research design and systematic collection of data, which can be added to the existing literature on e-governance and citizen-centered public service delivery.

3.2 Research Philosophy

Research philosophy is the package of assumptions and beliefs that underlie the process of knowledge creation and dictate the choice of research method. It offers the theoretical context for interpreting knowledge production, what is considered valid evidence, and how research outcomes should be understood (Saunders, Lewis, &

Thornhill, 2019). It is important to ensure consistency between the research objectives, methodology, and analysis to choose a research philosophy.

There are several approaches in social science research as positivism, interpretivism, pragmatism and realism. Positivism is more centered on objective measurement and quantitative analysis to find causal relationships between variables. Interpretivism is defined by an interest in the subjective experiences and social reality of individuals that utilizes a qualitative approach to inquiry. Pragmatism is a mix of quantitative and qualitative methods, where the methods used are those that are most suitable to the research problem and realism is a view that social phenomena are independent but are understood in the context of human experience.

Based on the purpose of the study adopted the positivist research philosophy. The study uses structured survey data to analyses measurable aspects of applicants' experiences with the digital birth registration services, so positivism is appropriate. The research mainly aims to objectively measure variables like perceived usefulness, perceived ease of use, service quality, responsiveness, reliability, and citizen satisfaction. These can be quantified and investigate, in order to determine patterns and relationships.

The positivist philosophy is in favor of adopting standardized data collection tools, objective analysis and empirical data for inference. It reduces researcher bias and focuses on systematic e v a s i o n and statistical validation. Given that the purpose of the present study is to evaluate the delivery experience of e-service for birth registration to a relatively large number of applicants and draw generalizations within the study area, the positivist approach is suitable as it deals with philosophical foundation for the study.

Besides, the positivist approach is in line with the theory that is used in this study, namely the Technology Acceptance Model (TAM) and SERVQUAL model. Both frameworks are based on measurable constructs which can be converted to survey questions and measured quantitatively. Thus, the positivist philosophy gives a logical basis for analyzing the relationship between technology acceptance, service quality and the overall experience of the applicants in digital birth registration services.

3.3 Research Approach

Research approach is a description of the logical course of the study from the theory to the empirical investigation. It helps to define the way the research questions are answered and the way that theoretical concepts are connected to data collection and analysis. The three popular methods of research are deductive, inductive, and adductive.

The deductive method starts with theories, hypotheses or propositions which are subsequently subjected to empirical testing. It is often linked with quantitative research, and emphasizes studying relationships between variables that are already identified. The inductive method, on the other hand, is the one used in qualitative research in which the researcher explores a new concept and tries to understand what experiences those they are studying are having in their research, and it is based on r e l a t i o n s . Adductive method involves some aspects of both deductive and inductive logic, and it is a method that alternates between theory and data.

The study follows a deductive approach as it is based on existing theoretical models and aims to explore the applicability of these theoretical models in the context of digital birth registration services in Bangladesh. Specifically, the study builds upon the Technology Acceptance Model (TAM) and the SERVQUAL model, which is used to explain the applicant's experiences of e-service delivery, depending on the adoption of the technology and the quality of the service.

Based on these theoretical frameworks, measurable variables are identified, a structured questionnaire is developed, quantitative data is collected from birth registration applicants and the collected data are analyzed to examine the relationships between the variables of the study. The deductive method allows the researcher to assess the suitability of the theories that already exist in predicting the e-service delivery experience of applicants in Dhaka North City Corporation.

The deductive approach is especially appropriate for this research because it offers a scientific approach for objective measurement, testing of the hypothesis (if applicable), statistical analysis, and generalization of the conclusions to the target population. It also provides uniformity among the research philosophy, theory, research design, and analysis used throughout the study.

To conclude, it can be said that positivism philosophy and deductive research method lays strong foundations in order to investigate e-service delivery experience of the birth registration applicants. All these methodological decisions allow the study to be undertaken systematically and all results to be true, valid and consistent with the research questions.

3.4 Research Design

Research design is the general scheme or blueprint of the data collection, measurement and analysis to provide a satisfactory answer to the research problem. It offers a systematic approach to research, detailing the processes and methodologies for collecting and analyzing data, and guaranteeing the validity and reliability of the results (Creswell & Creswell, 2018). A suitable research design helps the researcher achieve his or her research goals effectively and reduce the likelihood of the possible sources of bias in the research.

The nature of the research problem in this study and its objectives, a quantitative research design was employed. It is suitable quantitative research as the study wants to analyze the e-service delivery experience of applicants of birth registration in gathering measurable data from comparatively larger number of respondents. The design supports the statistical analysis of the perception of the applicants concerning the service quality, perceived usefulness, perceived ease of use, responsiveness, reliability, and overall satisfaction with the Digital Birth Registration Services.

Specifically, descriptive cross sectional survey design was used. A descriptive design is appropriate when you are describing and analyzing the experiences and perceptions of applicants and you are not manipulating any variables. The cross sectional study enables the collection of data from the respondents at one stage of time and hence provides a snapshot of the experiences of the respondents with the Birth Registration Information System (BRIS) and other service provision of Dhaka North City Corporation (DNCC).

Structured questionnaire was the main tool for data collection. The questionnaire was primarily close-ended and was measured using a five-point Likert

scale which allowed respondents to respond with their opinion on how much they agreed with the statements on the various dimensions of e-service delivery. Data collected were analyzed using the appropriate statistical methods to determine patterns, relationships and factors that affect overall applicant's experiences.

The descriptive quantitative research design is appropriate for this study because it is based on the positivist philosophy and deductive research method. In addition, it provides a platform for the researcher to quantify the theoretical constructs objectively and look at how these constructs affect the birth registration applicant's e-service delivery experience, which can be applied to the Technology Acceptance Model (TAM) and the SERVQUAL model.

3.5 Study Area

The study was conducted in Dhaka North City Corporation (DNCC), one of the two city corporations responsible for urban governance in Dhaka, the capital city of Bangladesh. Established in 2011 following the division of the former Dhaka City Corporation, DNCC is responsible for delivering a wide range of municipal services, including birth and death registration, trade licensing, waste management, public health, urban planning, and other citizen services.

DNCC was selected as the study area because it is one of the largest urban local government institutions in Bangladesh and serves a highly diverse population. The city corporation processes a substantial number of birth registration applications each year through the Birth Registration Information System (BRIS), making it an appropriate setting for examining citizens' experiences with digital public service delivery.

The implementation of online birth registration services within DNCC reflects the Government of Bangladesh's broader commitment to digital governance under the Digital Bangladesh initiative and the Smart Bangladesh Vision 2041. Applicants can submit birth registration applications electronically, upload supporting documents, and monitor the status of their applications through the BRIS platform. Despite these technological advancements, applicants continue to encounter challenges related to document verification, communication, system accessibility, technical issues, and

service responsiveness. Investigating these experiences provides valuable insights into the effectiveness of digital public service delivery at the local government level.

Another important reason for selecting DNCC is its administrative diversity. The city corporation consists of multiple administrative zones and wards that serve citizens with varying socio-economic backgrounds, educational levels, and digital literacy. This diversity provides an appropriate environment for examining how different groups of applicant's experience digital birth registration services.

The findings of this study are expected to contribute to improving the quality of e-service delivery within DNCC while also providing policy recommendations that may be applicable to other city corporations and local government institutions implementing similar digital public service initiatives in Bangladesh.

3.6 Population of the Study

The study was done in Dhaka North City Corporation (DNCC), one of the two City Corporations of Dhaka, the capital city of Bangladesh for urban governance. When the old Dhaka City Corporation split in 2011, it established DNCC to provide a multitude of municipal services such as registration of births and deaths, trade licensing, waste management, public health, urban planning, and other citizen services.

DNCC was chosen as a study area due to its large size, being one of the biggest urban local government institutions in Bangladesh, and the fact that it has a diverse population. The city corporation receives a significant number of birth registration applications annually in the Birth Registration Information System (BRIS), making it a suitable context to study citizens' experience with digital public service delivery.

By introducing the online birth registration process in DNCC, the Government of Bangladesh is demonstrating its dedication to digital governance as part of the Digital Bangladesh initiative and Smart Bangladesh Vision 2041. The applicants can apply for birth registration electronically, upload necessary documents and track the status of their application using the BRIS platform. Even with all these technological advances, there are problems regarding communications, document verification, system accessibility, technical issues and service responsiveness that applicants are facing.

These experiences offer insights to the effectiveness of digital public service delivery at the local government level.

Among the other important factors in choosing DNCC is its administrative diversity. The City corporation is divided into several administrative districts and wards that cater to citizens with different socio-economic status, education and digital literacy. This diversity helps to adequately explore the experience of digital birth registration services for various groups of applicants.

The outcomes of this study will be helpful to enhance the quality of e-service delivery to the citizens in DNCC and policy recommendations which can be applicable to other city corporations and local government departments carrying out similar digital public service projects in Bangladesh.

Variable Type	Variables	Source
Independent Variables	Perceived Usefulness, Perceived Ease of Use	Davis (1989)
Independent Variables	Reliability, Responsiveness, Assurance, Empathy, Tangibility	Parasuraman et al. (1988)
Dependent Variable	E-Service Delivery Experience	Developed by the Researcher
Outcome Variable	Citizen Satisfaction	Based on Literature

3.7 Sample Size and Sampling Technique

The study targeted the applicants who were experienced in birth registration services of Dhaka North City Corporation (DNCC). The study used non-probability sampling technique because there was no complete sampling frame of eligible applicants and the practical difficulties in accessing applicants. The respondents were selected on the basis of their availability, accessibility, willingness to participate in the study.

A sample size calculator was referred to as a reference to determine a target number of respondents with a population size of ~6,000,000, a population proportion

(p) of 0.50, a 90% confidence level and a ±8% margin of error. Based on these assumptions, the indicative sample size was about 106 respondents. The value of 0.50 was taken as a conservative value because it is the maximum variation when the proportion of the population is unknown.

The number of 106 was used as a reference target because the study was based on non-probability sampling and not a required number based on a probability sample. The researcher received 100 valid and usable responses and all 100 responses were used in the final analysis.

Thus, the above confidence level and margin of error should not be interpreted as a probability-based sampling error for the present study. Instead, they were applied only as guidelines to estimate a suitable approximate sample size. The results are therefore not necessarily representative of the experiences and perceptions of all 100 respondents who participated in the study, and are not intended to be statistically representative of the entire DNCC applicant population.

3.8 Data Sources

The primary and secondary sources of data were used in this study to gain a holistic view of the e-service delivery process of the applicants for birth registration at Dhaka North City Corporation.

3.8.1 Primary Data

The primary data were the main source of data used in this research. The data were collected on the field from the applicants of the birth registration who had experienced the Birth Registration Information System (BRIS). Respondents were asked about their understanding of the service quality, usability of the system, response, reliability, accessibility and overall satisfaction with the digital birth registration service using a structured questionnaire.

This use of primary data allowed the researcher to gather data that was relevant to the research goals and was contemporary, contextual, and of first-hand experience.

The respondents were recent users of the s y s t e m , so they had useful feedback on the performance of the current process for delivering e-services.

3.8.2 Secondary Data

The theoretical, conceptual and policy context of the study was developed using secondary data. Relevant information was obtained from a variety of credible sources, including:

- Peer-reviewed journal articles
- Academic books
- Government reports
- Policy documents

The Local Government Division (LGD) publishes the following:

Write a report about birth and death registration, from the registrar general office. Write a report regarding the birth/death register, from the registrar general office.

- United Nations (UN) publications
- World Bank reports
- OECD reports

Bangladesh Bureau of Statistics (BBS)

Theses and dissertations previously published.

- Conference proceedings
- Official government websites

The secondary data were mainly utilized in the preparation of the literature review, theoretical framework, and background of the study. They also facilitated an understanding of the findings, as they offered national and international experiences and viewpoints of e-governance, digital public service delivery, birth registration systems, citizen satisfaction, and service quality.

The use of primary and secondary data enhanced the quality of the research as a whole because the empirical findings were interpreted within a theoretical and policy context.

3.9 Data Collection Methods

The process of data collection is an important stage in the research process since the quality of data collected will directly affect the results of the research to be valid and reliable. Appropriate data collection techniques ensure that data collected is accurate and reflects the research objectives and offers meaningful evidence for analysis.

In this study, survey was used as a data collection technique. An in-depth questionnaire was handed over to the applicants of birth registration who had utilized the Birth Registration Information System (BRIS) of Dhaka North City Corporation.

The questionnaire was created after reading a wide range of literature and application of the theoretical constructs of the Technology Acceptance Model (TAM) and the SERVQUAL model. It was predominantly a closed-ended questionnaire with the scoring being on a 5-point Likert scale from Strongly Disagree (1) to Strongly Agree (5). This was a measurement scale for the respondents to indicate their perceptions towards the digital birth registration service.

There were two sections to the questionnaire. The first section gathered the demographic data of respondents such as age, gender, education level, occupation and/or previous experience with online government services. The second section evaluated the main study variables of:

- Perceived usefulness

How easy it is to use. Ease of use.

- Reliability
- Responsiveness
- Assurance
- Empathy
- Tangibility

The overall level of service quality of the delivery of electronic services.

- Citizen satisfaction

A test of the questions and the questionnaire was conducted with a few respondents prior to the main survey to ensure clarity, relevance and reliability of the

questions. Feedback received from the questionnaire was used to modify the wording, order, and format to make it better prior to the final survey.

The researcher personally gave out the questionnaires to selected birth registration service centers during the time of data collection. The participants were informed about the study and assured that it would be voluntary and the information provided was anonymous and for research only. Informed consent was obtained from all respondents and they were all included in the survey.

The questionnaires were completed and reviewed immediately on collection to check for incompleteness or inconsistencies. The data was then cleaned and verified and valid responses were coded and entered into Statistical Software for analysis.

3.10 Research Instrument

A research instrument is a device that is used systematically to gather data from the respondents from which the objectives of the study can be addressed. The study employed the quantitative research design thus a structured questionnaire was used as the major instrument to collect primary data. The questionnaire was developed after a thorough literature search of theories and models including Technology Acceptance Model (TAM) (Davis, 1989) and SERVQUAL (Parasuraman, Zenithal, & Berry, 1988).

The questionnaire was designed in a simple and understandable language so that people having different educational backgrounds understand the questions asked. It was comprised of mostly closed-ended questions rated on a five-point Likert scale, with the respondents responding to the following:

Scale	Interpretation
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The questionnaire was divided into three sections. The questionnaire consisted of three sections.

Section A: Demographic Information

This section captured the background information of the respondents such as:

- Gender
- Age
- Educational qualification
- Occupation
- Monthly income (optional)

Have been using online government services.

Experience in online birth registration.

The data on demographics were used to describe the characteristics of respondents and to understand the diversity of the study population.

In section B, the researcher gathers data on the independent variables. In Section B, the researcher collects data on independent variables.

This section captured the factors that affect the applicants' experience on digital birth registration services. The variables were selected based on the already existing theories and empirical studies.

The Technology Acceptance Model (TAM) was used to measure:

- Perceived Usefulness
- Perceived Ease of Use

The SERVQUAL model was used to measure:

- Reliability
- Responsiveness
- Assurance
- Empathy
- Tangibility

A number of statements derived from the validated instruments from previous studies were used to measure each construct. The dependent variable is in Section Cather dependent variable is listed in Section C. The last section analyzed the overall experience of e-service delivery and citizen's satisfaction from searching for birth registration services through online platforms by Dhaka North City Corporation. The

respondents were asked to rate their satisfaction with the following statements: Overall experience with the BRIS platform and quality of services received.

The questionnaire was examined by academic experts and pretested with a small number of respondents to check the clarity, relevance and reliability of the questionnaire prior to the final survey. A few modifications were made to the instrument according to the results of the pilot testing to improve the instrument.

3.11 Operationalization of Variables

Operationalization is the translation of theoretical concepts into measurable variables. It allows for the measurement of abstract concepts in an empirical manner with specific indicators. According to the theory being applied, the independent variable in this research are the factors that influence the development of students' abilities, while the dependent variable is the ability of students to develop.

Table 3.1 Operationalization of Variables

Variable	Construct	Indicators	Measurement Scale	Source
Perceived Usefulness (PU)	Degree to which applicants believe BRIS improves service efficiency	Faster service, convenience, effectiveness, reduced paperwork, time saving	5-point Likert Scale	Davis (1989)
Perceived Ease of Use (PEOU)	Degree to which BRIS is easy to understand and operate	Easy navigation, simple procedures, understandable instructions, user-friendly interface	5-point Likert Scale	Davis (1989)
Reliability	Ability to provide dependable and accurate services	Accurate information, consistent service, dependable system, error-free processing	5-point Likert Scale	Parasuraman et al. (1988)
Responsiveness	Promptness of service delivery	Timely response, quick processing, staff willingness, application status updates	5-point Likert Scale	Parasuraman et al. (1988)
Assurance	Confidence and trust created by service providers	Professional behavior, competence, privacy protection, trustworthiness	5-point Likert Scale	Parasuraman et al. (1988)
Empathy	Individual attention	Courtesy, communication, personalized support,	5-point Likert Scale	Parasuraman et al. (1988)

Variable	Construct	Indicators	Measurement Scale	Source
	provided to applicants	understanding applicants' needs		
Tangibility	Physical and technological aspects of service delivery	Website appearance, system quality, ICT facilities, physical environment	5-point Likert Scale	Parasuraman et al. (1988)
E-Service Delivery Experience	Applicants' perception of the overall digital service experience	Accessibility, efficiency, convenience, satisfaction, overall experience	5-point Likert Scale	Developed from TAM & SERVQUAL
Citizen Satisfaction	Overall satisfaction with birth registration services	Overall satisfaction, willingness to reuse, recommendation, confidence in services	5-point Likert Scale	Oliver (1980); Parasuraman et al. (1988)

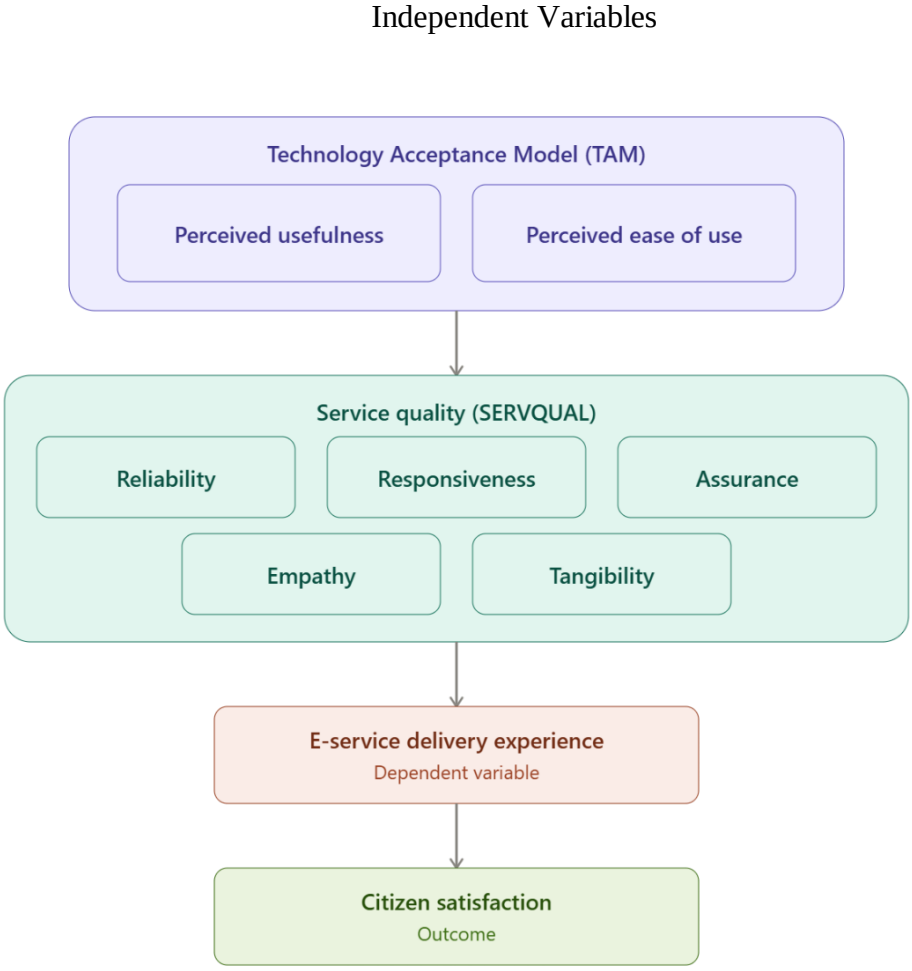


Figure 3.2 ***Operational Model of the Study***

Source: Developed by the Researcher based on Davis (1989) and Parasuraman et al. (1988).

3.12 Data Analysis Techniques

Descriptive statistical techniques were used in analyzing the data obtained from the structured questionnaire. The analysis was aimed to give a clear and systematic description of the respondents' characteristics, experiences, perception and overall satisfaction on the birth registration e-services provided by Dhaka North City Corporation (DNCC).

The socio-demographic details of the respondents like gender, age, educational qualification, occupation and other background information were summarized using frequencies and percentages. These measures were also applied to categorical items on applicants' experiences with the birth registration process.

Second, the mean and standard deviations were computed for the items on the Likert-scale questionnaire. General level of respondents' perceptions on Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Tangibility, Reliability, Responsiveness, Assurance, Empathy, Payment and Cost Experience, Governance and Administrative Experience, and Citizen Satisfaction were identified using mean scores.

The mean scores were used to identify whether the respondents had positive, moderate or negative perceptions about various aspects of the e-service delivery experience. The standard deviation was used to show how widely the respondents' responses deviated from the mean.

Results were described in tables, frequencies, percentages, mean scores and standard deviations as appropriate. The findings were then analyzed based on the research objectives and research questions of the study. Special focus was placed in identifying the key strengths, weaknesses, challenges and areas for improvement in the delivery of birth registration e-services in DNCC.

Because the study is descriptive in nature, it does not try to draw causal conclusions or make statistical predictions of citizen satisfaction. Thus, the study did not use Pearson correlation analysis, multiple regression analysis, and regression modelling.

3.12.1 Data Screening

The data set was checked for missing answers, partial answers, coding errors, and extreme values before statistical analysis. To assure data quality, questionnaires with significant missing information were excluded from the final analysis.

3.12.2 Descriptive Statistics

Demographic characteristics of the respondents and the description of the major study variables were summarized using descriptive statistics.

The following statistical measures were used:

- Frequency
- Percentage
- Mean
- Standard Deviation

Results are presented in tables and/or figures as appropriate.

3.12.3 Reliability Analysis

Cronbach's Alpha was determined for the internal consistency of the questionnaire. According to Hair et al. (2019):

Cronbach's Alpha	Reliability
0.90 and above	Excellent
0.80–0.89	Good
0.70–0.79	Acceptable
Below 0.70	Requires improvement

The Cronbach Alpha value of 0.70 or above was accepted for this study.

3.13 Key Informant Interviews (KII)

To complement the quantitative survey findings, **five Key Informant Interviews (KIIs)** were conducted with individuals who had relevant knowledge and experience regarding the delivery and administration of birth registration services

through the Birth Registration Information System (BRIS) at Dhaka North City Corporation (DNCC). The KIIs were included to obtain deeper qualitative insights into the applicants' experiences and to provide contextual explanations for the quantitative findings.

The key informants were selected purposively based on their knowledge, experience, and involvement in birth registration service delivery. A **semi-structured interview approach** was used, allowing the researcher to follow a set of predetermined topics while also allowing informants to elaborate on issues that emerged during the interviews.

The interviews focused on major aspects of e-service delivery, including **ease of access, ease of use, reliability, responsiveness, assurance, empathy, tangibility, administrative procedures, and challenges faced in delivering birth registration services**. The qualitative information obtained from the interviews was analyzed thematically. Similar responses were grouped into common themes and used to complement and contextualize the quantitative findings presented in Chapter 5.

The participation of the informants was voluntary, and confidentiality and anonymity were maintained in reporting the findings.

CHAPTER FOUR

OVERVIEW OF BIRTH REGISTRATION E-SERVICE IN DNCC

OVERVIEW OF BIRTH REGISTRATION E-SERVICE IN DNCC

4.1 Introduction

There has been a significant evolution in the nature of public service delivery worldwide as a result of the ‘information and communications revolution' (ICT). Electronic service delivery mechanism has been embraced by most governments to enhance service efficiency, transparency and accountability, and accessibility. Bangladesh has also embarked upon a journey of digital transformation under the Digital Bangladesh and Smart Bangladesh programs, with several public services being slowly digitized, such as birth registration.

Local governments or institutions provide a wide variety of public services, among which, birth registration is one of the most basic public services. It provides a legal identity to a person and is the basis for enjoying education, health, passports, national identity documents, social security and safety net programs, banking services and inheritance rights. Being its importance, the Government of Bangladesh incorporated a digital Birth Registration Information System (BRIS) to revamp the conventional civil registration services and accessibility of services.

Among the most important institutions of urban local government in Bangladesh, Dhaka North City Corporation (DNCC) is known for its contribution in the execution and administration of birth registration activities for a massive urban population. The aspects of the applicants' experience dealing with the digital birth registration of DNCC give useful lessons about the successes and weaknesses of e-governance projects, specifically in urban Bangladesh. This chapter offers a brief discussion about institutional arrangements, operational processes, service distribution methods, and challenges of the birth registration electronic service that DNCC offers.

4.2 Profile of Dhaka North City

Corporation in 2011 Dhaka City Corporation was divided into Dhaka North City Corporation (DNCC) and Dhaka South City Corporation (DSCC) as a result of which DNCC was born. The division sought to increase the efficiency of administration and to enable better urban governance due to the rapid growth of urban areas and population. The main functions of DNCC involve provision of various forms of services that are provided to the municipality, such as waste management, road maintenance, public health services, trade licensing, environmental management, taxation, registering births and deaths and community welfare programs. It functions via the Local Government Division in the Ministry of Local Government, Rural Development and Cooperatives. There are 54 wards in the jurisdiction of DNCC and includes major urban areas such as Uttara, Mohammadpur, Palabian, Mirpur, Gulshan, Banani, Badda, Khilkhet, and Tejgaon. Based on the latest population figures, almost 6 million people are served by the authority of the DNCC, which is one of the biggest local government bodies in Bangladesh. With the large population and rising demand for public services, DNCC is one of key local governments adopting digital service delivery mechanisms. One of the widely-used citizen facing digital services offered within the corporation is the birth registration service.

4.3 Birth Registration Information System (BRIS)

The official government information system Bangladesh has to register, manage, store and verify birth and death records is the Birth and Death Registration Information System (BDRIS), now being called the Birth Registration Information System (BRIS). Office of Registrar General, in the Local Government Division, administers the system. It is a unified national database of city corporations, municipalities, union parishads, cantonment board and Bangladeshi missions in the foreign countries. BRIS aims to achieve the following: Editors: How it works in the country and the necessity for it to be centralized. Editors: How does it work in a country and the need for it to be centralized.

- Keeping accurate and consistent records;
- Reducing damage and loss; and to enable on-line application and verification;

• Developing more efficient and accessible services;

• Having support for integration with other government databases.

A birth registration number is generated in the system, offering an identity document useful in an individual's life cycle, and is unique for each person.

A web-based birth registration system is used. Online Birth Registration system is used. The digital birth registration system under DNCC involves multiple inter-related steps, both on the online side and on the administrative side.

4.4 Online Birth Registration Process

The process to update online birth records. The electronic registration at birth (ERb) under DNCC consist of several connected steps, both of submitting and administrative verification. Application to be submitted online

Step 1: submission of an online application Applicants applies on the birth registration portal on the national level where they type details regarding:

• Child's name;

• Date of birth;

• Place of birth;

• Parents' information;

• Matrimonial status; and

• Supporting documents.

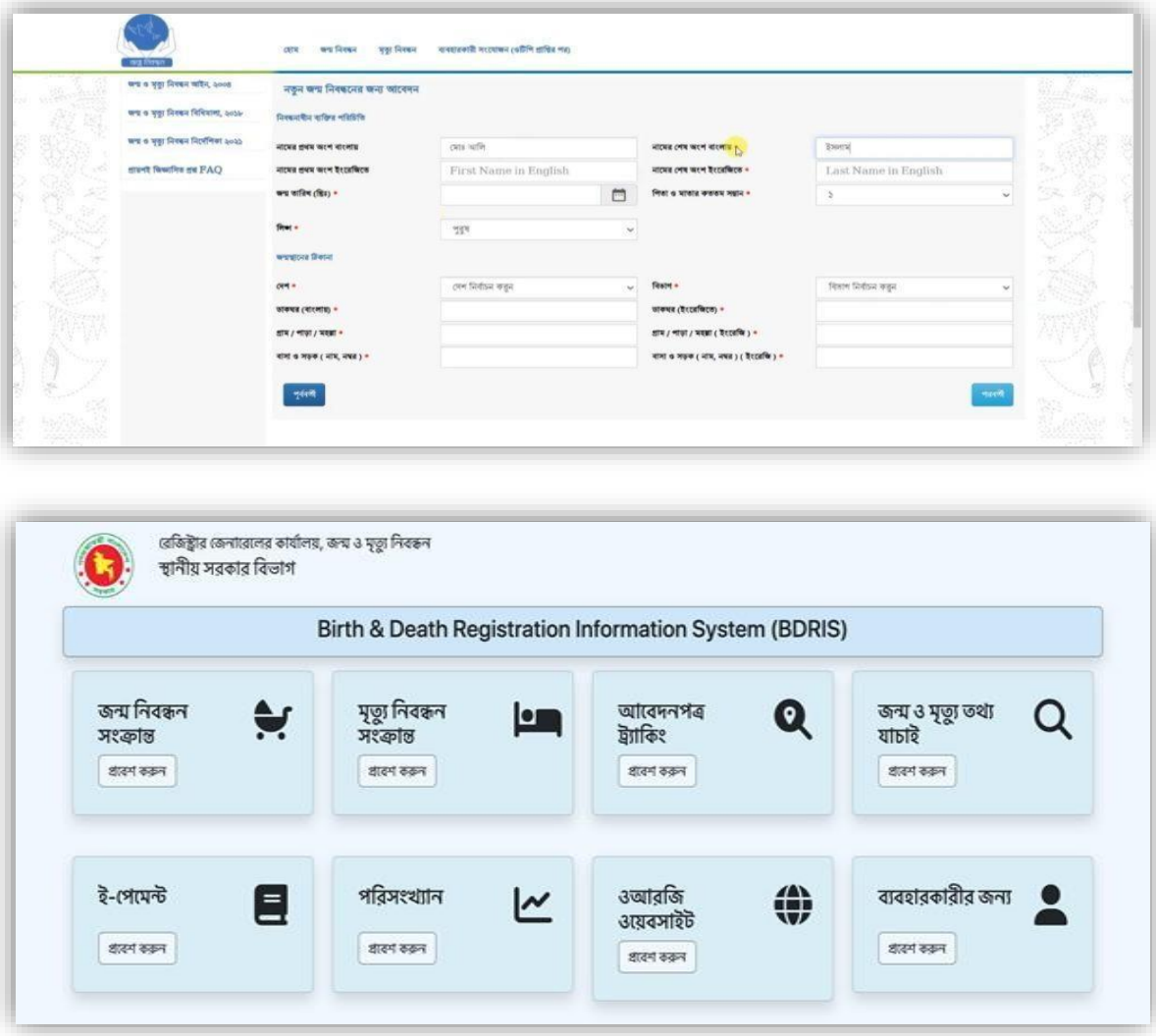


Figure 4.1 Online Birth Registration Application Portal

Source: Official Birth and Death Registration Information System (BDRIS), Government of Bangladesh.

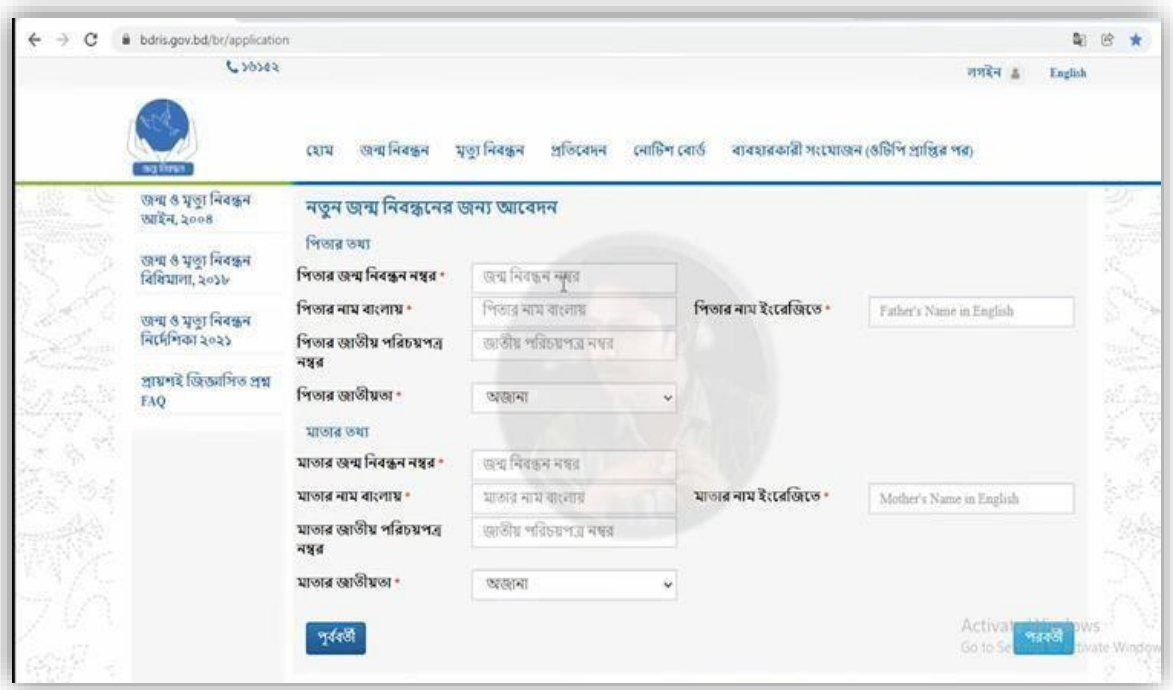


Figure 4.2: Online

Source: Official Birth and Death Registration Information System (BDRIS), Government of Bangladesh.

Figure 4.3: Birth Registration Certificate



Government of the People's Republic of Bangladesh
Office of the Registrar, Birth and Death Registration
Dncc Ward-13
Dhaka North City Corporation, Dhaka
(Rule 9, 10)

জন্ম নিবন্ধন সনদ / Birth Registration Certificate

Date of Registration: 16/10/2012
Birth Registration Number: 19832692513029247
Date of Issuance: 16/10/2012

Date of Birth :
In Word :
Sex : Male

নাম : Name :
মাতা : Mother :
মাতার জাতীয়তা : বাংলাদেশী Nationality : Bangladeshi
পিতা : Father :
পিতার জাতীয়তা : বাংলাদেশী Nationality : Bangladeshi
জন্মস্থান : ঢাকা, বাংলাদেশ Place of Birth : Dhaka, Bangladesh
স্থায়ী ঠিকানা : ৬১৪, মধ্য মনিপুর, মিরপুর-১২১৬, ডিএনসিসি ওয়ার্ড ১৩, ঢাকা
Permanent Address : 614, Middle Monipur, Mirpur-1216, Dncc Ward 13, Dhaka

02.01.2024
Seal & Signature
Assistant to Registrar

02.07.2
Seal & Signature
Registrar

Source: Official Birth and Death Registration Information System (BDRIS), Government of Bangladesh.

The online portal provides a better option for an applicant to electronically submit information to the registration office without having to travel to the office initially, lowering the administrative burden and overall travel expenses.

In Step 1, Supporting Documents are submitted.

In Step 2, it is the turn to submit Supporting Documents. Applicants are required to submit supporting documents such as: • Pupils' Class Teacher's report card; and All existing parent birth certificates (if applicable); Vaccination card or hospital discharge certificate; Rental assessment / proof of address.

Step 3: Verification Process The application will then be sent electronically to DNCC for verification to the respective ward. The documents prepared are verified by officials and verified information of the documents submitted is confirmed.

Step 4: Approval and Registration If the verification is successful, the application is approved and added to the national data base.

Step 5: Certificate Issuance The applicant is issued an official birth certificate with a specific birth certificate number and electronic signature mechanism.

Step 6: Online Verification The citizens can check the authenticity of the certificates by using the online facility with the registration no. and Date of Birth. Though the online applications, the applicants still approach office physically to cross check, correct their documents and to pick up the certificates.

4.5 Stakeholders Involved in Service Delivery

There are a number of institutions and actors involved in delivering birth registration. Office of the Registrar General in charge of national database management and technical administration. Local Government Division Offers policy directions and

institutional control. Dhaka North City Corporation His duties as the local registering authority include both approval and the issuance of certificates. Ward Offices & Registration Officials Do field-level verification and processing of application. Citizens and Applicants Play a leading role in the benefits and use of the service. Hospitals and Health Institutions Present birth related data and documentation. Educational Institutions Accept birth certificates for student enrollment. ICT Service Providers and Computer Service Centers Support citizens without being able to use digital systems on their own.

4.6 Existing Challenges in E-Service Delivery

Awareness on challenges already faced in E-Service Delivery Although there has been substantial progress in digitalization, there are a number of t a c k l e s to improving the efficiency of service delivery. Technical Issues and Downtime with Servers. Technical Difficulties and Server Down Time. Applicants often have to struggle with slow servers, temporary system failures, which make the processing of applications delayed. Administrative Delays Sometimes, much longer time is needed for verification and confirmation for official reasons of workload stress. Data Entry Errors in names, birthdate, or parent information is a challenge to applicants and typically involves lengthy correction procedures. Multiple Verification Requirements Potential buyers often may be asked to provide further paperwork and to visit the offices again. Digital Literacy Constraints Low digital skills among many citizens necessitates the presence of an intermediary, cyber café, ICT service provider etc. Accountability Challenges Sometimes there is no communication on status of the app that leads to dissatisfaction of applicant. Governance and Coordination Issues There needs to be co-ordination between several institutions for the effective delivery of the services and loss of communication between the agencies may have effects on processing time.

4.7 Chapter Summary

In this chapter, it was discussed that the institutional and operational framework of birth registration e-services in DNCC can be discussed in an overview manner. The organizational profile of DNCC, the Birth Registration Information system, the web application process, the engagement of stakeholders and some of the greatest service

delivery challenges were discussed. With the improvements in the accessibility and efficiency of services brought on by the digitalization, citizens' experiences with the birth registration services remain affected by problems of infrastructure, organization, administrative capacity and digital inclusion as evidenced in the chapter. Next, in the chapter found in this Guide, the findings of the empirical research are presented and the conceptual framework along with the construction of the questionnaire developed in previous chapters are discussed in terms of the perceptions and experiences of the birth registration applicants.

Chapter Five

FINDINGS AND ANALYSIS

FINDINGS AND ANALYSIS

5.1 Introduction

The results and description of the survey which was conducted among the applicants of birth registration in the birth registration e-services of Dhaka North City Corporation (DNCC) are presented in this chapter. The analysis is based on 100 valid responses and covers the socio-demographic characteristics of the respondents, their perceived usefulness, ease of use, service quality, payment and cost experience, governance and administrative experience, difficulties encountered in the registration process and overall citizen satisfaction.

Frequencies, percentages, means and standard deviations were used to analyze the collected data. The results are presented in tabular and graphical form and explained based on the research goals and research questions of the study.

5.2 Socio-Demographic Characteristics of Respondents

The socio-demographic data of respondents gives a detailed account of the people who were involved in this study. Knowing about the socio-demographic profile of respondents is crucial as their personal attributes (gender, age, education, occupation, etc.) can play a significant role in how they use digital technologies, how much they know about digital literacy, their perception of public services and their satisfaction with e-government initiatives. Prior research on e-government adoption has consistently shown that demographic characteristics have an impact on citizens' willingness and capacity to effectively use e-government services. These characteristics therefore provide useful background information for the consideration of applicants experiences with the Birth Registration Information System (BRIS).

The BRI was established to streamline the birth registration process and enhance access to services by digitizing the process. The effectiveness of these digital public services are not solely dependent on the technological infrastructure but on the attributes of the citizens who are using the service. For instance, younger users tend to be more aware and comfortable with online platforms, whereas higher education levels

may lead to fewer challenges in using online systems. Similarly, the internet access, ownership of digital devices, and frequency of contact with government services is frequently affected by occupational status. Therefore, by analyzing the demographic profile of the respondents, this study can assess if the BRIS platform is accessible to a wide range of users and if user groups are equally distributed.

The socio-demographic data used in this study are gender, age, educational qualification and occupation. The variables were chosen due to their frequent use in research examining the evaluation of digital government services and citizens' satisfaction. Descriptive statistical techniques were used in analyzing the data; the descriptive statistics used were frequencies and percentages, which present the characteristics of the respondents clearly and systematically. The results are displayed in tables and graphs, and then elaborated upon to explain the meaning of each of the demographic variables.

The socio-demographic analysis is used as a backdrop to the rest of the data to help place the data contained in the following questions about the applicant's experience with the service, the quality of the service, challenges that are faced while using the service and the overall satisfaction with the service. The demographic profile also allows comparisons to be made with previous studies done in Bangladesh and other developing countries on the uptake of e-government services.

5.2.1 Gender Distribution of Respondents

Gender is one of the most significant demographic factors taken into account while conducting research in social science and public administration as it is likely to affect access to information, adoption of technology and utilization of public services. Gender differences can influence confidence in digital platforms, digital literacy, and perceptions of the quality of the digital government services in the context of digital government services. The gender composition of the respondents is an examination that will help to ascertain whether the Birth Registration Information System is equally accessible to all users of the information system in society as well as whether the examination indicates the different user experience.

The Government of Bangladesh has put a strong focus on inclusive access to digital public services in the context of Digital Bangladesh and Smart Bangladesh. Birth Registration is one of the basic civil registration services that is applicable to all citizens, irrespective of gender. However, in practice, applications are typically made by the parents or legal guardians of the children, so it's essential to understand who is more involved in the registration process, by gender. A balanced gender distribution helps to increase the representativeness of the study, and the credibility of the research results.

Gender was requested in the survey when asked, the respondents were asked to indicate their gender. Frequency and percentage distributions were used to analyses the responses and give an overview of the gender composition of the sample. The results are shown in Table 5.1.

Table 5.1 Gender Distribution of Respondents (N = 100)

Gender	Frequency	Percentage (%)
Female	56	56.0
Male	33	33.0
Prefer not to say	11	11.0
Total	100	100.0

Source: Field Survey, 2026.

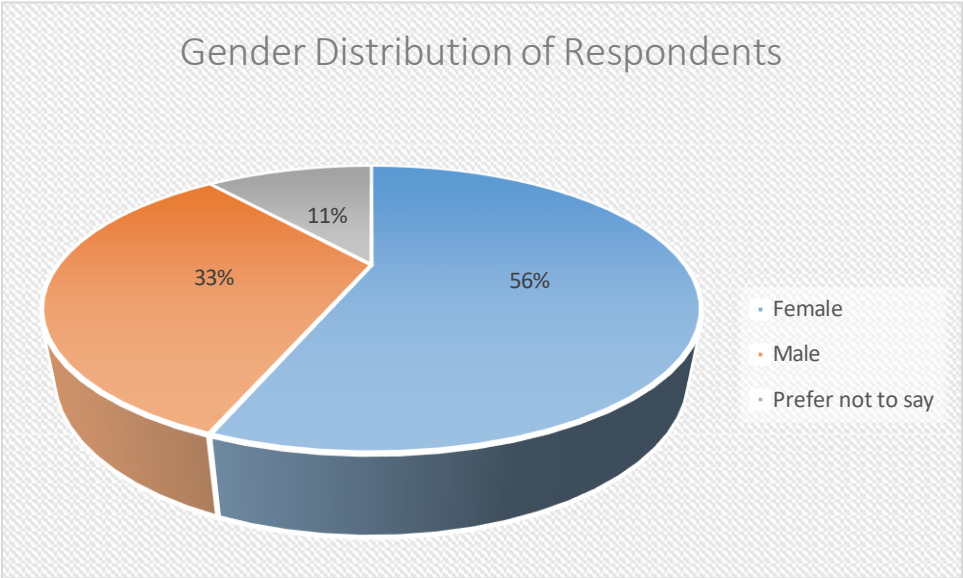


Figure 5.1 Gender Distribution

Interpretation and Discussion

As shown in Table 5.1, the majority of respondents in this study were female (55.0%, n = 55). 33.0% (n = 33) of the respondents were male, and 11.0% (n = 11) of the respondents did not indicate gender.

The relatively higher proportion of females, suggests that the birth registration process was active among women during the period of study. This discovery could be linked to the significant contribution of mothers and female guardians in turn in turn-out birth registration documents and access to public services for children. It also shows that women are also more engaged in the use of digital government services, reflecting the government's efforts in digital inclusion and enhancing public service delivery via digital channels in Bangladesh.

A significant number of male respondents were also identified indicating that the Birth Registration Information System is being used by both men and women. Male and female respondents also enable the study to be more representative, as it includes the views of different groups of service users. This diversity is essential because some prior research has indicated that gender might affect perceptions of service quality, technology acceptance and satisfaction with e-government services.

The results of privacy and voluntary participation were evidenced by the presence of respondents who did not want to reveal their gender. This is a smaller proportion of the sample, but does provide for good research practice and ethical practice in relation to confidentiality and respondent autonomy.

The results show that the Birth Registration Information System has not only penetrated one demographic group but has also spread across various groups of people from a digital public administration perspective. The proportion of male and female respondents is relatively even, thus indicating that online birth registration service is generally acceptable to both genders. This is in line with the vision of Bangladesh's digital governance programs, which aim for equal access to basic public services using information and communication technology.

In general, the gender distribution is an important basis for explaining the following results of this study. As respondents came from a variety of gender groups, the analysis of the experiences, service quality, challenges and citizen satisfaction of applicants reported in the following sections can be considered as a cross section of user views. The demographic diversity increases the authenticity of the study and the applicability of results in the study context that applies the Birth Registration Information System in Dhaka North City Corporation.

5.2.2 Age Distribution of Respondents

Age is a socio-demographic factor which affects citizens' use of digital technology, their platform access to public services and their satisfaction with e-government initiatives. Studies on digital governance also frequently highlight age as a major determinant on technology acceptance, with various age groups having different levels of digital literacy and familiarity with technology, and using the internet differently. Overall, younger people are more likely to have contact with digital technologies and thus, to be more comfortable with online government platforms. Older adults, on the other hand, can encounter issues with technology, access of the Internet, and their trust in electronic service delivery systems.

It is noteworthy to mention the age-wise distribution of citizens availed the Birth Registration Information System (BRIS) in the context of digital transformation programmer in Bangladesh. The registration of birth is an important public service and the people of different socio-economic status have requirement for it. For newborn children, birth registration is greatly facilitated by their parents/legal guardians. So, the age distribution of applicants may provide some interesting data on the portion of the population that is most engaged in access to digital government services.

The age distribution among the interviewees also provides information on the ability of the BRIS platform to reach all age groups of citizens. If there is a high proportion of people in one age group, this may indicate unequal access to digital public services. On the other hand, the involvement of several age groups indicates high inclusiveness of the online birth registration system and its ability to assist with inclusive public service delivery.

The respondents were classified as per age into five age groups: Below 20 years, 20-29 years, 30-39 years, 40-49 years and 50 years and above. Frequency and percentages were used to find descriptive statistics for each of the categories. The solutions to the exercises are provided in Table 5.2.

5.2.3 Age Distribution

Table 5.2 Age Distribution of Respondents (N = 100)

Age Group	Frequency	Percentage (%)
Below 20 years	4	4.0
20–29 years	37	37.0
30–39 years	24	24.0
40–49 years	28	28.0
50 years and above	7	7.0
Total	100	100.0

Source: Computed from Field Survey, 2026.

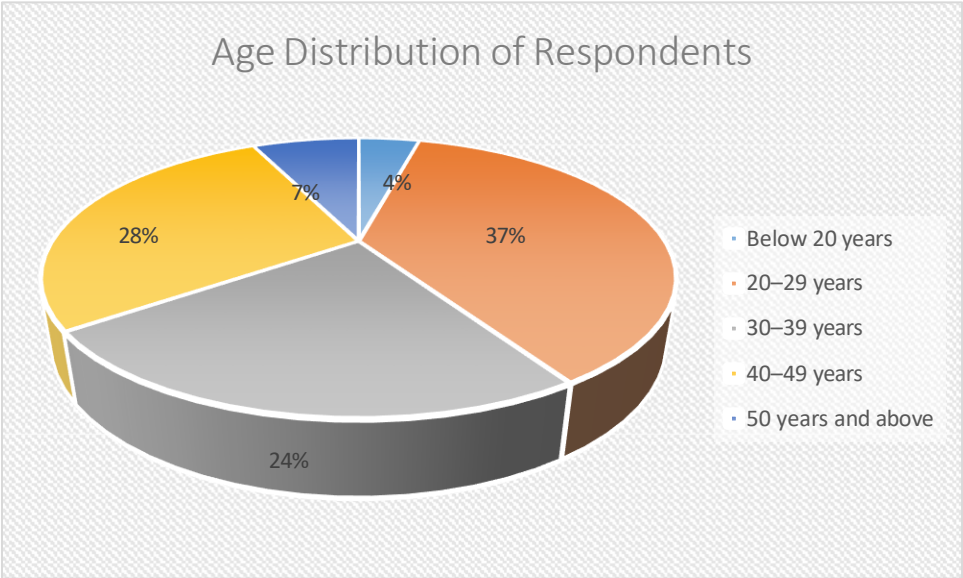


Figure 5.2 Age Distribution (Pie Chart)

Interpretation and Discussion

The age distribution of the respondents who took part in this study is presented in Table 5.2. The results show that the respondents' age distribution was in five age groups, which included people from different generations involved in the Birth Registration Information System.

The 20-29 age group had the highest percentage (37.0%, n = 37) of the respondents. This implies that the online birth registration service is used mainly by the young adults. This age group is more likely to be aware of digital technologies, internet-based services and smartphone applications. Digital literacy, at a higher level, may be a factor in their greater confidence to use the BRIS platform and complete online registration process with little to no difficulty.

The 40-49 age group was the next largest group with 28.0% (n = 28) of the respondents. The finding proves that middle-aged adults go to the online birth registration service to register births as well. Within this age group are many who are parents or guardians, who are tasked with registering children, or other family members' births. Their involvement demonstrates that the BRIS platform is not only for tech-savvy younger people but can also be used by older, more tech-savvy citizens.

24.0% (n = 24) of the sample consisted of respondents aged 30–39 years. This age category includes another large percentage of BRIS users, and indicates the involvement of working-age adults. People in this age group typically have work and family commitments and may specifically appreciate the ease of access of online public services, which eliminate the need to visit a library or service center for certain services, reducing the amount of time needed for travel, paperwork and administrative delays.

7.0% (n = 7) of all respondents were 50 years and older. This rate is relatively low, but shows that older adults are using digital government services as well. But earlier research indicates that elderly people might be more likely to encounter difficulties with digital literacy, Internet access, and their trust in electronic platforms. Therefore, it is crucial to continue to ensure that user friendly interfaces, streamlined application processes and easy to access customer support do not exclude older people from access to digital public services.

The youngest age category reported (Below 20 years, n = 4) was the least represented of all the age categories. This outcome is reasonable since it is common for parents or legal guardians to file the birth registration form on behalf of the child. However, this age band suggests that in the registration process, some younger people may have helped their family members or represented applicants.

The age distribution shows, overall, that BRIS has been able to build up users from a wide age range. The age breakdown of respondents shows that the system is used by a concentrated group in the 20-49 age range, suggesting that the system is primarily used by economically active adults that are engaged in administration related to the household and family. This is in line with the goals of the Digital Government efforts in Bangladesh, which strive to deliver digitized, efficient, and citizen-friendly public services.

These findings also validate the theoretical framework as discussed in Chapter Two. Based on the Technology Acceptance Model (TAM), people with more technological familiarity have a higher tendency to think that online systems are useful and easy to use. This is likely to account for the overall positive attitudes of the respondents to the BRIS platform in the following sections of this chapter. Meanwhile, the fact that older people are included, points to the need to create accessible services

for the digital age that are inclusive to citizens with different degrees of digital competence.

Overall, age distribution of the respondents shows that BRI is used by citizens of different age groups, with young and middle age adults being the most common users. The insights indicate that digital public service programs in Bangladesh have come a long way in increasing access to critical government services, and highlight the ongoing importance of user friendly system design, digital literacy support and inclusively providing digital public services for all age groups.

5.2.4 Educational Qualification of Respondents

One of the most important socio-demographic variables in e-government related study is educational qualification. Education improves the knowledge, analytical and information and communication technologies (ICT) literacy and confidence of individuals. Thus, people with better education generally have the ability to better comprehend the online processes, navigate online platforms, and better use electronic government services. However, those with less education might be more at risk of not being able to access digital services, because they might not be technologically adept or have a high level of internet literacy or lack knowledge of online systems.

The government's Digital Bangladesh and Smart Bangladesh programs have led to a substantial increase of digital public services in Bangladesh, such as birth registration through an online platform. The successful use of such services, however, will not only require technological infrastructure, but will also require citizens' educational background. It is important to note, therefore, that the educational profile of respondents needs to be understood to assess the accessibility of the Birth Registration Information System (BRIS) for citizens with varying levels of education and the effect of education on the use of digital public services.

As discussed in Chapter Two, previous empirical research has always showed a positive correlation between educational qualification and technology acceptance. Rather, those with higher levels of education tend to be more receptive to innovations in the digital space due to their tendency to view online systems as being easier to

understand and more useful. Improving the level of education also drives awareness of civil registration's importance, and therefore its use of online birth registration services.

The highest education qualification participants had attained was queried to explore respondents' educational backgrounds. The answers were grouped into six categories – No Formal Education, Primary Education, Secondary Education, Higher Secondary Education, Bachelor's Degree, and Master's Degree or Above. Descriptive statistical techniques were used to calculate the percentages and frequency distribution of the responses by these categories of education.

The results are presented in Table 5.3.

Table 5.3 Educational Qualification of Respondents (N = 100)

Educational Qualification	Frequency	Percentage (%)
No formal education	5	5.0
Primary	3	3.0
Secondary	3	3.0
Higher Secondary	11	11.0
Bachelor's Degree	44	44.0
Master's Degree or Above	34	34.0
Total	100	100.0

Table 5.3 shows the educational qualifications of the respondents in this study. The figures show that the respondents had a wide educational level but the majority had high level education.

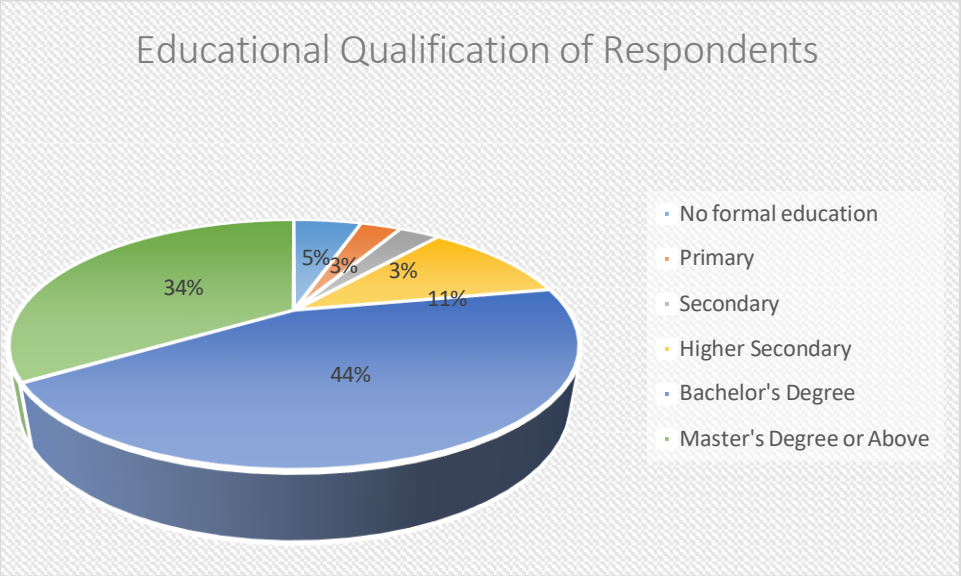


Figure 5.3 Educational Qualification (Pie Chart)

Interpretation and Discussion

The highest number of respondents (44.0%, n = 44) had a Bachelor's degree, which was the most abundant educational group in the study. The finding implies that the highest proportion of users of the Birth Registration Information System is the university graduates. There is a high level of digital literacy and familiarity with online platforms among people with bachelor's-level education. People with bachelor's-level education are generally more technologically literate and more familiar with online platforms, and have better access to technological resources. These attributes are likely to help them complete birth registration online with efficiency and self-sufficiency. These attributes are likely to facilitate their ability to efficiently and independently complete birth registration procedures online.

The second largest group was people who had a Master's degree or more, 34.0% (n = 34). The high rate of participation by postgraduates provides an insight into the high level of education amongst citizens who are using digital government services. Their involvement is an indicator of the increasing trust in online service provision and acceptance of online governance programs by the educated population.

Higher Secondary (3.9%) was the second largest category with 11.0% (n = 11) of the respondents. While the number of individuals with intermediate educational qualifications is less than that of those with a university education, it suggests that people with intermediate education levels can also access and take advantage of the online birth registration system. The discovery indicates that the BRIS platform is not only available for highly educated people but it can be used by citizens with low education.

There was a relatively low percentage with No Formal Education (5.0%), Primary Education (3.0%) and Secondary Education (3.0%). The limited participation of these groups may be due to barriers that are often linked to lower education levels such as low digital literacy, access to computers and smartphones, and lack of confidence in using online government services. The results are in line with the previous studies mentioned in Chapter Two which highlight that educational level is a key determinant of the use of e-government services by citizens.

The educational level of the respondents participating in this survey is comparatively low, but they participated in the survey confirming that the Birth Registration Information System is accessible to citizens with different educational qualifications. Those with less education may have had family, community or government representatives help them complete the online registration. This is a clear indication of the collaboration of public service delivery in Bangladesh and the need to have support mechanism for vulnerable users.

Considering digital governance, the education profile of the respondents shows that the BRIS platform has found a large acceptance among the educated citizens. However, the overwhelming majority of respondents with higher education (such as the bachelor's and master's degrees) indicates that digital literacy is a significant enabler of access to online public services. The results confirm the Technology Acceptance Model (TAM) which suggests that people with higher knowledge and technological competence are more inclined to think that a digital system is useful and easy to use.

In addition, the results are consistent with the SERVQUAL approach mentioned in Chapter Two. Educated respondents tend to be more adept at measuring aspects of service quality (e.g., reliability, responsiveness, assurance, empathy, and tangibility) due to their more significant experience of using digital platforms. Thus, them

perceptions are invaluable to evaluate the effectiveness of the Birth Registration Information System.

In addition, the results have policy implications. While most users seem to have relatively high levels of education, the government should continue to carry out measures for the enhancement of citizens' digital literacy who have lower educational attainment. Making websites easier to navigate, providing instructions in multiple languages, adding visual directions, making sites mobile-friendly, and implementing community-based birth registration support programs can help ensure that birth registration services are accessible to all individuals, particularly those with limited education.

Overall, the education distribution illustrates that the BRI system is being used by educated citizens and is accessible to those with different levels of education. This shows that the efforts on Digital Public Services (DPS) in Bangladesh have been good progress towards inclusive service delivery. However, ongoing endeavors to eliminate educational tackles and increase digital inclusion will further bolster citizens' participation and improve the quality and results of e-government services.

5.2.5 Occupation of Respondents

Occupational is an important socio-demographic variable because it is related to respondents' socio-economic status, level of economic activity and the level of interaction with public institutions. Occupations have been studied in relation to digital public service delivery and e-government in research areas related to digital literacy, access to information and communication technologies (ICTs), internet availability and familiarity with online administrative procedures. Thus, it is important to grasp the occupational profile of respondents and assess if digital public services are being accessed by various parts of society.

The Birth Registration Information System (BRIS) has been developed to give an efficient, transparent, citizen-friendly on-line service that is available to all people irrespective of their working background. The birth registration is a public service which is required by all citizens, so students, staff, businessperson, homemakers, and those from other occupational groups are welcome to register their births. An analysis

of what the respondents are doing will be used to identify whether the digital birth registration system has broad social inclusion and whether it has reached citizens from various economic backgrounds.

The findings from previous studies mentioned in Chapter Two indicate that occupation can have an impact on not only adoption but the perception of digital government services as well. People in professional and private sector j t e n d to have more access to computers and to internet and online technologies, and are more comfortable with using on-line services. In the same way, students are seen as early adopters of digital technologies due to their frequent use of a smartphone, computers, and learning platforms online. On the other hand, homemakers and self-employed people can have different experiences in the digital world, depending on their access to technology and education. For this reason, we examine the characteristics of the occupations in order to understand the difference in the applicants' experience with the BRIS platform.

This study included respondents who were requested to report the occupation they engage in the most. Occupational classifications were Student, Private Employee, Homemaker, Businessperson and Government Employee. The occupational profile of the respondents was presented in the form of frequency and percentage distribution.

The findings are presented in Table 5.4.

Table 5.4 Occupation of Respondents (N = 100)

Occupation	Frequency	Percentage (%)
Student	37	37.0
Private Employee	22	22.0
Homemaker	18	18.0
Business	12	12.0
Government Employee	11	11.0
Total	100	100.0

Table 5.4 shows the occupational features of the respondents who took this study. The findings showed that the respondents had different profiles in terms of their occupation, suggesting a wide range of citizens using the Birth Registration Information System in Dhaka North City Corporation.

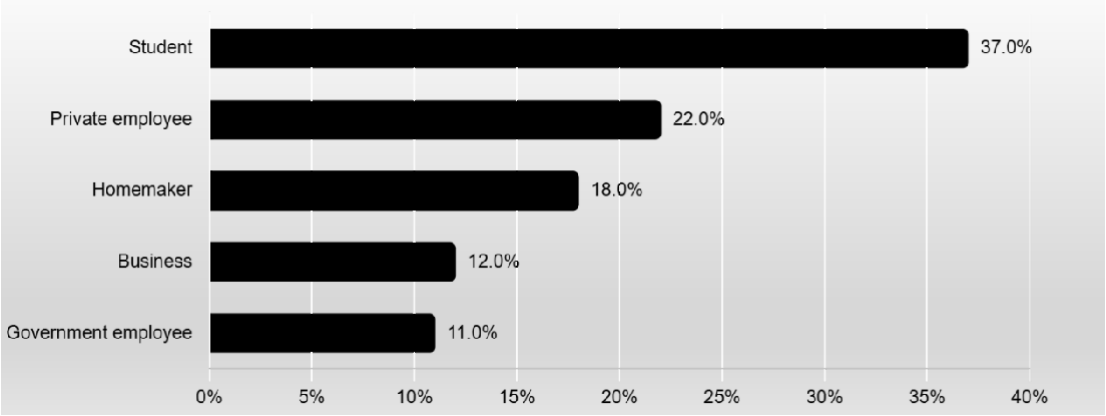


Figure 5.4 Occupation of respondent (Pie Chart)

5.2.6 Interpretation and Discussion

The results show that students were the biggest occupational group, accounting for 37.0% (n = 37) of the respondents. This means that students use the BRIS platform the most actively. The high participation rates might be explained by their higher degree of digital literacy, regular use of internet-based technologies, and knowledge of online applications. The majority of students are more comfortable in navigating digital platforms, and thus more likely to be able to access electronic government services independently. Students can also support family members to fill birth registration applications online in some situations.

Private-sector employees represented the second largest occupational group with 22.0% (n = 22) of respondents. People who work in private organizations are usually in frequent contact with computers, internet services and digital administration systems. For this, they might be more inclined to use online public services than conventional office-based services. The relatively high share of private employees indicates that digital birth registration services are well suited to the needs of working citizens by alleviating travelling time, administrative and waiting demands.

The homemakers constitute 18.0% (n = 18) of the respondents. This discovery shows that people who manage the households and family welfare are also using the BRIS platform. Because registration is closely tied to child welfare, child education,

child health and child legal identity, homemakers frequently engage in the process of registering their children. They are involved in the online service, which reflects that the online service is available to citizens outside the formal labor force.

12.0% (n = 12) of respondents were engaged in business activities. Businessmen are usually keen on having quick and convenient administrative processes as time they spend visiting government offices can adversely influence their economic processes. Their involvement shows that the digital birth registration system is a practical option to the traditional paper birth registration service, in that applications are lodged online.

Government employees were the smallest occupational group with 11.0% (n = 11) respondents. While their numbers are relatively low, government workers may be more familiar with administrative processes and digital governance efforts. The experiences they have in the BRIS platform give them some insights on the effectiveness of digital public service delivery and the efficiency of administration.

The overall distribution of occupations reveals that the Birth Registration Information System is being used by the citizens with a variety of socio-economic and professional backgrounds. The variety of occupations suggests that the birth registration service is generally accepted and not exclusive to any particular group of occupations. It confirms to the Government of Bangladesh the goal of providing inclusive and equitable access to essential public services by digital transformation.

Moreover, the findings corroborate the theory presented in Chapter Two. Based on the Technology Acceptance Model (TAM), there is a link between technological exposure and usefulness and ease of use. The Technology Acceptance Model (TAM) suggests a relationship between technological exposure and usefulness and ease of use of digital systems. Likewise, in the case of the SERVQUAL model, service quality perceptions could vary with users' experiences and expectations. The multi-occupational categorization of respondents thus enhances the validity of the study by bringing in a variety of viewpoints as regards service quality, user experience and citizen satisfaction.

5.2.7 Overall Demographic Summary

The socio-demographic description in this chapter serves as an overall profile of the respondents involved in the study. The results suggest that citizens of different gender, age, educational and occupational profile were included in the sample, which ensured diversity among the applicants who accessed the Birth Registration Information System (BRIS).

The analysis revealed that females made up the majority of the respondents, and the various age groups including between 20 and 49 years were quite well represented. The educational profile showed that the educational level of the persons who used the online birth registration system had relatively high levels, with bachelor's or master's degrees being the most common. Their occupations were varied, with students, private workers, homemakers, business people and government workers all responding to the survey.

Across the board these demographic facts show that the Birth Registration Information System is being used across the spectrum of society. The diversity of respondents increases the credibility and representativeness of the study because the results can be considered to be representative of the experiences of users from diverse social and economic backgrounds. In addition, the demographic profile offers background information for the interpretation of the following analyses of applicants' experiences, service quality, difficulties faced in using services and general satisfaction with services among citizens. The analysis of the effects of the demographic context is further provided for analysis of the respondents' perception of the quality and effectiveness of the Birth Registration Information System in Dhaka North City Corporation.

5.3 Applicants' Experience with Birth Registration E-Service

5.3.1 Occupation of Respondents

The occupation is one of the key socio-demographic characteristics, which indicates the economic activity, social status and level of interaction of an individual with public institutions. Occupations have frequently been related to variations in digital literacy, access to the internet, technology exposure, and the use of digital services in the context of e-government and digital public service delivery studies. The needs and expectations for digital government services may differ across occupational groups. A profile of each respondent's occupation is important, therefore, to grasp the diversity of users using the Birth Registration Information System (BRIS) and to interpret their perceptions of service quality and satisfaction.

To enable people to access government services without discrimination on the basis of their occupation and socio-economic status, the Government of Bangladesh has launched several digital governance initiatives. Birth registration is a mandatory civil registration process needed to achieve legal identity and to access various government services, such as school enrollment, health care, passports, social protection schemes and the right to vote. Applicants may be from a range of backgrounds as birth registration is a universal public service. Therefore, the occupational profile of the respondents gives valuable insight in the inclusiveness of the BRIS platform.

As mentioned in Chapter Two, previous studies have demonstrated that occupation can have a significant impact on digital public services adoption and use. Students and salaried employees tend to possess a greater degree of digital literacy as they are accustomed to using computers, using mobile phones and applications and are frequently exposed to the internet. Online services are popular among businesspeople as they minimize opportunity costs and administration delays. The main use of digital services for homemakers is administrative tasks related to family life, and government workers are likely to be aware of administrative procedures and public information systems. It is therefore relevant to analyses the occupational characteristics in order to better understand the users of BRIS and to help interpret applicants' experiences as discussed later.

To determine which occupations were the respondents' main occupation, they were asked to select it. They were classified into 5 occupational groups: Student, Private Employee, Homemaker, Businessperson and Government Employee. The data obtained were analyzed by descriptive statistics and presented in Table 5.4.

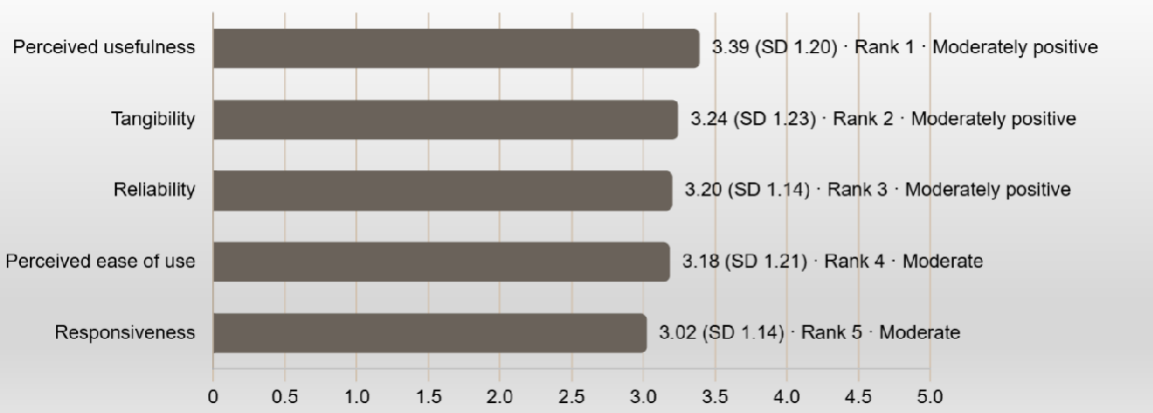
Table 5.5 Descriptive Statistics of Applicants' Experience

Dimension	Mean	Standard Deviation	Rank	Interpretation
Perceived Usefulness	3.39	1.20	1	Moderately Positive
Tangibility	3.24	1.23	2	Moderately Positive
Reliability	3.20	1.14	3	Moderately Positive
Perceived Ease of Use	3.18	1.21	4	Moderate
Responsiveness	3.02	1.14	5	Moderate

Source: Computed from Field Survey, 2026.

Table 5.5 presents the descriptive statistics of the major dimensions of applicants' experience with the Birth Registration Information System (BRIS). The results indicate that applicants' overall experience was **moderately positive**, although none of the dimensions achieved a mean score of 4.00 or above. This suggests that respondents generally viewed the digital birth registration service positively, while also identifying areas where further improvement is needed.

Figure 5.5 Mean Scores of Applicants' Experience



Overall Interpretation

Perceived Usefulness received the highest mean score (**M = 3.39, SD = 1.20**), ranking first among the five dimensions. This indicates that respondents generally perceived the BRIS as useful for completing birth registration. The finding suggests that the online system provides practical benefits such as convenience, reduced paperwork, and greater efficiency compared with traditional procedures. This result is consistent with the Technology Acceptance Model (TAM), which emphasizes perceived usefulness as an important factor influencing users' acceptance of a technology.

Tangibility ranked second, with a mean score of **3.24 (SD = 1.23)**. This indicates a moderately positive perception of the technological and presentation-related aspects of the service, including the website interface, information presentation, and overall system environment.

Reliability ranked third, with a mean score of **3.20 (SD = 1.14)**. The result indicates that respondents considered the BRIS moderately reliable. However, the score also suggests that improvements are needed in areas such as system stability, accuracy of processing, document submission, and timely delivery of certificates. The detailed reliability analysis further shows that the highest-rated reliability item was the accuracy of information on birth certificates (**M = 3.41**), while the lowest was the accuracy of application processing (**M = 2.79**).

Perceived Ease of Use ranked fourth, with a mean score of **3.18 (SD = 1.21)**. This indicates that applicants generally found the system reasonably easy to use, but some difficulties may remain in navigation, understanding instructions, completing forms, or using different functions of the online platform.

Responsiveness received the lowest mean score (**M = 3.02, SD = 1.14**), ranking fifth. Although this still represents a moderate assessment, it indicates that responsiveness is a relatively weaker area of the service. The detailed analysis shows that timely application updates received the highest responsiveness score (**M = 3.20**), whereas the statement that DNCC staff responded quickly to inquiries received the lowest (**M = 2.71**).

Overall, the results indicate that **Perceived Usefulness was the strongest dimension of applicants' experience, whereas Responsiveness was the weakest**. Therefore, while the BRIS provides useful and reasonably satisfactory digital services, greater attention should be given to improving **staff responsiveness, user support, system reliability, and ease of use** to enhance the overall e-service experience.

Applicants' Experience with the Birth Registration E-Service

Experience of applicants is the key feature for evaluating digital public service delivery. A good UX promotes continued citizen use of e-Government services while a lacking UX experience can reduce trust and satisfaction. In this study, applicant experiences of the Birth Registration Information System (BRIS) were operationalized into service components based on ease access, navigability and information availability. These constructs correspond (i.e. align) with respondents' answers in this study and were further supported by the results of SERVQUAL and Technology Acceptance Model (TAM) from chapter two

5.3.2 Ease of Access

This measure refers to how easily the applicants are able to access the Birth Registration Information System without impediments. Respondents were asked how they accessed the service of birth registration. Table 5.5 presents the distribution

Table 5.5 Method Used to Access the Birth Registration Service (N = 100)

Access Method	Frequency	Percentage (%)
Completely online (self-service)	45	45.0
Physical visit to the office (self)	24	24.0
Online with assistance	24	24.0
Entirely offline/manual process	6	6.0
Missing	1	1.0
Total	100	100.0

Source: Computed from Field Survey, 2026.

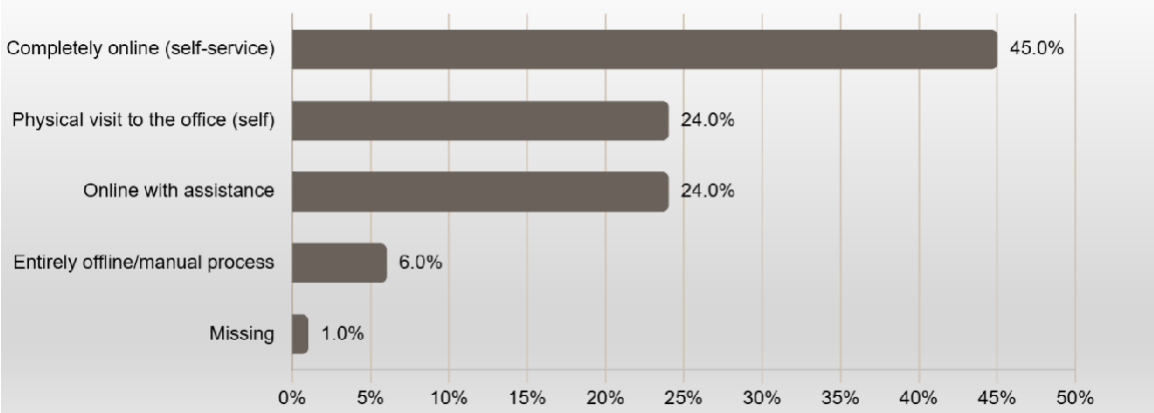


Figure 5.5 Access Method of Respondents

Interpretation

In addition to the quantitative survey of 100 respondents, five Key Informant Interviews (KIIs) were conducted to obtain qualitative insights into the delivery and administration of birth registration e-services at DNCC. The KII findings are presented thematically in the following subsections and are used to complement the quantitative findings. The results show that 45% of the respondents finished the birth registration procedure completely online on their own, which shows that there is an increasing acceptance of digital public services. At the same time, 24% of them needed help when filling in the online application, indicating that even though the digital facility is available, a large number of people still require assistance throughout the registration process.

24 per cent preferred to visit the registration office in person, and 6 per cent finished the process entirely by using manual methods. The fact that these results show is that digital transformation has greatly enhanced accessibility, but challenges connected with digital literacy, internet access, or user confidence still affect the way services are used.

The results support the Technology Acceptance Model. This model suggests that citizens are more likely to use e-services if they see them as easy to access and helpful. However, raising public awareness, improving digital skills, and making access procedures simpler could further improve the use of online birth registration services.

5.3.3 Key Informant Interview (KII): Ease of Access

Key Informant Interviews (KIIs)-these contributed to knowledge of the Birth Registration Information System (BRIS) accessibility from official's eyes who manage and provide birth registration services. The quantitative survey identified the shared experiences of applicants while accessing the system, whereas the interviews conceptualized institutional based factors that impacted ease of access.

Key informants asserted that BRIS significantly increased citizen access to these services because people can apply from anywhere, online. But they argued that many applicants, especially in rural areas, elderly people, or those with low digital literacy still faced a challenge in using the online system unaided. The main barriers to accessing the service remained limited internet connectivity, lack of personal devices and limited knowledge of online procedures reported by informants.

They elaborated that UDCs, municipal offices or designated staff for registration helped applicants having difficulties. They pointed out that these support mechanisms were essential in enabling citizens to fulfil the online registration process and help limit completely manual applications.

Furthermore, the key informants suggested that enhancing the digital literacy, increasing the internet coverage, simplifying the interface of the BRIS and increasing the public's awareness campaigns would be additional measures to enhance access and encourage more use of online birth registration services. They also advised to raise the

level of technical support in local service centers to facilitate access to the system for vulnerable groups.

Overall, the KII findings were consistent with the quantitative survey findings in that while the Birth Registration Information System had significantly improved access to birth registration services, challenges relating to digital skills, internet availability and user confidence continued to impact on the effective utilization of the e-service. The qualitative findings offered valuable institutional perspectives that complemented the survey data, resulting in a more holistic assessment of the accessibility of the Birth Registration Information System.

5.3.4 Ease of Navigation

The ease of navigation relates to how easily applicants are able to go through the online birth registration system and carry out the required tasks without getting confused. This aspect was measured using the statement "The online system is easy to navigate".

Table 5.6 Ease of Navigation

Indicator	Mean	Standard Deviation	Interpretation
The online system is easy to navigate	3.48	1.15	High

Source: Computed from Field Survey, 2026.

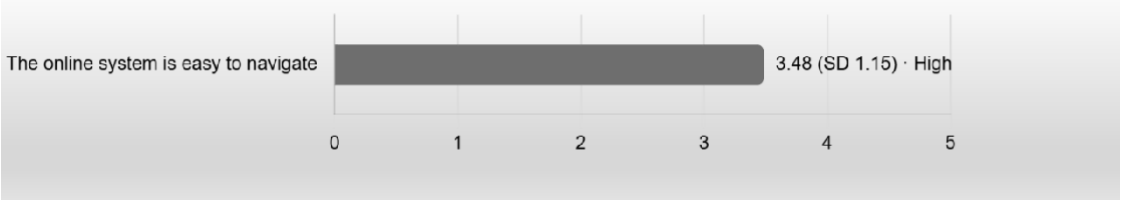


Figure 5.6 Mean Score for Ease of Navigation

Interpretation

The average score of 3.48 (standard deviation = 1.15) indicates that the respondents as a whole felt that the Birth Registration Information System was not difficult to navigate. Although the overall impression is positive, the relatively high standard deviation shows that the users' experiences varied greatly.

People who were familiar with digital technologies found the website fairly easy to use, whereas those who were not had difficulty locating the menus or completing the various steps in the application. This finding is in line with the previous studies mentioned in Chapter Two, which stated that website usability is a key factor in determining citizen satisfaction and their continued use of e-government services.

If we consider the situation in terms of the Technology Acceptance Model, improving the ease of navigation of a system will increase users' perceived ease of use and have a positive impact on their intention to adopt digital public services. It can therefore be concluded that altering the website's layout, simplifying the menu structures, and providing clearer navigation guidance would be able to further improve the experiences of applicants.

5.3.5 Key Informant Interview (KII): Ease of Navigation

Further insights on how easy the Birth Registration Information System (BRIS) was to navigate came from Key Informant Interviews (KIIs) with officials who managed and delivered the service. The interviews added to the quantitative findings by explaining the practical difficulties applicants encountered when using the online platform.

Most applicants with basic digital skills were able to navigate the system without significant difficulties, with the key informants saying the BRIS was generally designed to be user-friendly. They did however admit that some users had trouble completing online forms, navigating to the right menus, uploading supporting documents and understanding the various sections of the website. The informants said that the challenges were more common among first time users, older applicants and people with limited digital literacy.

The informants also reported that registration staff and Union Digital Centers (UDCs) routinely assisted applicants with navigation-related problems. “Step-by-step guidance for the online registration process, verification of uploaded documents and assistance for error correction helped us complete the online registration process successfully,” they said.

In addition, the website layout should be more streamlined, menu organization should be better, instructions should be clearer and features should be more user friendly to improve the navigation experience overall, the key informants suggested. They also stressed the importance of public awareness campaigns and digital literacy training to enable citizens to use the online system with more confidence and independence.

Generally, the findings from the KII corroborated the quantitative survey results that the BRIS was found to be generally easy to use for most of the respondents. However, some digital competence and knowledge of online services remained to have an effect on the navigation of users. These qualitative findings were complimentary to the survey results in that they offered practical explanations as to the differences in respondents' perceptions of ease of navigating system.

5.3.6 Information Availability

The degree to which the Birth Registration Information System makes information clear, accurate and easy to understand is what is meant by information availability. This aspect was evaluated using two Tangibility indicators:

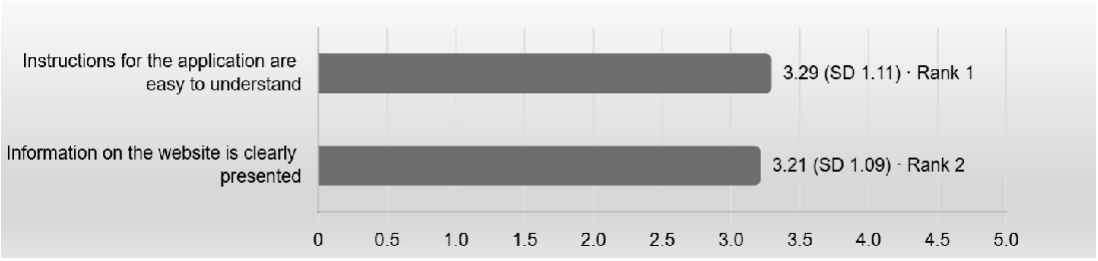
- The information available on the website is clearly presented.
- The instructions for using the application are easy to understand.

Table 5.7 Information Availability

Indicator	Mean	SD	Rank
Instructions for the application are easy to understand	3.29	1.11	1
Information on the website is clearly presented	3.21	1.09	2

Source: Computed from Field Survey, 2026.

Figure 5.7 Information Availability



Interpretation

Summary of findings depict that the respondents were tendered positive perception with regards to information generated by Birth Registration Information System, and a statement "The guidance for application is easy to follow" gained highest average score (M = 3.29, SD = 1.11), which illustrates that most applicants are able to grasp the procedural guide accessible on the website.

The item "Information on the website is clearly presented" received the average score of 3.21 (SD = 1.09). Thus, the respondents agreed on the moderate level of clarity. However, the obtained average score indicates that there is room for improvement in terms of presenting and organizing the information.

The results correlate with the SERVQUAL component of Tangibility, which focuses on the need for good communication, an appealing website design and a well-organized information to enhance the quality of services. It should be mentioned that previous research showed that clarity and accessibility of online information played an important role in shaping the attitudes of citizens about digital public services and their satisfaction with those.

It can be concluded that while the BRIS platform provides users with valuable and comprehensible information, its better organization, presentation and clear step-by-step instructions will enhance users' experience and promote further usage of online birth registration services.

5.3.7 Key Informant Interview (KII): Information Availability

The Key Informant Interviews (KIIs) were used to gain further insights into the information available and clear about the Birth Registration Information System (BRIS). The interviews provided a qualitative perspective on the results of the quantitative study and complemented the quantitative results from the interviews by providing the perspective of the officials dealing with the management and delivery of birth registration services.

The key informants reported that the BRIS communicated to the applicants the information needed on registration process, required documents, eligibility criteria, and the guidelines for application. But they said that some of the information was not easy to understand or clear for many who were still applying who were asking questions about the documents, how to apply and what the error messages meant.

Applicants with less digital literacy or who were not knowledgeable about government services online were more likely to have difficulties deciphering the instructions posted on the website, according to the informants. Registration staff and Union Digital Centers (UDCs) frequently counselled and informed applicants who needed extra assistance about registration requirements and guidelines.

The informants also suggested the following improvements to the website: Better organization of the website content, making the instructions more user-friendly, making the instructions more detailed and easier to follow step-by-step and the usability of visual aids; the use of screenshots or video tutorials. They added that the information should be made more user-friendly to help alleviate applicants' misunderstandings and improve the efficiency of the online registration process.

Overall, the KII results corroborated the quantitative survey results that there was adequate information provided in the Birth Registration Information System, which is presented in an understandable manner for applicants in general. However, increased clarity and organization of the information provided on the Web, and increased presentation of this information were thought to be necessary to improve users' understanding of applications, to reduce errors during the application process, and to increase the quality of the e-service.

5.3.8 Processing Time

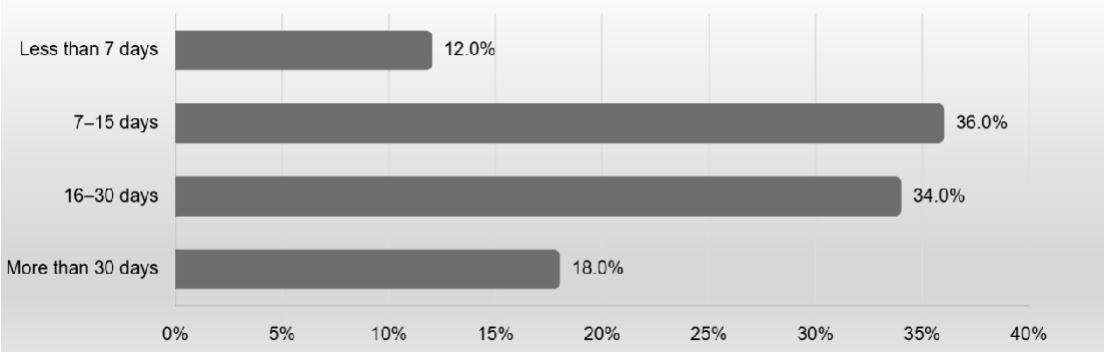
Time taken for processing is one of the major determinants of the efficiency of delivering government services in the digital era. The main purpose of e-governance is to minimize the time spent on receiving government services by citizens. In this research, respondents were asked how much time did they take to receive their birth certificate after applying for it.

Table 5.8 Processing Time for Birth Registration (N = 100)

Processing Time	Frequency	Percentage (%)
Less than 7 days	12	12.0
7–15 days	36	36.0
16–30 days	34	34.0
More than 30 days	18	18.0
Total	100	100.0

Source: Computed from Field Survey, 2026.

Figure 5.8 Processing Time



Interpretation

According to Table 5.8, 36% of respondents received their birth certificate between 7 to 15 days, making this period the most common one for this process. Additionally, another 34% received the service in 16 to 30 days, and 18% waited more than 30 days to receive their birth certificate. Only 12% were able to receive it within 7 days.

This means that the use of BRIS has led to higher administrative efficiency than using a conventional system in the past. The processing time, however, remains uneven;

almost 1 in 5 respondents had to wait more than a month. This provides evidence that there is a room for improvements regarding verification, collaboration, and approval of applications.

Findings from this study support the literature reviewed in Chapter Two on processing time being a determinant factor in satisfaction of citizens with digital public services. The faster the government delivers its services, the more efficient and effective citizens view their work.

5.3.9 Key Informant Interview (KII): Processing Time

The Key Informant Interviews (KIIs) also helped to gain deeper understanding of the factors affecting the processing time of birth registration applications. The interviews supplemented the quantitative results by allowing the experiences and perceptions of officials directly involved in processing and approving applications for birth registration to be heard.

The key informants cited the completion of applications as a major factor affecting processing times, which was largely due to the extent to which applications were completed accurately and in full. They said that applications were generally received within the prescribed time limit if they were complete and had proper information in them, but some applications which were incomplete or needed further verification received them more than a month late.

The most frequently cited reasons for processing delays were: Incomplete documentation, incorrect information submitted by applicants, system problems, Internet connectivity and need for verification/approval by various administrative offices, as reported by informants. They also reported that at times high application rates caused longer processing times.

The informants also highlighted that the implementation of the Birth Registration Information System (BRIS) had greatly enhanced the efficiency of the birth registration process compared to the existing manual registration system. The online platform helped to minimize paperwork, streamline document submission, enhance communication, and provide more efficient application tracking. They also

recognized however that further enhancements of the performance of the system and inter-agency coordination was still required to reduce delays.

Besides, the key informants suggested strengthening technical infrastructure, increasing the reliability of the system, easing verification procedures and training the service providers regularly to improve processing efficiency. They further recommended the need to get the public to be aware of submitting complete and accurate applications to minimize the delays in the process.

The overall findings of the KII were found to corroborate the findings from the quantitative survey that the BRIP has enhanced the efficiency of the birth registration services. However, administrative process and administrative documentation, technical issues, and missing applications remained factors in processing time. The qualitative findings were useful in operational explanations of the survey's finding of processing time variation and helped to build up a more complete picture of the efficiency of the BRIS.

5.3.10 Staff Cooperation

Despite the fact that the Birth Registration Information System is online based, there have been instances when the applicants have had to seek help from the staff while verifying documents or filling the form or for any other type of information related to it.

In order to measure this factor, two questions from the questionnaires were selected:

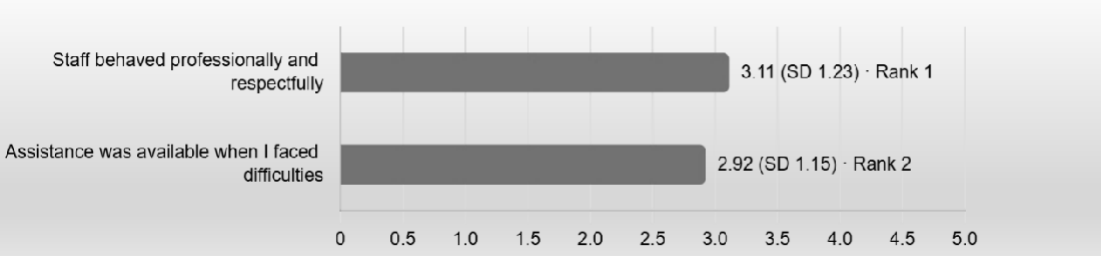
- I got help whenever I needed (RES2).
- The staff were professional and polite (ASS4).

Table 5.9 Staff Cooperation Assessment (N = 100)

Indicator	Mean	SD	Rank
Staff behaved professionally and respectfully	3.11	1.23	1
Assistance was available when I faced difficulties	2.92	1.15	2

Source: Computed from Field Survey, 2026.

Figure 5.9 Staff Cooperation



Interpretation

The results show that participants had positive to moderately positive attitudes towards the cooperation among the employees. The item "The staff behaved professionally and respectful" gained the highest mean (M = 3.11, SD = 1.23), which means that respondents were satisfied with the professionalism of DNCC employees while registering.

On the contrary, the item "I received help when I had problems" got a bit lower mean (M = 2.92, SD = 1.15). This suggests that although there were assistance services, some respondents had problems in receiving timely help due to the technical or procedural issues.

From the obtained results, it is clear that the professionalism of the staff is quite satisfactory; however, there is a need to pay more attention to responsiveness and assistance of the applicants.

5.3.11 Key Informant Interview (KII): Staff Cooperation

The Key Informant Interviews (KIIs) helped provide further understanding of the importance of staff collaboration for the effective implementation of birth registration services using the Birth Registration Information System (BRIS). The interviews complemented the quantitative findings by bringing voices of officials involved in assisting the applicants during the entire registration process.

The key informants identified that staff members were very useful in assisting applicants, especially those who had problems with the online application process, verification of documents, or understanding the application process. They said they

regularly helped applicants by providing guidance, verifying documents provided, correcting application errors, and answering service related inquiries.

The informants indicated that it was important for professionals to behave in a professional manner, communicate with the citizens with respect and be able to provide assistance in a timely manner, in order to provide citizen satisfaction and increase the citizens' trust in the service of birth registration. They noted, however, that due to the volume of work, limited staffing, number of applicants and a few technical issues, staff at times were unable to provide prompt assistance to all applicants.

The informants also highlighted the need for ongoing training of staff, sound team collaboration, and ongoing capacity development activities to enhance service quality and customer support. They also suggested strengthening communication system, augmenting the numbers of the frontline staff during rush hours and giving guidelines to deliver the services more responsively and efficiently.

Overall, the results from the KII corroborated the quantitative survey results, and generally applicants felt that the staff were professional and respectful. However timely support was an area that needed further development. These qualitative results gave institutional insights into staff performance and confirmed that good staff collaboration is one of the factors contributing to better applicants' experiences in the Birth Registration Information System.

5.4 Service Quality Assessment

Service quality is an important consideration when assessing the efficacy of digital public service delivery. As explained in Chapter Two, the SERVQUAL approach assesses service quality on the basis of the following five factors: Tangibility, Reliability, Responsiveness, Assurance, and Empathy. They represent both the technical and human sides of service delivery and provide a complete measure of the applicants' experience of the BRIS system.

Below are the descriptions of the statistical measures for all five SERVQUAL factors based on the respondents' feedback. Item-wise means, standard deviations, and ranking provide information about the BRIS system's strengths and weaknesses. The

higher item means denote positive perceptions of the service quality, while low means denote those areas that need to be improved further.

Apart from assessing the current performance of the online birth registration service, this assessment can provide some evidences to policymakers regarding improving the efficiency, transparency, accessibility, and citizen-centric nature of digital public services in Bangladesh. The results presented below are analyzed in light of the empirical literature reviewed in Chapter Two.

In this part, the quality of the BRIS is assessed based on the SERVQUAL dimensions used in this research. As has been explained in chapter two, SERVQUAL measures the quality of services based on five dimensions, namely, reliability, responsiveness, assurance, empathy, and tangibility. In this part, the description of the first two dimensions, that is, reliability and responsiveness, is presented based on the answers of 100 respondents.

5.4.1 Reliability

Reliability refers to the ability of the Birth Registration Information System to provide accurate, dependable, and consistent services. In the context of digital public service delivery, reliability includes accurate processing of applications, dependable information, timely certificate issuance, accurate status updates, system stability, successful document uploads, and error-free certificates. According to the SERVQUAL model, reliability is considered the most important dimension of service quality because citizens expect government services to be accurate and dependable.

Table 5.10 Descriptive Statistics for Reliability (N = 100)

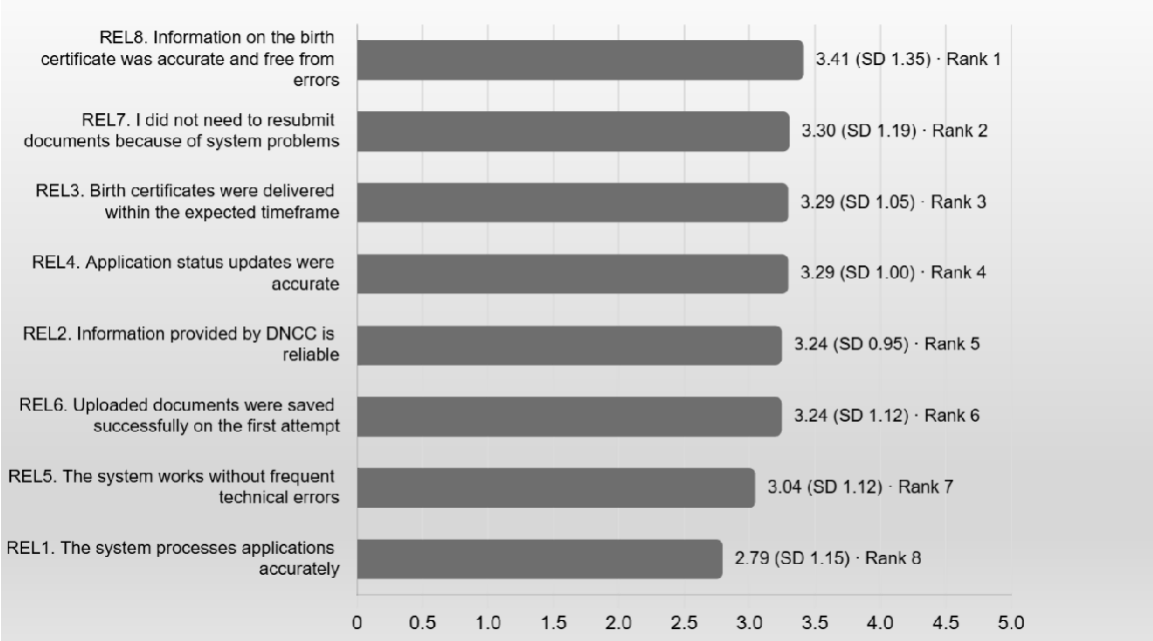
Rank	Reliability Indicator	Mean	SD
1	REL8. Information on the birth certificate was accurate and free from errors	3.41	1.35
2	REL7. I did not need to resubmit documents because of system problems	3.30	1.19
3	REL3. Birth certificates were delivered within the expected timeframe	3.29	1.05

Rank	Reliability Indicator	Mean	SD
4	REL4. Application status updates were accurate	3.29	1.00
5	REL2. Information provided by DNCC is reliable	3.24	0.95
6	REL6. Uploaded documents were saved successfully on the first attempt	3.24	1.12
7	REL5. The system works without frequent technical errors	3.04	1.12
8	REL1. The system processes applications accurately	2.79	1.15

Overall Reliability Mean = 3.20

Source: Computed from Field Survey, 2026.

Figure 5.10 Reliability Dimension



Interpretation

The overall mean of the Reliability dimension was 3.20 which suggested moderate level of agreement from the respondents about the reliability of the Birth Registration Information System. In general, applicants rated the system to be moderately reliable with some specific areas needing improvement.

The most positive statement was REL8, with respondents feeling that the information on their birth certificates was accurate with few errors (M = 3.41, SD = 1.35). The result confirms that the end product of the registration process is in general reliable and gives citizens a good level of trust in the authenticity of the registration documents provided by the government.

The second highest score was for REL7 (M = 3.30) which was obtained from many who successfully completed the registration process without having to upload documents because of system-related issues. Likewise, moderately positive perceptions were noted about timely delivery of certificate (REL3) with a mean score of 3.29, and accurate status updates on the application (REL4) with a mean score of 3.29.

REL1 (M = 2.79, SD = 1.15) had the lowest mean score suggesting respondents were relatively less confident that the system withstood the accuracy of application processing consistently. This suggests that technical errors, processing inconsistencies or administrative issues during the application process may have occurred with some applicants.

The results of the review of the literature in Chapter Two on the SERVQUAL indicate that reliability is the basic component of public service quality. Consistent and reliable delivery of accurate services by government systems improves citizens' confidence in digital platforms and encourages their ongoing use. Thus, DNCC should strive to further improve the reliability of the Birth Registration Information System by emphasizing the stability of the system, reducing processing errors, and strengthening quality control mechanisms.

5.4.2 Responsiveness

Responsiveness" is the willingness and ability of service providers to help applicants quickly and effectively. In digital public service delivery, responsiveness

refers to the ability to respond quickly to questions, provide assistance when needed, resolve issues promptly, address complaints and communicate regularly about the application process. An effective service delivery system enhances citizens' trust and is a major factor in overall satisfaction.

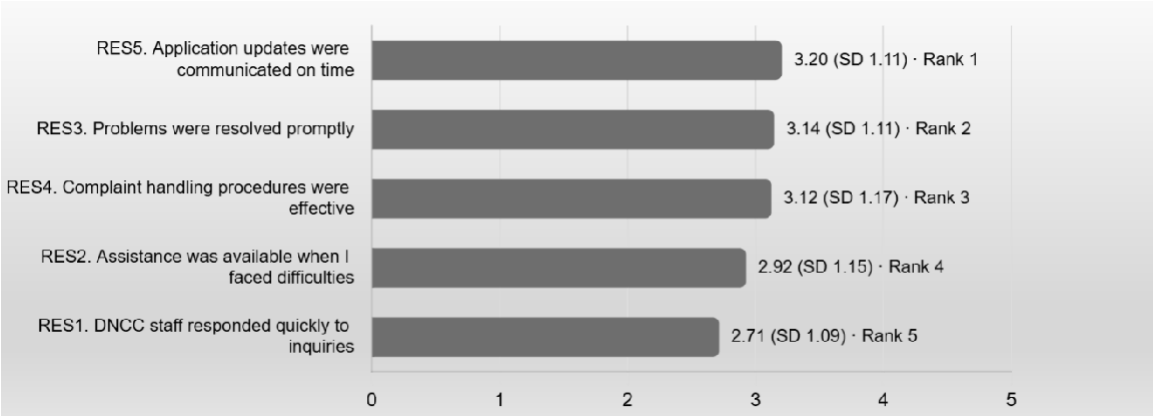
Table 5.11 Descriptive Statistics for Responsiveness (N = 100)

Rank	Responsiveness Indicator	Mean	SD
1	RES5. Application updates were communicated on time	3.20	1.11
2	RES3. Problems were resolved promptly	3.14	1.11
3	RES4. Complaint handling procedures were effective	3.12	1.17
4	RES2. Assistance was available when I faced difficulties	2.92	1.15
5	RES1. DNCC staff responded quickly to inquiries	2.71	1.09

Overall Responsiveness Mean = 3.02

Source: Computed from Field Survey, 2026.

Figure 5.11 Responsiveness Dimension



Interpretation

The overall mean score for the Responsiveness dimension was 3.02, which represents moderate satisfaction among respondents. Overall, applicants recognized

that support services were provided, but there is space for improvement in communication and response times.

The best-rated item was for timeliness of application updates (RES5), with a mean score of 3.20 (SD = 1.11). As a result, it has been possible to conclude that the general impression of the respondents on the updates they received with regards to their applications was rather positive and that there is an improvement in the use of digital communication.

Statements on prompt problem resolution (RES3) and effective complaint handling (RES4) were rated moderately with both suggesting that applicants felt the support mechanisms were reasonably effective. The mean scores, however, suggest that there is still room for improvement in order for the concerns of the citizens to be handled more efficiently.

The lowest score was obtained for RES1 (M = 2.71, SD = 1.09) which showed that the respondents were less satisfied with the response time of the staff of DNCC to inquiries. Similarly, there was a moderate evaluation for the availability of help when facing difficulties (RES2). The results indicated that the online platform is relatively acceptable but the human support of the service needs to be strengthened.

The findings are in line with the findings of other previous studies mentioned in Chapter Two that showed responsiveness was one of the factors that determines the satisfaction of citizens in e-government services. These key elements such as prompt communication, effective technical support and timely problem resolution have a key impact on the overall quality of service to the user. Thus, DNCC should persist in providing services for customer support, online support, and employee training for increased responsiveness and the betterment of the entire birth registration process.

5.4.3 Assurance

Assurance is the trust that an applicant has in the Birth Registration Information System (BRIS) and confidence in the capability, professionalism and integrity of the

officials responsible for the provision of the system in the system operation. The SERVQUAL model, which was introduced in Chapter Two, includes assurance as the knowledge of the staff, courtesy, security of personal data and users' confidence in the service. Assurance is of particular importance for digital public services, as the applicant can enter sensitive personal data via online means and requires it to be treated securely and professionally.

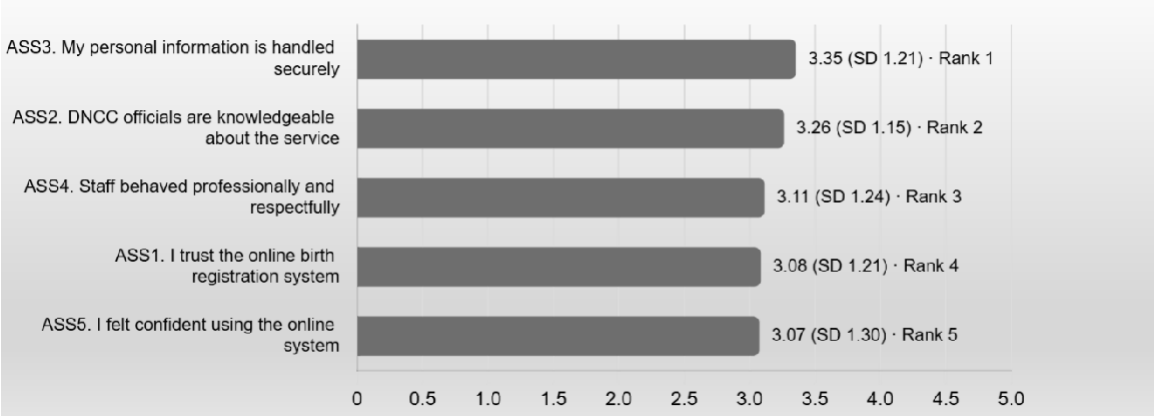
Table 5.12 Descriptive Statistics for Assurance (N = 100)

Rank	Assurance Indicator	Mean	SD
1	ASS3. My personal information is handled securely.	3.35	1.21
2	ASS2. DNCC officials are knowledgeable about the service.	3.26	1.15
3	ASS4. Staff behaved professionally and respectfully.	3.11	1.24
4	ASS1. I trust the online birth registration system.	3.08	1.21
5	ASS5. I felt confident using the online system.	3.07	1.30

Overall Mean = 3.17

Source: Computed from Field Survey, 2026.

Figure 5.12 Assurance Dimension



Interpretation

The mean score for the Assurance dimension was 3.17, suggesting a moderate level of trust and confidence in the BRIS. The highest mean score was given for security of personal information (ASS3, M = 3.35, SD = 1.21), indicating that the majority of respondents felt that their personal information was secured. This is welcome news as one of the drivers for citizens' acceptance of e-government services is data security.

The 2nd highest mean (M = 3.26) was obtained for ASS2 which shows that there was generally a high level of knowledge about the birth registration process by DNCC officials. Applications received a satisfactory rating (M = 3.11) for professional behavior of staff, indicating generally positive interactions between applicants and service providers.

The scores of the other variables were comparatively lower, however, for trust in the online system (ASS1) and confidence in the system (ASS5). While both stayed on the positive side of the pH scale, the results indicated that applicants still have some concerns about electronic delivery of government services without the assistance of others.

The findings align with the SERVQUAL framework and the studies it draws upon reviewed in Chapter Two that highlight that the key factors affecting citizen satisfaction and use of digital public services are trust, staff competence and data security. Improving cybersecurity measures, educating users on their options, and raising awareness of data protection policies could further boost citizens' trust in the BRIS platform.

5.4.4 Empathy

Empathy is the level of attention and responsiveness shown to applicants' needs by service providers. In the SERVQUAL dimensions, empathy is represented as being able to offer tailored service, be willing to help, treat people with respect, offer convenient service and consider citizens' concerns. Even as digital service delivery is becoming traditional, empathy is still crucial since there are still many applicants who need assistance when registering, despite the fact that online services are available.

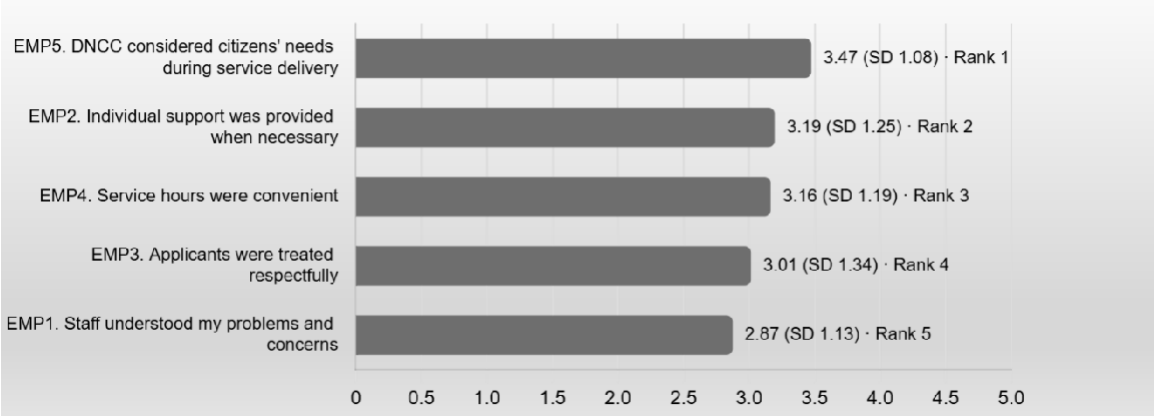
Table 5.13 Descriptive Statistics for Empathy (N = 100)

Rank	Empathy Indicator	Mean	SD
1	EMP5. DNCC considered citizens' needs during service delivery.	3.47	1.08
2	EMP2. Individual support was provided when necessary.	3.19	1.25
3	EMP4. Service hours were convenient.	3.16	1.19
4	EMP3. Applicants were treated respectfully.	3.01	1.34
5	EMP1. Staff understood my problems and concerns.	2.87	1.13

Overall Mean = 3.14

Source: Computed from Field Survey, 2026.

Figure 5.13 Empathy Dimension



Interpretation

The overall mean score of the Empathy dimension was 3.14, which means the BRIS was perceived by the respondents as moderately citizen-centered. The most highly rated indicator was EMP5 (M = 3.47, SD = 1.08) indicating that many respondents thought that DNCC took citizens' needs into consideration when providing service.

There was also positive perception of the availability of individual support (EMP2) and convenient service hours (EMP4). The results show that the service has taken steps to meet the needs of applicants.

The lowest mean score was that for EMP1 (M = 2.87, SD = 1.13) some respondents reported that staff were not always knowledgeable about their problems/concerns or that staff did not always address problems/concerns. Similarly, the treatment of customers was judged as moderate (EMP3) indicating room for improving the customer service.

The results corroborate those of the literature presented in Chapter Two that suggests that to create public services that are citizen-oriented, empathy is a key factor. While BRIS is largely a digital platform, there are scenarios where human-to-human interactions are crucial, such as when applicants need further information, verification of documents, or assistance with technical matters. Further training to improve the dimension of customer service and communication skills might be desirable.

5.4.5 Tangibility

The tangibility of the Birth Registration Information System relates to the physical and graphical characteristics of the website, the explanation of the information, how easy it is to navigate around, the presence or lack of available forms and instructions for uploading documents. For digital public service delivery, a visually appealing and user-friendly interface enhances usability and positively affects the overall experience of the applicants.

Table 5.14 Descriptive Statistics for Tangibility (N = 100)

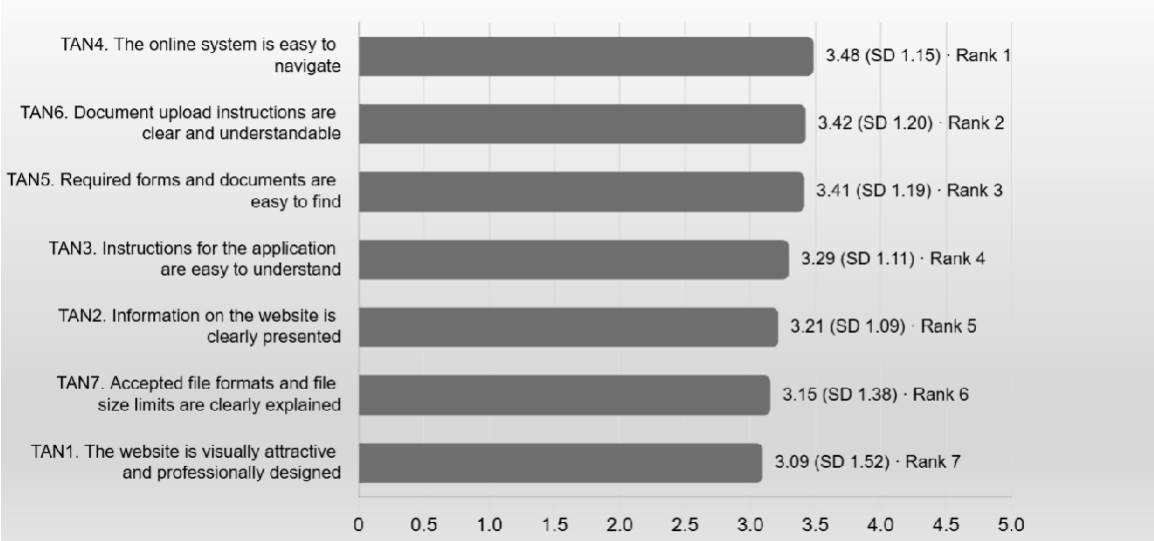
Rank	Tangibility Indicator	Mean	SD
1	TAN4. The online system is easy to navigate.	3.48	1.15
2	TAN6. Document upload instructions are clear and understandable.	3.42	1.20
3	TAN5. Required forms and documents are easy to find.	3.41	1.19
4	TAN3. Instructions for the application are easy to understand.	3.29	1.11
5	TAN2. Information on the website is clearly presented.	3.21	1.09
6	TAN7. Accepted file formats and file size limits are clearly explained.	3.15	1.38

Rank	Tangibility Indicator	Mean	SD
7	TAN1. The website is visually attractive and professionally designed.	3.09	1.52

Overall Mean = 3.29

Source: Computed from Field Survey, 2026.

Figure 5.14 Tangibility Dimension



Interpretation

The Tangibility dimension had the highest overall mean score of all the SERVQUAL dimensions (M = 3.29), suggesting a favorable attitude of the respondents for the visual and functional properties of the BRIS platform.

Responses showed that the most popular item was Ease of navigation (TAN4) with a mean of 3.48, indicating that in general, the system was easily navigated. Likewise, the instructions for document upload (TAN6) and availability of required forms (TAN5) were rated favorably, indicating that the applicants could find the information and do the necessary paperwork.

There were lower ratings for website appearance (TAN1) and the technical guidance on accepted file formats (TAN7), suggesting that respondents would appreciate enhancements to the website appearance and technical guidance.

5.5 Reliability Analysis

The internal consistency of the research instrument was carried out by Cronbach Alpha reliability analysis in SPSS version 26. Cronbach's Alpha is used to determine how well the items in each construct are correlated with one another, and how closely they measure the same underlying concept. The constructs of Perceived Usefulness, Perceived Ease of Use, Reliability, Responsiveness, Assurance, Empathy, and Tangibility were included in the questionnaire. Other constructs were Payment Experience, Citizen Satisfaction, and Governance.

Table 5.15: Reliability Statistics of the Research Instrument

Construct	No. of Items	Valid N	Cronbach's Alpha	Interpretation
Tangibility	7	92	0.779	Acceptable
Reliability	8	92	0.757	Acceptable
Responsiveness	5	99	0.733	Acceptable
Assurance	5	96	0.718	Acceptable
Empathy	5	94	0.751	Acceptable
Perceived Usefulness	5	94	0.757	Acceptable
Perceived Ease of Use	7	95	0.793	Acceptable
Payment Experience	6	75	0.751	Acceptable
Citizen Satisfaction	5	80	0.776	Acceptable
Governance	5	98	0.611	Below the preferred threshold

Source: Computed from field survey data using SPSS Version 26, 2026.

Interpretation of the Reliability Results

The results of the reliability analysis showed that the majority of the constructs had good internal consistency with Cronbach's Alpha values between 0.718 and 0.793. Perceived Ease of Use (α = 0.793), Tangibility (α = 0.779) and Citizen Satisfaction (α = 0.776) yielded the highest reliability coefficient. The lowest coefficient among the constructs that met acceptable level was Assurance (α = 0.718).

The Cronbach's Alpha coefficients for Perceived Usefulness (0.757), Reliability (0.757), Responsiveness (0.733), Empathy (0.751), Payment Experience (0.751), and Citizen Satisfaction (0.776) also indicate acceptable internal consistency. Thus, the instruments employed to assess these constructs have a good level of consistency for the study.

The Governance construct, however, had a Cronbach's Alpha of 0.611, which is less than the generally accepted 0.70. Hence, caution must be taken in interpreting the Governance results, as the items have relatively low internal consistency.

The reliability analysis results indicate that most of the constructs of the questionnaire have good internal consistency. The instrument thus offers a good foundation for analyzing applicants' experiences of the digital birth registration service. The reliability results also corroborate the subsequent descriptive analysis presented in Chapter 5.

5.5 Challenges Faced by Applicants

Though the process of digital delivery of public services has been improving over time, there are still a few challenges faced by the applicants while using the Birth Registration Information System (BRIS) in Bangladesh. These challenges are important to consider when assessing the effectiveness of the e-service and where policies and administration need to be improved. This section presents analysis of responses to the open-ended question about the greatest challenge encountered in the registration of

births, unlike the previous sections where responses were on a Likert scale. Responses were then aggregated based on thematic analysis into themes.

Technical issues, documentation and verification concerns, processing delays and user support limitations were the most common problems identified during the analysis. While some respondents said they had none of the difficulties, most respondents reported having one or more difficulties that impacted their overall service experience.

5.5.1 Technical Problems

An open-ended question was used to determine the problems faced by the applicants in the birth registration process. Responses were analyzed and categorized into common themes using thematic analysis. Of the 100 respondents, 52 respondents (52.0%) responded to the open-ended question, and 48 respondents (48.0%) did not respond to the open-ended question.

It is important to note that the relatively high non-response rate should be taken into account when interpreting the findings. The results of the thematic analysis should therefore be interpreted as a reflection of the experiences of those respondents who responded to the open-ended question and should not be extrapolated to the 100 respondents.

Technical Challenge	Frequency	Percentage of Total Sample (%)	Percentage of Respondents Who Answered (%)
Server failures/system downtime	5	5.0	9.6
Website interface difficult to use/lack of support	5	5.0	9.6
Difficulty completing online form	3	3.0	5.8
Waiting for application progress/system updates	3	3.0	5.8

Technical Challenge	Frequency	Percentage of Total Sample (%)	Percentage of Respondents Who Answered (%)
Other minor technical issues	2	2.0	3.8
No technical problem reported	34	34.0	65.4
No response	48	48.0	—
Total	100	100.0	100.0*

Table 5.15: Technical Problems Reported by Respondents

Source: Thematic analysis of open-ended survey responses, 2026.

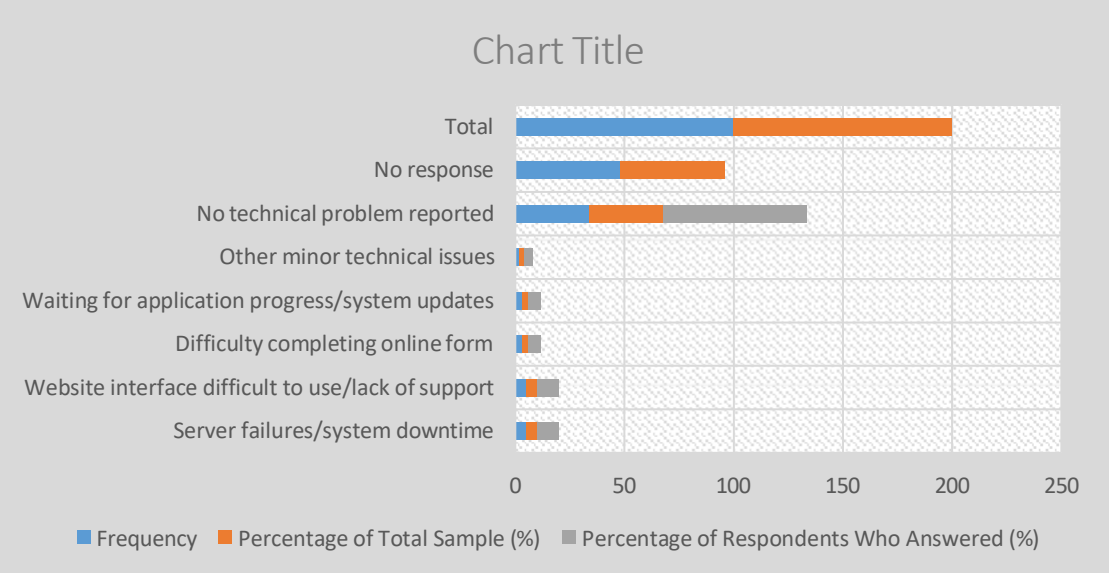


Figure 5.15 Technical Problems

Interpretation

Of the 48 respondents who did not answer the open-ended question, 48.0% responded to this question. Thus, the technical-problem findings should be taken with a pinch of salt.

Of the 52 who responded, 34 (65.4%) had not had a major technical problem. Five respondents (9.6% of valid responses) reported server failures/system downtime and problems with the website interface/support. Three respondents (5.8%) reported difficulty completing the online form and 2 respondents (3.8%) reported other minor

technical issues, and 2 respondents reported waiting for application progress or system updates.

Therefore, the evidence is not sufficient to support the use of the 5% categories as “major challenges” for the total sample. Instead, they are fairly small percentages of those who responded to the open-ended question.

5.5.2 Documentation Issues

Documentation Challenge	Frequency	Percentage of Total Sample (%)	Percentage of Respondents Who Answered (%)
Delays due to document verification	20	20.0	38.5
Unclear document requirements/instructions	13	13.0	25.0
Multiple office visits for verification	9	9.0	17.3
Long administrative procedures	4	4.0	7.7
No documentation issue reported	6	6.0	11.5
No response	48	48.0	—
Total	100	100.0	100.0*

*Based on 52 substantive responses.

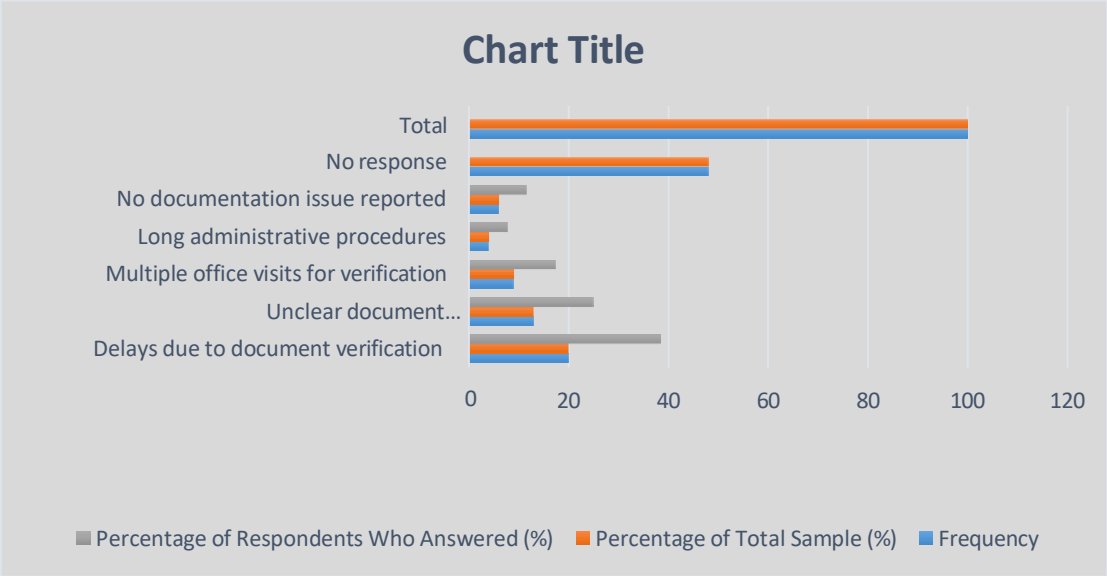


Figure 5.16 Documentation Issues

Interpretation

Documentation and verification issues were more frequently mentioned than technical problems among respondents who provided an answer. **Twenty respondents (38.5% of valid responses)** identified delays in document verification as a challenge. This was followed by unclear documentation requirements or instructions (**25.0%**), multiple office visits for verification (**17.3%**), and lengthy administrative procedures (**7.7%**).

However, these findings must be interpreted in light of the **48.0% non-response rate for the open-ended question**. Consequently, the results indicate the types of challenges reported by respondents who answered the question, rather than the prevalence of these challenges across the entire sample.

Interpretation

One of the main issues raised by respondents was documentation-related issues. Delays in document verification and information that is not clear on required documents were the most common complaints. Some of the respondents also reported having to go to the registration office several times in order to undergo the verification process.

The results indicated that the process for applying the use of these applications has been digitized, while the administrative procedures supporting the application process still have a high percentage in manual verification. This delays the application process for applicants, lower its efficiency and overall quality of the online service.

The findings align with the literature reviewed in Chapter Two and revealed that documentation complexity was mentioned in the literature as a major problem for e-service delivery in developing countries. So far, there have been arguments for extending digital transformation to other administrative and document verification processes that are not related to the submission of applications. The reduction of documentation requirements, enhancement of online guidance and the introduction of online verification processes would streamline processing time and increase citizen satisfaction.

5.5.3 Overall Interpretation of the Open-Ended Findings

The thematic analysis offers valuable qualitative data on applicants' experiences, however, the non-response rate of 48.0% is a major constraint. The frequencies and percentages of individual themes should not therefore be viewed as being representative of all 100 survey respondents.

The most common problem mentioned in the open-ended questions was document verification delays, followed by unclear documentation requirements and multiple office visits. Technical problems were reported less frequently, and a significant number of those who answered the technical-problem question indicated that they did not experience a significant technical problem.

The results thus indicate that documentation and verification processes might be a more significant issue than technical issues for those who gave substantive responses. However, the results of the open-ended question were not received by nearly half of the respondents, making the results only indicative and not conclusive.

The high non-response rate could have been due to the optional or open-ended question, respondent fatigue, no specific difficulty to report or not wanting to give further comments. But it is not possible to identify the cause of non-response from the

data available in the study. Thus, it should not be assumed that the non-respondents had no problems.

5.5.3 Internet Connectivity Issues

In the digital age, the internet is a necessary condition for access to digital government services. An internet connection helps applicants to fill online forms, upload supporting documents and track their application. However, poor connectivity can disrupt the application process, make it time consuming to complete, and deter citizens from utilizing online public services. Thematic analysis of open-ended responses found that challenges encountered on the internet included when respondents noted problems with the internet platform due to slow or intermittent internet connection.

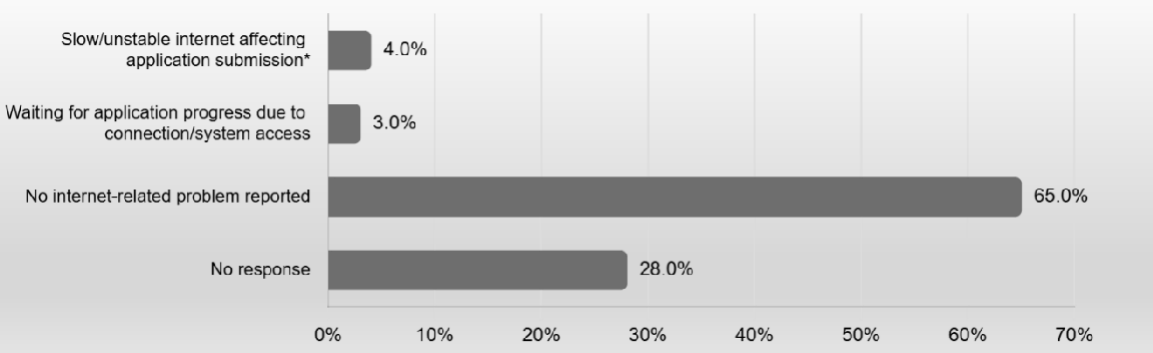
Table 5.18 Internet Connectivity Issues Reported by Respondents (N = 100)

Internet Connectivity Issue	Frequency	Percentage (%)
Slow/unstable internet affecting application submission*	4	4.0
Waiting for application progress due to connection/system access	3	3.0
No internet-related problem reported	65	65.0
No response	28	28.0
Total	100	100.0

*Derived from respondents' descriptions of delays and difficulty accessing or completing the online process.

Source: Thematic analysis of open-ended survey responses, 2026.

Figure 5.17 Internet Connectivity Issues



Interpretation

The thematic analysis shows that internet connectivity was not a major problem faced by the majority of respondents. About 65% of respondents reported no difficulties with the internet and 28% did not answer the open-ended question. The small number of applicants mentioned that their internet connection was unstable, which made it hard to submit the application or to receive updates to the application.

While it is not a large proportion of respondents that actually stated that internet connection was a major issue, reliable internet is a crucial part of the effective delivery of digital public services. The results align with the review of literature in Chapter Two which emphasizes the role of digital infrastructure as a key enabler of effective e-governance. Investing in the infrastructure of the network and making service platforms mobile would further increase the level of accessibility and decrease the level of service interruptions.

5.5.4 Lack of Digital Literacy

Literacy of a digital person is their capability with computers, smartphones and internet sites. People who have low computer literacy might have trouble filling out a form on-line; reading directions; uploading paperwork; visiting government sites. These constraints may limit accessibility and inclusiveness for people accessing online government services.

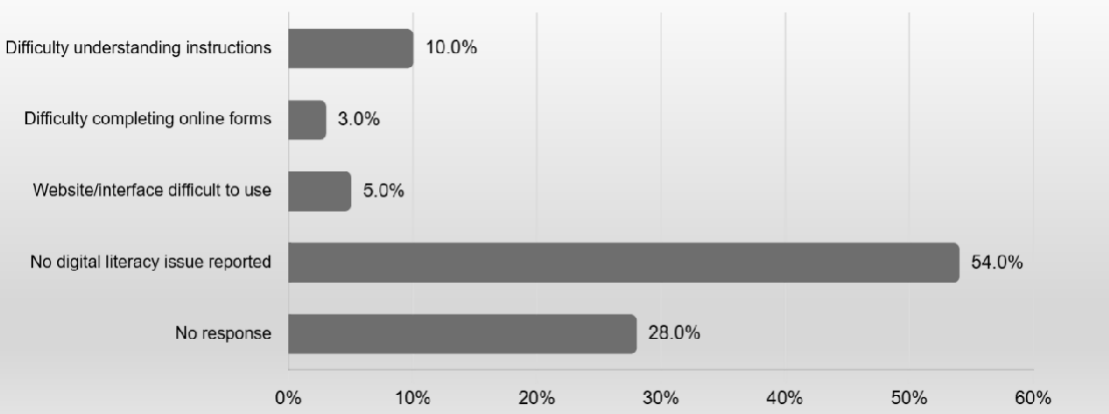
Open-ended answers indicate some difficulties faced by some candidates while doing it on their own for completing this task. There were problems with comprehension of directions; filling out forms for applications; and accessing a website to register.

Table 5.19 Digital Literacy Challenges (N = 100)

Digital Literacy Issue	Frequency	Percentage (%)
Difficulty understanding instructions	10	10.0
Difficulty completing online forms	3	3.0
Website/interface difficult to use	5	5.0
No digital literacy issue reported	54	54.0
No response	28	28.0
Total	100	100.0

Source: Thematic analysis of open-ended survey responses, 2026.

Figure 5.18 Digital Literacy Challenges



Interpretation

One of these problems was a delay to delivery services that were found to be among them most often. About 20 percent of people mentioned that there were delays due to verification of documents and applications. Some people complained about long waiting periods; they had to visit registration offices several times per day; there was a lot of bureaucracy involved with processing applications.

The results show that although there is a digitization of submissions through a system called BRIS, some back-office tasks still require manual checks and approvals by way of sequential processes. Thus, candidates might also face delays post-submission of online applications.

The findings are consistent with the empirical literature reviewed in Chapter Two, which found that processing delays are a common challenge in e-government services across many developing countries. Shortening verification time by means of electronic document verification; enhancing inter-agency cooperation; and automation of applications management would likely enhance productivity significantly and improve public satisfaction greatly.

5.7 Citizen Satisfaction Analysis

The citizen's contentment has been identified by many experts to be an important indicator for evaluating efficiency of electronic government systems. Satisfaction is an indication to how satisfied a person was with their experience regarding birth registration services including quality, availability, speediness and utility of BRIS system. According to Chapter Two, the Technology Acceptance Model (TAM) and the SERVQUAL model indicate that customers would be more satisfied with digital products if they were dependable, quick to respond; user-friendly; and able to meet their needs.

This research has been conducted to measure citizens' satisfaction with regard to their experience as users on a given birth registration service application (bra). Analysis shows high levels of moderate customer satisfaction for the BRIS application among users. Although most people liked ease-of-use for submitting applications electronically; less so due to longer wait times and poor customer service issues like slow response rates and inadequate verification processes for documents provided by customers.

Perceived Usefulness had an average rating of greater than any other measure and therefore was considered more important by participants who believed it to be

useful for them while registering babies online. Generally speaking, people felt that this service decreased unnecessary visits from citizens at government offices; it was easier for them to apply for their children's births online rather than going through a lot of paperwork as before. This finding strongly supports the Technology Acceptance Model, which argues that perceived usefulness is one of the strongest determinants of technology acceptance and user satisfaction.

Also, Tangibility had an excellent rating so people felt very happy about their site's design and content accessibility and usability. It seemed to be fairly easy-to-use for users; however, there are some areas where websites could improve their usability significantly by improving layout and accessibility of information access.

Reliability, Assurance, and Empathy had good average values for their respective measures. The people were generally satisfied with how accurate it was that what they received from this program; they also liked being served professionally by those who worked for them here. Nevertheless, moderate ratings show that there is still some work to be done on maintaining good customer service standards; safeguarding customers' trust; offering tailored support during sign-up procedures.

Responsiveness had a lower average rating among all of them (SERVQUAL). The customers felt that there was a delay when answering questions; they had little help available for them; also, it took too long to resolve issues with technology. The results are also similar to those found by earlier research on e-government services for Bangladeshi citizens that showed poor service delivery as an issue affecting their level of satisfaction with government administration.

In general, however, there is a high level of acceptance among users regarding their experience with this system for registering births; nevertheless, more work needs to be done on improving response time, speediness of processing requests and better customer care so as not only increase user's loyalty towards it but also promote usage of other online government services.

5.8 Discussion of Findings

The research gives valuable information on how people use a Birth Registration Information System (BRIS), which will help us understand better what is provided through electronic government services for citizens of Bangladesh. Chapter Two Results and those described here are found below.

Also, demographic data shows that we have various age groups; varying levels of educational attainment and occupations hence there are users for us like this site who belong to various classes. The relatively high percentage of respondents with secondary and tertiary education suggests that education attainment may affect citizens' willingness and ability to use online government services.

Also according to research of customers' opinions they have good experience with its ease-of-use, accessibility and simplicity level. Perceived usefulness score is very high because people find it convenient to register their births online rather than going through tedious procedures like visiting an office where they have to fill out paperwork manually. This is also consistent to Technology Acceptance Model as it says that "perceived usefulness" affects users' attitudes towards technology adoption positively.

In addition, these findings show how Tangibility ranked as an important dimension for services' quality. Generally, people were found to access information easily and easy-to-use website structures. Also it's consistent with previous studies done by us for Bangladesh and other developing nations where attractive websites and easy-to-use information improve public perception towards government e-services.

Customers gave high ratings to trustworthiness as they believed that information provided by them through those apps are accurate. However due to technical problems and administrative errors it has a low success rate for app development that damages customer's confidence significantly. There is also a similar result from studies of e-government implementation within countries of south Asia where reliability was found to be an important factor influencing people's trustworthiness towards these systems so much so that they accept them for their use.

The responsiveness was rated as good according for its comparison with other services' quality indicators (SERVQUAL). People complained about being dissatisfied because of getting answers for their queries. It is difficult for them to get help from service providers and resolve issues raised by customers. It is consistent with findings from other research presented on page 2 of this chapter. Also these researches showed out poor support of customers along with delays are issues which continue to occur while dealing with government affairs.

The qualitative information about applicants' issues is supportive of that finding. They complained about paperwork requirements; waiting time for processing; computer related problems; lack of technological literacy amongst people and inadequate availability of computers / phones. Though digitizing application process on-line has been effective but some manual work done by admin leads towards delay and customer visit to office again and again.

Generally speaking, this result shows that we have a much more efficient Birth Registration Information System for providing services on behalf of its users through digital means. However, to enhance public's happiness there needs additional funds for infrastructural reliability; governmental effectiveness; computer skill enhancement courses and support systems integration. These improvements will assist us to achieve goals established by Government of Bangladesh towards delivering efficient, transparent and user-friendly e-government services.

5.9 Applicants' Perceptions of Payment, Cost and Financial Transparency

The purpose is to describe how people view this service for registering births (birth registrations) and paying fees associated with it along with its transparency regarding costs involved. This study was conducted with six variables to define Payment Experience as an item rating scale (Likert). The mean score and standard deviation has been computed from surveys results.

Table 5.20: Applicants' Payment and Cost Experience

Payment Experience Item	Valid N	Mean	Std. Deviation
Official fees were clearly communicated.	97	2.83	1.25
The payment process was simple and convenient.	94	3.14	1.13
The overall cost of obtaining the certificate was reasonable.	91	3.08	1.00
Online payment methods were secure and trustworthy.	93	3.33	1.20
I was not asked for any unofficial payment.	89	3.19	1.23
Document preparation costs increased my total expenses significantly.	86	3.33	1.29
Overall Payment Experience	97	3.12	0.77

Source: Field Survey, 2026; calculated from the survey dataset using SPSS Version 26.

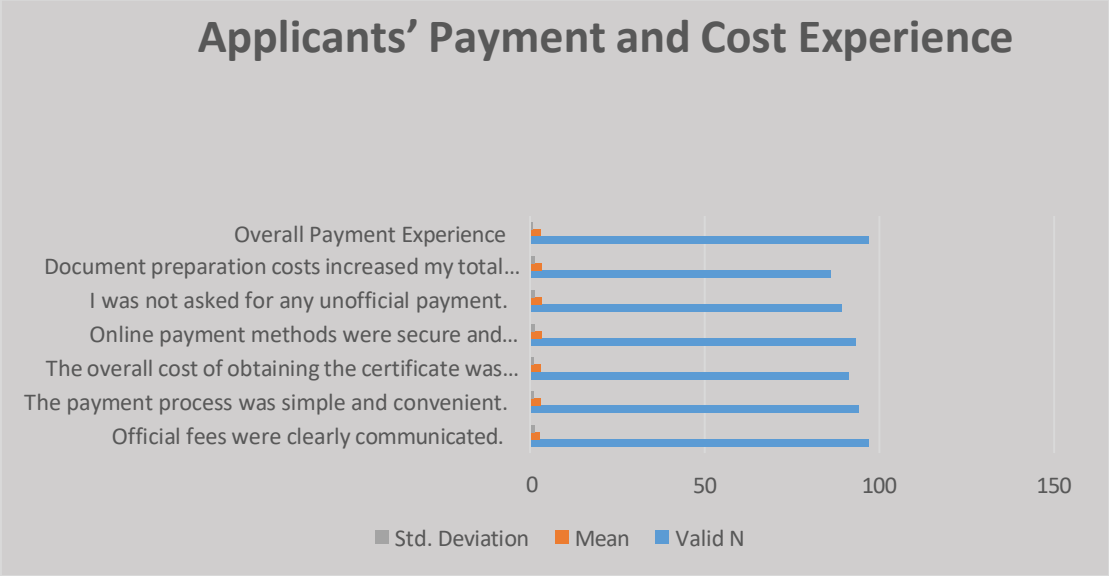


Figure 5.19 Applicants' Payment and Cost Experience

Interpretation

The results showed that the overall payment experience of the applicants was moderate, with an overall mean score of 3.12 (SD = 0.77).

The highest mean score was for the perception that online payment methods were secure and trustworthy (M = 3.33, SD = 1.20) among the individual items. The

mean score (M = 3.33, SD = 1.29) was also relatively high for the statement about document preparation costs. The payment process itself was rated with a mean score of 3.14 (SD = 1.13) and the reasonableness of the overall certificate cost was rated with a mean score of 3.08 (SD = 1.00).

The clarity of official fees (M = 2.83, SD = 1.25) had the lowest mean score. It means that there are still some issues with clarifying costs as they should be communicated clearly enough to customers. The mean for the unofficial payments statement was 3.19 (SD = 1.23).

In general terms, these findings show an average level for perceptions regarding payments/ costs associated with registering births at this facility. Lowery rated by clarity of official fee rates indicates a need to improve transparency and communication regarding these charges.

5.10 Overall Citizen Satisfaction with Birth Registration E-Service

This part looks at how happy applicants with the birth registration online services offered by DNCC. Peoples happiness was checked using five questions that use a scale from disagree to strongly agree. These questions are about how satisfied they're overall if the service was what they expected if they would use it again if they would tell others about it and if they think it made their experience, with government services better.

Table 5.21: Citizen Satisfaction with Birth Registration E-Service

Citizen Satisfaction Item	Valid N	Mean	Std. Deviation
Overall, I am satisfied with the birth registration service.	98	3.13	1.37
The service met my expectations.	97	3.22	1.13
I would use this online service again in the future.	92	3.25	1.04
I would recommend this service to others.	91	3.16	1.09
The online system improved my overall experience with government services.	93	3.33	1.26
Overall Citizen Satisfaction	98	3.22	0.83

Source: Field Survey, 2026; calculated from the survey dataset using SPSS Version 26.



Figure 5.20 Citizen Satisfaction with Birth Registration E-Service

Interpretation

The findings indicate that the overall satisfaction of the respondents on the birth registration e-service was moderate, given an overall mean score of 3.22 (SD = 0.83).

The highest mean score was obtained for the statement “the online system enhanced respondents' overall experience with government services” (M = 3.33, SD = 1.26). The next most important was respondents' willingness to use the online service again (M = 3.25, SD = 1.04).

The mean scores for the service met respondent expectations and willingness to recommend the service were 3.22 (SD = 1.13) and 3.16 (SD = 1.09) respectively. The direct global satisfaction item had a mean value of 3.13 (SD = 1.37).

The overall results indicate that the respondents felt moderately satisfied with the e-service of birth registration. The results show that applicants are not particularly satisfied with the services, clarity, responsiveness and administrative procedures, which can further enhance applicants' overall experience.

5.11 Chapter Summary

This chapter is about what we found out from the people who used the Birth Registration Information System under Dhaka North City Corporation. We looked at the information from 100 people who used this system. We used numbers to understand the data about the people who used the system what they thought about it and the problems they faced.

We found out that people of all ages, education levels and jobs are using this system to register births. This means that people from all walks of life are using this website.

Most people who used the system liked it. They thought it was useful and easy to use. We need to make it faster and improve the customer service so that people have a better experience.

We also looked at the quality of the birth registration services. People liked the way the website looked and how easy it was to get information. They did not like how long it took to get a response and the customer service was not always good.

We found some problems that people faced when using the system. Some people had trouble with the technology did not know how to use the system had internet or did not know how to use a computer. We need to make the system better and help people who need it.

Overall using the Birth Registration Information System has made it easier for people to register births in Dhaka North City Corporation. We can still make it better by making the service more reliable, faster and easier to use. This study can help us make recommendations for how to improve the system and what we can do to make it better in the future.

* The system is useful and easy to use

* We need to make it faster and improve customer service

* People like the website and can get information easily

* We need to improve the response time and customer service

* Some people have trouble with technology. Need help

We can use this study to make the birth registration services better and to help people who need it. We can also use it to think about how to do studies, in the future and how to make the system even better.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter is about the discussion of the study on the Birth Registration Information System under Dhaka North City Corporation. It looks at the findings and draws conclusions based on the research objectives. The chapter also gives recommendations on how to improve the Birth Registration Information System.

The previous chapter was about presenting and analyzing the findings. This chapter takes a step back. Looks at the findings in the context of public administration, digital governance and how citizens get services. It explains how the findings add to what we know about e-government and suggests practical ways to make digital public services better in Bangladesh.

The main goal of this study was to see how people who apply for birth registration in Dhaka North City Corporation feel about the service. To do this the study used a model that looks at the quality of the service and another model that looks at how people accept technology. These models helped us understand how citizens think about public services.

The study used a questionnaire to collect data from 100 people who applied for birth registration. The data was analyzed to see how people felt about the service, what challenges they faced and how satisfied they were with the Birth Registration Information System. The findings showed that people generally thought the online birth registration service was useful and easy to access. However, there were still some problems with how the service was run that affected the quality.

Governments over the world are using digital technologies more and more. They are moving away from paper-based systems and towards digital services to make things more efficient, transparent and satisfying for citizens. Bangladesh is also doing this with its Digital Bangladesh and Smart Bangladesh plans. The Birth Registration Information System is a part of this because birth registration is the basis of a person’s legal identity and helps them access many public services. So it is very important that this service is easy to use, reliable and accessible.

The findings in Chapter Five show that digitalizing birth registration has made it easier for people to access government services. People liked that they could apply online and did not have to visit government offices much. However, the findings also show that having technology is not enough. The government needs to be responsive verify documents efficiently have staff who cooperate, provide support and communicate effectively for the digital service to work well. The Birth Registration Information System needs to be improved so that it's more user-friendly and accessible to everyone. The study suggests ways to do this such as making the website easier to use and providing support to people who are using the service.

The Birth Registration Information System is very important for Bangladesh because it helps people get access to public services. The system needs to be reliable and easy to use so that everyone can benefit from it. The study provides recommendations on how to improve the Birth Registration Information System, such as providing training to staff and improving the technology used. By implementing these recommendations, the government can make the Birth Registration Information System better and more accessible, to everyone.

This chapter goes beyond just describing what was found in the research. It carefully looks at the results. Connects them to what the study wanted to find out. It also looks at the ideas that were used in the study and how they match up with what other people have written about before. This chapter also talks about what can be learned by people who make rules people who run governments and people who work with computers and design services for the public. The ideas in this chapter try to help make the Birth Registration Information System better. It also helps in making the government of Bangladesh more open, faster and focused on people.

At the end the chapter talks about what the study added to what people know and where more research could go in the future about computer-based government services in Bangladesh. By talking about these things the chapter shows how the results of this study can help make government services and help people trust online government services more.

6.2 Summary of Major Findings

The goal of this research was to look at how people who live in Dhaka North City Corporation feel about using services for birth registration. Using the SERVQUAL framework and the Technology Acceptance Model the research was done to see how people feel about using a service. It also looked at how people think the services they get are working. Chapter Five has details about how the Birth Registration Information System is working now. That information is useful for seeing how well it is doing and finding places where it needs to be better.

6.2.1 Findings Related to Socio-Demographic Characteristics.

The data from this study shows that people who use the Birth Registration Information System come from different social and economic backgrounds. The people who took part in the study were both young and old. They had levels of education and different jobs. This shows that the service is for different people.

Most of the people who used the system were working adults. They probably used the system to take care of family matters and register their children. Most of them had some level of school after school which suggests that education helps people use online government services. However, the fact that some people with education also used the system shows that the service is now available to more people. Still more help might be needed for people who're not good with computers.

People who used the system had jobs. Some were government workers. Others worked in companies. Some were business people some were housewives and others had kinds of jobs. This shows that the service is important for everyone no matter what they do or their social class. So making the system better could help people, not just a few.

Overall these numbers show that the service is working well for people who use it online. However, there is a need to make changes in the future so that people with levels of education different computer skills and different access, to technology are not left out of the services.

6.2.2 Findings Related to Applicants' Experience with the Birth Registration E-Service.

When we looked at how people felt about using the Birth Registration Information System we found that they had a lot of things to say. We checked how easy it was for them to use the system how easy it was to get the information they needed how fast the system worked and how helpful the staff were.

Most people said that it was pretty easy to use the website to apply for birth registration without running into many problems. Being able to access the system over the internet meant they did not have to go to an office and they could do most things from home. This is an improvement over the old way of doing things with paper and it shows that people are really using the electronic government services.

We also found out that people thought the website was easy to navigate. The menus were easy to use and the tools and resources were easy to find, which helped people understand how to apply. However, some people had trouble filling out forms online and uploading documents, which means the website needs to be made simpler so it is easier for everyone to use.

Another good thing about the system is that it provides a lot of information. Most people felt that the website gave them information about the application process and what paperwork they needed. However, some people were unsure about whether their documents were okay and what to do with them. This means that while there is information it would be helpful to have more details so people who are using the system for the first time can understand it better.

People were not as happy with how it took to process their applications. Even though they liked being able to submit their documents they were concerned that it was taking a long time to validate and approve them. The results show that just because people can submit their documents online it does not mean that the administrative process is faster because they still need to check a lot of paperwork.

The staff at the Birth Registration office are usually good at their jobs. People thought that some of them were very helpful and efficient. However, some people had problems with the staff not communicating and taking a long time to respond to

questions, which means there is still room for improvement in terms of customer support.

These results show that people think it is really useful to have access to the Birth Registration Information System. They also want to see more improvements in terms of how well the system is run and the quality of the service. This is in line with the idea of using technology to make government services better and more efficient so that people have an experience when they use them.

The Birth Registration E-Service is an example of how technology can be used to improve people's lives. People like being able to use the Birth Registration Information System to apply for birth registration and they think it is easy to use. The Birth Registration Information System is a tool for people and it can be made even better with a few improvements.

The main thing that people want is for the Birth Registration E-Service to be faster and more efficient. They want to be able to submit their documents and have them processed quickly without having to wait a long time. The Birth Registration Information System is a start but it needs to be improved so that it can provide better service to people.

Overall the Birth Registration E-Service is a tool that can be improved with a few changes. People, like using the Birth Registration Information System and they think it is easy to use. The Birth Registration Information System is a part of the Birth Registration E-Service and it can be made even better with a few improvements.

6.3 Conclusion

The main goal of this study was to look at how people felt about the service they received when they registered a birth in Dhaka North City Corporation and to check how good the Birth Registration Information System was. This study used the SERVQUAL model and the Technology Acceptance Model to do this. The purpose of this research was to see how users felt about the application; to check how well the system worked; to find out what problems users had when they tried to register a birth; and to see how happy people were with the system. These findings are helpful to show

how well the digital government services in Bangladesh are working. They also give ideas about how to make e- programs better.

The results show that the Birth Registration Information System helped make public services better by turning a process that used to be done in an office into something that can be done online. This makes it easier for people to access. The people who took part in the study were mostly happy with how the application worked. They said it would help reduce the amount of tape; make it easier to get services; and save time and money. These results match the goals of the Digital Bangladesh and Smart Bangladesh programs, which focus on making government work better by using information and communication technology.

This study also shows that people who used the system had an opinion of it. They said the system was reliable, easy to trust and showed care. They felt good about using the system. The results show that there has been a lot of progress in making a good and easy to use service for citizens.

The results also show that just having good technology does not always mean the services are good. Some people gave scores for how quickly the system responded. This means there is a need for answers; quicker fixes for problems; and better service. Even though some people could apply online many said they had delays when their papers were being processed. They also said they did not get updates about where their applications were. They could not get help quickly because of technical problems or paperwork issues. These results show that how well the government works and how good the organization is still matters a lot for people's happiness even if the system is technologically advanced.

The Technology Acceptance Model helps to understand people's experiences. It shows that people think the system is useful and that it is easy to use. A high score for perceived usefulness shows that people think the system is helpful for convenience, less paperwork and an easier way to register a birth. Also a positive score for perceived ease of use means that most people found the system to be easy to use. However, there were problems with the website. Some people had trouble navigating it uploading documents and understanding the steps they had to take. These issues need to be fixed to make the system easier for people of all ages with levels of computer skills.

These results also show some problems with how the system works. Technology problems; internet access; complicated documents; slow processing times; and not enough people knowing how to use computers were some of the issues people faced. These problems show that digitalization is more than making a website. It is about having technology easy to use systems and good customer service. These problems need to be fixed so that everyone has access to government services through their websites or apps.

Another thing the results show is that people's happiness depends on how good the service's how much people use the technology. Applicants judge a service provider not by the technology it has but also by the experience they have how trustworthy the organization is and how open the services are. The results show that it is important to use SERVQUAL and TAM when looking at digital government services. SERVQUAL looks at how people see the service while TAM looks at how people use the technology. These models give a picture of what people think about e-government services.

This research helps us understand more about governance in Bangladesh through what people actually experience. Even though many government offices offer services for birth registration there is not much research on this topic at a local level. So this study helps fill a gap by finding out what is good and what needs to be improved. It also shows that both technology and how well the government works affect the results of the services.

From a public administration point of view these results show how important it is for digitalization to have support from the organization to build up skills and to keep improving the services over time. More money should go into training people; making customer service better; fixing security problems; and getting people involved. Organizations should focus on people with technology improvements matched by management clear communication and open government. This plan will help people trust their government more. It will also make sure that e-government services last a long time.

Overall this research says that the Birth Registration Information System has made it easier and faster for people to register a birth in Dhaka North City Corporation. There are still things that can be improved. The government needs to make the system more efficient reduce tape improve the technology and encourage more e-governance.

By doing these things the government can make people happier. Help build a government that is more fair, open and effective for all people, in Bangladesh.

6.4 Recommendations

The Birth Registration Information System in Dhaka North City Corporation needs to be improved. To do this we have some ideas that can help make it more efficient, accessible and sustainable. These ideas can be grouped into policies, institutions, structures, administrations and technologies that can help with the complexities of providing e-government services.

6.4.1 Policy Recommendations

Bangladesh needs to make its national policy on public services better. This can be done by setting standards for service quality making sure systems work together and keeping users online. The government should also create a system to make sure birth registration facilities are the same everywhere whether it is at the municipal corporation level or local government bodies.

The Local Government Ministry, Rural Development and Cooperatives should create a guide for how long it should take to deliver services, how to handle complaints and how to make sure the quality of services is good. This will help reduce differences in how servicers provided in different areas and make sure everyone gets fair treatment no matter where they live.

The government should also make sure that everyone has access to online services, especially people in rural areas, women, older people, people with disabilities and those who are marginalized. There should be programs to help these groups use services. The government should also have a system to evaluate the performance of government bodies, where they have to do surveys to see how satisfied citizens are with their services and make the results public.

6.4.2 Institutional Recommendations

To make the digital government service system sustainable the Dhaka North City Corporation needs to build its capacity. This can be done by creating an E-Service Management Unit that will plan monitor and improve the Birth Registration Information System.

The corporation should work better with institutions like the Office of the Registrar General, the Election Commission, the ICT Division, health institutions and other relevant agencies by sharing information. This will help avoid doing the work twice make auditing easier and increase productivity.

There should also be a team to monitor and evaluate the services regularly to see how effective they are how satisfied customers are and how complaints are handled. This team should give reports on its performance to make things more transparent and accountable.

The corporation should also educate its employees through seminars on skills development, knowledge sharing sessions with organizations and courses on e-government services delivery and data management.

6.4.3 Structural Recommendations

With internet access, there are still some problems with the infrastructure of birth registration centers. To fix this the whole government system that supports e-services administration needs to be changed.

The corporation should use a business process -engineering approach to redesign administrative processes that eliminate unnecessary paperwork, approvals and delays. This will reduce the time it takes to process applications and improve productivity.

The government should have a civil registration system that links birth registrations to national identity databases health care information systems, passport

services, schools and social services. This will reduce the need to report the information multiple times and improve cooperation between government organizations.

The government can also provide support services through Union Digital Centers, municipal service centers and community support centers. This will help reduce differences in access to services, in areas.

Finally, the government should clearly define the roles and responsibilities of organizations involved in birth registration so that there is no overlap of duties and everyone is accountable.6.4.4 Administrative Recommendations

The Dhaka North City Corporation should make it easier for people to register their babies. They can do this by getting rid of checks and making sure all the forms are the same. The corporation should also make sure that all the companies that help with registrations are providing the level of service.

The corporation needs to set up a customer service center to help people who are having problems with their applications or with technology. People should be able to get help by phone, email, SMS or online chat. The people who work with birth registrations should also get training on how to take care of customers use computers and solve problems.

The corporation should also keep track of how they are doing with things like how long it takes to process complaints, how many applications are approved and how happy customers are. They should check on these things all the time to make sure they are getting better.

6.4.5 Technical Recommendations

This study shows that the Birth Registration Information System has made it easier and faster for people to register births. There are still some technical problems that need to be fixed. These problems need to be addressed with funding for technology and security.

I. Improve Technology Infrastructure

The Birth Registration Information System needs to have technology to make sure it can handle all the people using it. This means they need to upgrade their servers and make sure they can handle a lot of transactions at the time. They should also have a system to balance the load and use cloud hosting to make it more flexible.

ii. Make the System Easy to Use

The Birth Registration Information System should be designed to be easy for everyone to use no matter what their education level or computer skills are. It should have forms and pictures to help people fill them out. It should also be available in languages, including Bangladeshi and English. The system should also be accessible for people with disabilities.

iii. Keep Data Safe

The Birth Registration Information System has data that needs to be kept safe. They should use end-to-end security. Make sure only the right people have access to the data. They should also have passwords and test the system regularly to make sure it is secure.

iv. Connect with Other Systems

The Birth Registration Information System should be connected to important government databases to reduce duplication of work and make services more efficient. This would allow for verification of applicant information and reduce errors.

v. Use Artificial Intelligence

The Birth Registration Information System can use intelligence to improve productivity and make the experience better for people. Powered catboats and virtual assistants can help people with their applications and answer questions. Automated document verification can also help reduce processing time and increase accuracy.

vi. Track Applications in Real Time

People should be able to track the progress of their applications in time. They should receive notifications by SMS, email and mobile app during all stages of the process. This would increase transparency. Reduce uncertainty.

vii. Make the System Reliable

The Birth Registration Information System should be reliable and able to handle a lot of traffic. It should have features like re-session restoration and temporary data backup when offline. It should have redundant internet connections and backup communication systems.

viii. Monitor the System

The Birth Registration Information System should have a monitoring system to track its efficiency. It should track things like server availability, load time and transaction rate. It should also have alerts to notify engineers of any problems.

ix. Use Open Standards

The Birth Registration Information System should be built with standards to make it easy to scale up later. It should use native technology, micro services architecture and standard APIs to facilitate future integration with other government digital services.

x. Get Feedback from Citizens

The Birth Registration Information System should have a feature for citizens to provide feedback. Citizens should be able to rate the services report problems and submit feedback. The system should analyze the feedback periodically to identify recurring issues and improve the services.

xi. Develop Technical Skills

The Birth Registration Information System needs a workforce to maintain and improve it. Technical staff should be trained regularly on cybersecurity, cloud computing and digital service management. Partnerships with universities, research institutions and tech companies can help improve innovation and support, for developing technologies.

6.5 Implications for Public Service Delivery

The research has implications for government administration and e-government services provided by Bangladeshi government officials. As the government uses technology to improve administration and get citizens involved it is crucial to understand peoples experience with electronic services so that they can be designed effectively and inclusively as an institution. This research shows how digitalization can greatly improve service accessibility and effectiveness but technology alone cannot guarantee quality of services. The capacity of organizations, administration effectiveness and citizen's participation are also issues to address.

6.5.1 Policy Implications

The research shows that policy makers should not just focus on changes but also take a comprehensive approach towards e-government administration. The national digitalization strategy must focus on services excellence people's organizations responsibility and fairness of access. The policy for e- programs must set standards to measure services performance and specify time limits on processing requests from citizen's perspectives periodically.

The results also show that integration between government departments electronic service delivery is necessary. An integrated strategy for harmonizing registries with health records, school enrollment information and national identification systems is needed to minimize redundancy of services provided by government

departments. These policy reforms are likely to be beneficial for integration with citizens needs through government services.

6.5.2 Institutional Implications

The research shows how institutions capacities play a role in effective provision of services through digitalization. Where there is technology availability, poor management of organizations, low manpower availability and inefficiency due to division among departments may affect services quality significantly. Therefore, government organizations must enhance their management systems improve cooperation between departments and create specialized departments to monitor and improve services delivery efficiency.

Accountability institutions need to have monitoring systems for their performance and allow citizens input on services provided by them along with reporting on standards of efficiency. These approaches will promote organizational development and are conducive to evidence-based enhancements of government services provisioning.

6.5.3 Administrative Implications

The results indicate that administration effectiveness is still a factor affecting peoples experience of e-government services. Despite simplifying applications through a Birth Registration Information System there are still issues related to processing time for documents validation and customer support from government offices.

Therefore, government officials must focus on streamlining processes, standardization of work practices with communications and complaints handling skills. Performance measures like applications processing times, customer service response rates, complaints resolution rate and general public opinion on services provided by government agencies must be included within a measure for assessing effectiveness of administration.

There must also be a system for growth so that employees can develop their skills related to information systems management, customer relationship management and ethics of government administration.

6.5.4 Technological Implications

The research shows how technology has an impact on people's willingness to adopt and utilize government services. According to the Technology Acceptance Model people will be more inclined to adopt a service if it is perceived as useful, trustworthy and convenient for them.

More investment should go towards improving software usability making it easy for people on phones enhancing security measures ensuring compatibility with systems and technological advancements. AI systems, automated document validation software, cloud-based services and live customer support are some of these innovations that would help increase productivity without increasing expenses significantly.

The technology must not be used for automation of current manual tasks but also help redesign administrative procedures to provide better transparency, efficiency and citizen-centric government services.

6.5.5 Social and Development Implications

Birth registration is not an administrative process but also a basis for citizenship right to healthcare facilities and more. Birth registration efficiency allows people access to schooling, medical care, welfare programs, passport issuance and electoral participation among others.

The findings have implications for achieving several Sustainable Development Goals, particularly SDG 16.9 which calls for providing legal identity for all including birth registration and SDG 16.6 which promotes effective, accountable and transparent institutions. The improvement of the Birth Registration Information System is beneficial for government administration as it reduces bureaucracy and increases accessibility of social services among people with disabilities.

Improving public services is a key component of Bangladesh's Smart Bangladesh Vision 2041 as it promotes good government administration, institutionalization and citizen-centric services delivery.

6.5.6 Theoretical Implications

From my point of view, the two models, SERVQUAL and TAM are complementary to each other when it comes to assessing electronic service delivery services provided by governments. SERVQUAL measures all aspects of services while TAM focuses on consumer's satisfaction with their products/services and usage patterns for devices/products.

Combining them gives a view of people's happiness, which is not possible with either one of them individually. Future public administration research may benefit from integrating service quality theories with technology acceptance theories when evaluating digital government initiatives.

In general, this research adds to existing literature about government administration of Bangladesh and offers an approach that can be used by other nations with similar issues regarding their electronic governments performance.

6.6 Areas for Future Research

This research provides useful information about the service delivery process for people applying to register their babies at the corporation's office located within the DNCC city center area.

The research is restricted by location as it only involves applicants from one municipal corporation. Future research should involve people from cities, townships and villages for better generalizability and comparability with other regions.

Future researchers might use probability sampling methods and larger samples for representativeness and validity of results. They may also use an approach of surveying people quantitatively and conducting interviews/group discussions with applicant's government officials/policymakers.

Comparative studies of e-government services such as death registration, trade licensing, passport services, land administration and tax collection would be useful to find out some similarities among them for the Bangladeshi governments digital public administration system.

Future research should investigate factors that may affect citizen's satisfaction, such as public trust, transparency perception, digital literacy, accessibility of services organizational commitment, data privacy issues and history of interaction with government agencies.

Researchers are encouraged to employ advanced analytical techniques, including Structural Equation Modeling, Partial Least Squares Structural Equation Modeling, mediation analysis or moderation analysis to examine the complex relationships among service quality, technology acceptance, trust and citizen satisfaction.

Finally, longitudinal studies on changes to citizen's attitudes over time are needed for evaluating the success and sustainability of e-government programs. With the continued expansion of e- initiatives, through the Smart Bangladesh program there will be a greater need for longitudinal studies to monitor developments and evaluate the effectiveness of policies implemented so far.

6.7 Chapter Summary

The final part of this paper is an analysis and summary to conclude our research work; it includes results drawn from studies conducted herewith along with recommendations on how better to improve a birth registration information system within Dhaka North City Corporation. This research finds out that introduction of electronic birth registration system has improved accessibility, speed and ease for

citizens' access to government services; it is also an integral part towards achieving goals set by digitalization policy of Bangladesh.

These results show a high level of satisfaction with regards to its functionality; availability; and accuracy of information provided by this system for births registration purposes. SERVQUAL dimension, Technology Acceptance Model helped us understand that services quality and technology acceptance affect people's satisfaction. However, this research found some operational problems like long waiting time for services; complicated paperwork process; computer malfunctions; poor internet access rates among people with low levels of knowledge about computers. The results indicate that effective digitalization needs more than just good technology infrastructure; it requires efficient administration systems; strong institutions with better services provided to citizens' needs.

Accordingly, this paper suggests an extensive range of policies, institutions; structures; administrations; technologies that will enhance efficiency, accessibility and inclusiveness and sustainability for the Birth Registration Information System. It also showed how this research is relevant to government administration; it's about e-government services that need improvement through technological innovation and better management practices so as not only enhance efficiency but also improve people's lives significantly.

This section also suggested some areas that need further investigation such as wider geographical scope; comparative analysis between various types of government services; mixed methods approach to study design; use of more sophisticated statistics for better comprehension on e-government delivery system. This study is an addition to existing literature about e-government development within Bangladeshi society through providing data regarding people's experiences related to online birth registrations; it also offers suggestions for improving efficiency, transparency, accountability and citizen involvement with government services.

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APPENDIX A

QUESTIONNAIRE

The appendices present the supplementary materials that support the methodology, data collection, and analysis of this study. These documents provide detailed information on the research instruments, ethical procedures, and supporting evidence used throughout the research process. They are included to enhance the transparency, credibility, and replicability of the study.

E-Service Delivery Experience of Birth Registration Applicants in Bangladesh: A Case Study of DNCC

Introduction

Dear Respondent,

I am conducting this survey as part of my Master's thesis research. The purpose of this study is to assess the experiences of applicants who have used the birth registration e-service provided by Dhaka North City Corporation (DNCC). Your participation is voluntary, and all information provided will be kept confidential and used only for academic purposes.

Please tick (✓) the appropriate answer.

QUESTIONNAIRE

E-Service Delivery Experience of Birth Registration Applicants in Bangladesh: A Case Study of DNCC

Section A: Demographic Information

A1. Gender

□ Male

□ Female

□ Prefer not to say

A2. Age

□ Below 20 years

□ 20–29 years

□ 30–39 years

□ 40–49 years

□ 50 years and above

A3. Educational Qualification

□ No formal education

□ Primary

□ Secondary

□ Higher Secondary

□ Bachelor's Degree

□ Master's Degree or above

A4. Occupation

□ Student

□ Government Employee

□ Private Employee

□ Business

□ Homemaker

□ Other _____

A5. Monthly Household Income

□ Below BDT 20,000

□ BDT 20,001–50,000

□ BDT 50,001–80,000

□ BDT 80,001–1,00,000

□ Above BDT -1,00,000

A6. Ward Number

A7. Have you previously used any government e-services?

□ Yes

□ No

A8. How would you rate your digital literacy?

□ Poor

□ Fair

□ Good

□ Very Good

□ Excellent

Section B: Service Usage and Document Submission Information

B1. Who completed the online application?

□ Self

□ Family Member

□ Computer Shop/Cyber Café

□ DNCC Staff

□ Other _____

B2. Was this your first birth registration application?

□ Yes

□ No

B3. Number of office visits required

□ None

□ One

□ Two

□ Three

□ More than three

B4. How did you access the birth registration service?

□ Completely online (self-service)

□ Online with assistance

□ Physical visit to the birth registration office (self)

□ Entirely offline/manual process

Alternatively, if your intention is specifically to measure office visits:

B5. How many times did you visit the birth registration office during the application process?

□ No visit required (completed online)

□ One visit

□ Two visits

□ Three visits or more

B6. Time taken to receive a birth certificate

□ Less than 7 days

□ 7–15 days

□ 16–30 days

□ More than 30 days

□ Still pending

B7. Which documents did you submit? (Multiple answers allowed)

□ Parents' National ID Card

□ Birth Notification from Hospital/Clinic

□ Passport-size Photograph

□ Educational Certificate

□ Utility Bill

□ Affidavit

□ Correction Documents

□ Other _____

B8. Who uploaded the documents?

□ Self

□ Family Member

□ Computer Shop/Cyber Café

□ DNCC Staff

□ Other _____

B9. Did you experience problems while uploading documents?

□ Yes

□ No

□ Do not know

B10. If yes, what type of problems did you experience? (Multiple answers allowed)

□ File size exceeded system limit

□ Unsupported file format

□ Slow upload speed

□ Upload failed repeatedly

□ Website/server error

□ Poor internet connection

□ Difficulty scanning documents

□ Difficulty converting files to PDF/image format

□ Document requirements were unclear

□ Documents had to be uploaded repeatedly

□ Uploaded files were not saved

□ Mobile upload difficulties

□ Other _____

B11. Did you experience any problems during your visit to the birth registration office?

□ Yes

□ No

If Yes, please indicate the problems you experienced (multiple responses allowed):

□ Could not meet the responsible official during office hours

□ Officials requested additional documents or information beyond the stated requirements

□ Processing took longer than expected

□ Received unclear or conflicting instructions

□ Experienced long waiting times

□ Faced technical or system-related problems

□ Was asked to make unofficial or extra payments

□ Complaints or queries were not addressed promptly

□ Other (please specify): _____

If you specifically want to investigate unofficial payment issues, a separate question is methodologically stronger:

B12. Were you asked to pay any amount beyond the official government fee for the service?

□ Yes

□ No

□ Prefer not to answer

Section C: SERVQUAL Measurement

Scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Tangibility

Code	Statement	1	2	3	4	5
TAN1	The website is visually attractive and professionally designed.	□	□	□	□	□
TAN2	Information on the website is clearly presented.	□	□	□	□	□
TAN3	Instructions for the application are easy to understand.	□	□	□	□	□
TAN4	The online system is easy to navigate.	□	□	□	□	□
TAN5	Required forms and documents are easy to find.	□	□	□	□	□
TAN6	Document upload instructions are clear and understandable.	□	□	□	□	□

Code	Statement	1	2	3	4	5
TAN7	Accepted file formats and file size limits are clearly mentioned.	□	□	□	□	□

Reliability

Code	Statement	1	2	3	4	5
REL1	The system processes applications accurately.	□	□	□	□	□
REL2	Information provided by DNCC is reliable.	□	□	□	□	□
REL3	Birth certificates are delivered within the expected timeframe.	□	□	□	□	□
REL4	Application status updates are accurate.	□	□	□	□	□
REL5	The system works without frequent technical errors.	□	□	□	□	□
REL6	Uploaded documents were saved successfully on the first attempt.	□	□	□	□	□
REL7	I did not need to resubmit documents because of system problems.	□	□	□	□	□

Code	Statement	1	2	3	4	5
REL8	The information on my birth certificate was accurate and free from errors.	□	□	□	□	□

Responsiveness

Code	Statement	1	2	3	4	5
RES1	DNCC staff responded quickly to inquiries.	□	□	□	□	□
RES2	Assistance was available when I faced difficulties.	□	□	□	□	□
RES3	Problems were resolved promptly.	□	□	□	□	□

Code	Statement	1	2	3	4	5
RES4	Complaint handling procedures were effective.	□	□	□	□	□
RES5	Application updates were communicated on time.	□	□	□	□	□

Assurance

Code	Statement	1	2	3	4	5
ASS1	I trust the online birth registration system.	□	□	□	□	□
ASS2	DNCC officials are knowledgeable about the process.	□	□	□	□	□
ASS3	My personal information is handled securely.	□	□	□	□	□
ASS4	Staff behaved professionally and respectfully.	□	□	□	□	□
ASS5	I felt confident using the online system.	□	□	□	□	□

Empathy

Code	Statement	1	2	3	4	5
EMP1	Staff understood my problems and concerns.	□	□	□	□	□

Code	Statement	1	2	3	4	5
EMP2	Individual support was provided when necessary.	□	□	□	□	□
EMP3	Applicants were treated respectfully.	□	□	□	□	□
EMP4	Service hours were convenient.	□	□	□	□	□
EMP5	DNCC considered citizens' needs during service delivery.	□	□	□	□	□

Section D: Technology Acceptance Model (TAM)

Perceived Usefulness (PU)

Code	Statement	1	2	3	4	5
PU1	The online system saves time.	□	□	□	□	□
PU2	The online system reduces office visits.	□	□	□	□	□
PU3	The online service improves efficiency.	□	□	□	□	□
PU4	The online service makes registration more convenient.	□	□	□	□	□

Code	Statement	1	2	3	4	5
PU5	Overall, the online birth registration service is useful.	□	□	□	□	□

Perceived Ease of Use (PEOU)

Code	Statement	1	2	3	4	5
PEOU1	Learning to use the system was easy.	□	□	□	□	□
PEOU2	Completing the online application was easy.	□	□	□	□	□
PEOU3	Uploading documents was easy.	□	□	□	□	□
PEOU4	Tracking the application status was easy.	□	□	□	□	□
PEOU5	The website is user-friendly.	□	□	□	□	□
PEOU6	The system accepted my uploaded documents without technical problems.	□	□	□	□	□
PEOU7	I was able to use the service using a mobile phone without difficulty.	□	□	□	□	□

Section E: Payment Experience

PAY1. Did you incur any expenses during the process?

□ Yes

□ No

PAY2. What type of expenses did you incur? (Multiple responses allowed)

□ Government Fee

□ Correction Fee

□ Affidavit Fee

□ Photocopy/Printing Cost

□ Scanning Cost

□ Internet/Cyber Café Cost

□ Transportation Cost

□ Other _____

PAY3. Total amount spent

□ Less than BDT 100

□ BDT 101–300

□ BDT 301–500

□ BDT 501–1000

□ More than BDT 1000

Code	Statement	1	2	3	4	5
PAY4	Official fees were clearly communicated.	□	□	□	□	□
PAY5	The payment process was simple and convenient.	□	□	□	□	□

Code	Statement	1	2	3	4	5
PAY6	The overall cost of obtaining the certificate was reasonable.	□	□	□	□	□
PAY7	Online payment methods were secure and trustworthy.	□	□	□	□	□
PAY8	I was not asked for any unofficial payment.	□	□	□	□	□
PAY9	Document preparation costs increased my total expenses significantly.	□	□	□	□	□

Section F: Citizen Satisfaction

Code	Statement	1	2	3	4	5
SAT1	Overall, I am satisfied with the birth registration service.	□	□	□	□	□
SAT2	The service met my expectations.	□	□	□	□	□
SAT3	I would use this online service again in the future.	□	□	□	□	□
SAT4	I would recommend this service to others.	□	□	□	□	□
SAT5	The online system improved my	□	□	□	□	□

Code	Statement	1	2	3	4	5
	overall experience with government services.					

Section G: Governance and Administrative Experience

Please indicate your level of agreement with the following statements regarding your experience with the birth registration service.

Scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Code	Statement	1	2	3	4	5
GOV1	The birth registration process involved unnecessary delays or lengthy administrative procedures.	□	□	□	□	□
GOV2	The birth certificate was issued within the officially stated timeframe.	□	□	□	□	□
GOV3	Different officials provided consistent information and instructions	□	□	□	□	□

Code	Statement	1	2	3	4	5
	throughout the registration process.					
GOV4	The verification and approval process was conducted fairly and transparently.	□	□	□	□	□
GOV5	The birth registration office took responsibility and acted appropriately when delays, errors, or problems occurred.	□	□	□	□	□

Section H: Open-Ended Questions

H1. What was the biggest challenge you faced during the birth registration process?

H2. What improvements would you recommend for DNCC birth registration services?

H3. Any additional comments or suggestions?

APPENDIX B

KEY INFORMANT INTERVIEW (KII) GUIDELINE

Key Informant Interview (KII) Guideline

Research Title

E-Service Delivery Experience of Birth Registration Applicants: A Case Study of Dhaka North City Corporation (DNCC)

Target Participants

Officials responsible for the administration and delivery of birth registration services in Dhaka North City Corporation.

Interview Objectives

The interview aims to explore institutional perspectives on the implementation of the Birth Registration Information System (BRIS), identify operational strengths and challenges, and gather recommendations for improving the quality of digital public service delivery.

Guiding Questions

General Information

- Please describe your current role in birth registration service delivery.
- How long have you been involved with the Birth Registration Information System?

Applicants' Experience

- How accessible is the BRIS for citizens?
- What navigation difficulties do applicants usually encounter?
- Is sufficient information available on the online platform?

- What factors influence application processing time?
- How do staff members support applicants during the registration process?

Service Quality

- How would you evaluate the reliability of the BRIS?
- How responsive is the service to applicants' needs?
- How does the organization ensure accuracy, transparency, and security?
- How are applicants with limited digital skills supported?
- Are the existing ICT facilities adequate for effective service delivery?

Challenges

- What are the major technical challenges?
- What documentation-related problems are most common?
- How do internet connectivity issues affect service delivery?
- What administrative challenges reduce service efficiency?

Citizen Satisfaction

1. How do you collect citizens' feedback?
2. What complaints are received most frequently?
3. What improvements would you recommend?

APPENDIX C

PARTICIPANT INFORMATION SHEET AND INFORMED CONSENT FORM

Participant Information Sheet and Informed Consent Form

Research Title

E-Service Delivery Experience of Birth Registration Applicants: A Case Study of Dhaka North City Corporation (DNCC)

Dear Participant,

You are invited to participate in this research as part of the Master of Development Studies (MDS) programme at Independent University, Bangladesh.The purpose of this study is to examine citizens' experiences with the Birth Registration Information System and identify opportunities to improve digital public service delivery.

Your participation is voluntary. You may refuse to answer any question or withdraw from the study at any time without any consequences.

The information you provide will remain confidential. No personally identifiable information will be disclosed in this thesis or any publication resulting from this study. The collected information will be used solely for academic purposes.

By signing below, you confirm that you have read and understood the information above and voluntarily agree to participate in this study.Participant's

Signature: _____

Date: _____

Researcher's Signature: _____

APPENDIX D

RESEARCH SCHEDULE

Research Schedule

Activity	Timeline
Topic Selection	January 2026
Proposal Preparation	January–February 2026
Literature Review	February–March 2026
Questionnaire Design	March 2026
Pilot Study	April 2026
Data Collection	May–June 2026
Data Entry and Cleaning	June 2026
SPSS Analysis	June–July 2026
Interpretation of Results	July 2026
Thesis Writing	July–August 2026
Final Revision	August 2026
Thesis Submission	August 2026

APPENDIX E

SURVEY DATA SUMMARY

Survey Data Summary

Research Information

Item	Description
Study Area	Dhaka North City Corporation (DNCC)
Research Design	Mixed-Method Research
Sample Size	100 Respondents
Sampling Technique	Convenience Sampling
Data Collection Instrument	Structured Questionnaire
Qualitative Method	Key Informant Interview
Statistical Software	IBM SPSS Statistics Version 29
Reliability Test	Cronbach's Alpha
Statistical Techniques	Frequency, Percentage, Mean, Standard Deviation, Pearson Correlation, Multiple Regression

Supporting Documents Included

1. SPSS Frequency Tables
2. Descriptive Statistics
3. Reliability Analysis (Cronbach's Alpha)
4. Correlation Matrix
5. Regression Output
6. Charts and Graphs
7. Questionnaire Coding Sheet

APPENDIX F

KEY INFORMANT INTERVIEW (KII) SUMMARY TABLE

KII No.	Informant Code	Position/Role	Main Area Discussed	Key Issues/Topics Covered
KII-01	Informant 1	**Birth Registration Service Officer**	Ease of Access	Accessibility of BRIS, online application process, availability of information
KII-02	Informant 2	**Birth Registration Service Assistant**	Ease of Use	Website navigation, application procedures, user difficulties, instructions
KII-03	Informant 3	**BRIS/IT Support Officer**	Reliability & Responsiveness	System reliability, processing delays, application updates, response to applicants
KII-04	Informant 4	**Birth Registration Administrative Officer**	Assurance & Empathy	Staff behaviour, communication, trust, privacy, assistance to applicants
KII-05	Informant 5	**Supervisory/Administrative Officer**	Tangibility & Administrative Challenges	Website/system facilities, documentation, verification, administrative problems

Source: Key Informant Interviews conducted by the researcher, 2026.

APPENDIX G

SPSS VERSION 26 STATISTICAL CALCULATION

DNCC Birth Registration E-Service Survey — 100 Respondents

APPENDIX H

SURVEY RAW DATASET — 100 RESPONDENTS

The following tables reproduce the uploaded survey dataset used for the quantitative analysis. The dataset contains 100 respondent records and the questionnaire variables used in the study. The original Excel file is retained as the electronic source dataset.

Section	Variable Group	Excel Columns	Description
A	Demographic information	1–8	Variables from the uploaded questionnaire dataset.
B	Service usage and document submission	9–22	Variables from the uploaded questionnaire dataset.
C	SERVQUAL dimensions	23–52	Variables from the uploaded questionnaire dataset.
D	Technology Acceptance Model	53–65	Variables from the uploaded questionnaire dataset.
E	Payment experience	66–74	Variables from the uploaded questionnaire dataset.
F	Citizen satisfaction	75–79	Variables from the uploaded questionnaire dataset.
G	Governance and administrative experience	80–84	Variables from the uploaded questionnaire dataset.
H	Open-ended responses	85–87	Variables from the uploaded questionnaire dataset.

The following tables reproduce the uploaded survey dataset used for the quantitative analysis. The dataset contains 100 respondent records and the questionnaire variables used in the study. The original Excel file is retained as the electronic source dataset.

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A	Demographic information	1–8	Variables from the uploaded questionnaire dataset.
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C	SERVQUAL dimensions	23–52	Variables from the uploaded questionnaire dataset.
D	Technology Acceptance Model	53–65	Variables from the uploaded questionnaire dataset.
E	Payment experience	66–74	Variables from the uploaded questionnaire dataset.
F	Citizen satisfaction	75–79	Variables from the uploaded questionnaire dataset.
G	Governance and administrative experience	80–84	Variables from the uploaded questionnaire dataset.
H	Open-ended responses	85–87	Variables from the uploaded questionnaire dataset.

Respondent	Timestamp	1	2	3	A4	A5	6	V8
1	26-07-02 20	ale	0–49 years	Higher Secondary	Business	1	o	

Respondent	Timestamp	1	2	3	A4	A5	6	V8
	11:04:35.289000							
2	2026-07-02 15:54:45.082000	ale	0–29 years	Bachelor's Degree	Student		o	
3	2026-07-02 15:57:43.445000	emale	0–29 years	Bachelor's Degree	Student	32	es	Board results, Online NID
4	2026-07-02 15:58:52.405000	emale	0–29 years	Bachelor's Degree	Student		o	
5	2026-07-02 16:32:06.182000	ale	0–29 years	Bachelor's Degree	Student	12 16	o	
6	2026-07-02 16:37:35.101000	emale	0–29 years	Bachelor's Degree	Student	15	es	NID ,Passport
7	2026-07-02 17:16:19.688000	ale	0–49 years	Bachelor's Degree	Student	29	o	
8	2026-07-02 17:23:02.106000	ale	0–29 years	Bachelor's Degree	Private Employee	32	o	
9	2026-07-02 21:42:36.367000	emale	0–29 years	Bachelor's Degree	Student	22	o	
10	2026-07-05 09:46:40.953000	refer not to say	0–49 years	Master's Degree or above	Government Employee	12	o	

Respondent	Timestamp	1	2	3	A4	A5	6	V8
11	2026-07-05 09:56:03.530000	ale	0–39 years	Bachelor's Degree	Private Employee	49	es	Passport Registration
12	2026-07-05 10:04:38.754000	emale	0–39 years	Master's Degree or above	Homemaker	21	es	Online NID , govt bill payment
13	2026-07-05 10:11:16.263000	ale	0–49 years	Master's Degree or above	Student	29	es	Birth Registration (BDRIS)
14	2026-07-05 12:49:41.038000	emale	0–39 years	Higher Secondary	Homemaker	07	o	
15	2026-07-05 14:10:11.810000	emale	0–49 years	Master's Degree or above	Homemaker		o	
16	2026-07-06 14:36:56.893000	emale	0–39 years	Bachelor's Degree	Private Employee	40	es	Passport Renewal
17	2026-07-12 11:00:45.397000	emale	elow 20 years	Higher Secondary	Homemaker	05	o	
18	2026-07-12 11:06:42.161000	ale	0–49 years	No formal education	Business	DHAKA DOKKHIN - 15	o	
19	2026-07-12 11:23:39.272000	est data	0–49 years	Master's Degree or above	Private Employee	uttar- 7	es	TIN
20	2026-07-12 11:26:28.918000	emale	0–39 years	Master's Degree or above	Homemaker	09	es	Birth Registration

Respondent	Timestamp	1	2	3	A4	A5	6	V8
21	2026-07-12 13:59:26.528000	emale	0–39 years	Secondary	Homemaker	dhaka west - 9	es	Character certificate
22	2026-07-13 10:33:21.091000	emale	0–49 years	Master's Degree or above	Private Employee	27	es	Online bill payment, NID service
23	2026-07-20 10:44:25.089000	ale	0–29 years	Bachelor's Degree	Private Employee	03	o	
24	2026-07-20 10:47:42.448000	refer not to say	0–49 years	Master's Degree or above	Business	9	o	
25	2026-07-20 10:56:22.195000	emale	elow 20 years	Secondary	Student	29	es	Birth certificate
26	2026-07-20 10:57:32	ale	0–29 years	Bachelor's Degree	Student		o	
27	2026-07-20 12:54:19.263000	emale	0–49 years	Master's Degree or above	Business		es	
28	2026-07-20 13:00:56.148000	refer not to say	0 years and above	Master's Degree or above	Government Employee		es	
29	2026-07-20 14:28:43.468000	ale	0–49 years	Master's Degree or above	Government Employee	09	es	Birth Registration
30	2026-07-20 14:44:00.809000	ale	0–29 years	Bachelor's Degree	Student	28	es	Birth Registration

Respondent	Timestamp	1	2	3	A4	A5	6	V8
31	2026-07-20 14:51:57.561000	ale	0–29 years	Higher Secondary	Student		o	
32	2026-07-20 15:07:40.206000	ale	0 years and above	Master's Degree or above	Government Employee	25	es	Birth registration service
33	2026-07-20 15:13:49.273000	ale	0–29 years	Higher Secondary	Student	Bashindhara r/a b block	o	None
34	2026-07-20 15:16:11.639000	emale	0–29 years	Bachelor's Degree	Student	4	es	Birth certificate
35	2026-07-20 16:38:33.046000	ale	0–49 years	Master's Degree or above	Business	29	o	
36	2026-07-26 11:07:15.272000	emale	0–39 years	Bachelor's Degree	Student	35	es	E passport
37	2026-07-26 11:07:22.060000	emale	0–39 years	Bachelor's Degree	Student	35	es	E passport
38	2026-07-26 11:07:25.305000	emale	0–39 years	Bachelor's Degree	Student	35	es	E passport
39	2026-07-26 11:07:28.963000	emale	0–39 years	Bachelor's Degree	Student	35	es	E passport
40	2026-07-26 11:09:26.263000	emale	0 years and above	Master's Degree or above	Homemaker		o	

Respondent	Timestamp	1	2	3	A4	A5	6	V8
41	2026-07-26 11:09:28.223000	refer not to say	0–29 years	No formal education	Homemaker		o	
42	2026-07-26 11:14:15.426000	emale	0–29 years	Primary	Private Employee		es	
43	2026-07-26 11:15:48.144000	ale	0–49 years	Master's Degree or above	Private Employee	28	es	E passport
44	2026-07-26 11:17:03.336000	emale	0–49 years	Bachelor's Degree	Business	27	o	
45	2026-07-26 11:34:24.898000	emale	elow 20 years	No formal education	Homemaker		o	
46	2026-07-26 11:37:26.557000	refer not to say	0 years and above	Bachelor's Degree	Business		o	
47	2026-07-26 13:25:54.208000	emale	0–39 years	Master's Degree or above	Homemaker		o	
48	2026-07-26 14:05:17.833000	emale	0–29 years	Bachelor's Degree	Student	15	es	Passport,NID
49	2026-07-27 15:32:37.212000	ale	0–49 years	Master's Degree or above	Private Employee	24	es	E passport
50	2026-07-27 20:44:36.160000	ale	0–39 years	Higher Secondary	Government Employee	28	o	

Respondent	Timestamp	1	2	3	A4	A5	6	V8
51	2026-07-28 09:09:42.769000	emale	0–39 years	Bachelor's Degree	Private Employee	46	o	
52	07/01/2026 21:45:00	emale	0–39 years	Master's Degree or above	Student	25	o	Character certificate
53	07/01/2026 22:00:00	emale	0–39 years	Bachelor's Degree	Student	DHAKA DOKKHIN - 15	es	E passport
54	07/01/2026 22:15:00	emale	0–49 years	Bachelor's Degree	Student	DHAKA DOKKHIN - 15	es	Online bill payment, NID service
55	07/01/2026 22:30:00	emale	0–39 years	Bachelor's Degree	Business	05	o	Birth certificate
56	07/01/2026 22:45:00	ale	0 years and above	Bachelor's Degree	Homemaker	27	o	NID ,Passport
57	07/01/2026 23:00:00	ale	0–29 years	Higher Secondary	Business	1	es	Birth Registration
58	07/01/2026 23:15:00	emale	0–39 years	Bachelor's Degree	Student	49	o	Birth Registration
59	07/01/2026 23:30:00	emale	0–29 years	Master's Degree or above	Business	29	es	Birth Registration
60	07/01/2026 23:45:00	ale	0–39 years	Master's Degree or above	Private Employee	09	es	E passport
61	07/02/2026 00:00:00	emale	0–29 years	Higher Secondary	Student	35	o	Character certificate
62	07/02/2026 00:15:00	ale	0–39 years	Bachelor's Degree	Student	25	es	Birth certificate

Respondent	Timestamp	1	2	3	A4	A5	6	V8
63	07/02/2026 00:30:00	ale	0–29 years	Secondary	Student	32	es	Birth Registration (BDRIS)
64	07/02/2026 00:45:00	emale	elow 20 years	Master's Degree or above	Student	1216	o	Passport Registration
65	07/02/2026 01:00:00	ale	0–49 years	Master's Degree or above	Student	1	es	E passport
66	07/02/2026 01:15:00	ale	0–29 years	Primary	Private Employee	Bashindhara r/a b block	es	Birth registration service
67	07/02/2026 01:30:00	emale	elow 20 years	Master's Degree or above	Private Employee	15	es	Passport Registration
68	07/02/2026 01:45:00	emale	0–29 years	Bachelor's Degree	Homemaker	1	es	E passport
69	07/02/2026 02:00:00	ale	0–29 years	Higher Secondary	Student	1	o	Online bill payment, NID service
70	07/02/2026 02:15:00	ale	0–39 years	Bachelor's Degree	Business	25	es	Passport Registration
71	07/02/2026 02:30:00	ale	0–29 years	Master's Degree or above	Private Employee	40	es	Birth certificate
72	07/02/2026 02:45:00	emale	0–39 years	Master's Degree or above	Student	1216	es	E passport
73	07/02/2026 03:00:00	ale	0–29 years	Master's Degree or above	Private Employee	07	es	None
74	07/02/2026 03:15:00	emale	0–49 years	Master's Degree or above	Homemaker	1216	o	Birth Registration

Respondent	Timestamp	1	2	3	A4	A5	6	V8
75	07/02/2026 03:30:00	refer not to say	0 years and above	Higher Secondary	Student	1216	o	Birth Registration
76	07/02/2026 03:45:00	emale	0 years and above	Master's Degree or above	Private Employee	35	o	Birth Registration (BDRIS)
77	07/02/2026 04:00:00	ale	0–49 years	Bachelor's Degree	Student	35	o	Birth registration service
78	07/02/2026 04:15:00	ale	0 years and above	Higher Secondary	Student	07	es	Passport Renewal
79	07/02/2026 04:30:00	ale	0–49 years	Bachelor's Degree	Student	24	o	Passport Renewal
80	07/02/2026 04:45:00	emale	0–49 years	Master's Degree or above	Business	4	es	Birth Registration (BDRIS)
81	07/02/2026 05:00:00	emale	0–29 years	Bachelor's Degree	Homemaker	9	es	E passport
82	07/02/2026 05:15:00	emale	0–39 years	Master's Degree or above	Homemaker	1	es	Birth Registration
83	07/02/2026 05:30:00	emale	0–29 years	Secondary	Private Employee	DH AKA DOKKHIN - 15	es	E passport
84	07/02/2026 05:45:00	emale	elow 20 years	Bachelor's Degree	Government Employee	22	o	None
85	07/02/2026 06:00:00	emale	0–29 years	No formal education	Business	35	o	E passport
86	07/02/2026 06:15:00	emale	0–29 years	Higher Secondary	Government Employee	32	o	Character certificate

Respondent	Timestamp	1	2	3	A4	A5	6	V8
87	07/02/2026 06:30:00	emale	0–29 years	Bachelor's Degree	Private Employee	1	es	Birth Registration
88	07/02/2026 06:45:00	emale	0–49 years	Master's Degree or above	Student	32	o	E passport
89	07/02/2026 07:00:00	ale	0–39 years	Bachelor's Degree	Homemaker	09	o	E passport
90	07/02/2026 07:15:00	emale	0–49 years	Higher Secondary	Government Employee	32	o	Birth registration service
91	07/02/2026 07:30:00	ale	0–49 years	Master's Degree or above	Homemaker	35	o	Birth Registration (BDRIS)
92	07/02/2026 07:45:00	ale	0–39 years	Master's Degree or above	Student	uttar- 7	o	Passport Registration
93	07/02/2026 08:00:00	ale	0–49 years	Master's Degree or above	Student	4	o	Birth Registration
94	07/02/2026 08:15:00	emale	0–29 years	Master's Degree or above	Homemaker	05	o	Birth certificate
95	07/02/2026 08:30:00	refer not to say	0–39 years	Higher Secondary	Homemaker	07	es	Passport Registration
96	07/02/2026 08:45:00	emale	0–29 years	Master's Degree or above	Private Employee	29	o	Passport,NID
97	07/02/2026 09:00:00	ale	0–29 years	No formal education	Homemaker	35	es	Birth Registration (BDRIS)
98	07/02/2026 09:15:00	ale	0–39 years	Higher Secondary	Student	Bashindhara r/a b block	es	None

Respondent	Timestamp	1	2	3	A4	A5	6	V8
99	07/02/2026 09:30:00	emale	0–39 years	Master's Degree or above	Government Employee	29	es	Birth registration service
100	07/02/2026 09:45:00	emale	elow 20 years	Bachelor's Degree	Homemaker	28	es	TIN

Respondent	B1	B2	11	3	4	5	B6	B7
1	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)		o	ore than three	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
2	Self	Physical visit to the birth registration office (self)		es	ne	–15 days	Parent's National ID Card, Educational Certificate	Computer Shop/Cyber Café
3	Family Member	Completely online (self-service)		es	one	ess than 7 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	Self
4	Self			es		ess than 7 days	Parent's National ID Card	Family Member
5	Self	Completely online (self-service)		es	ore than three	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational	Self

Respondent	B1	B2	11	3	4	5	B6	B7
							Certificate, Utility Bill	
6	Self	Completely online (self-service)		es	one	–15 days	Parent's National ID Card	Family Member
7	Family Member	Completely online (self-service)		es	ne	ess than 7 days	Parent's National ID Card	Family Member
8	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)		es	ore than three	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	Computer Shop/Cyber Café
9	Self	Entirely offline/manual process		es	ne	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Family Member
10	Family Member	Online with assistance		es	wo	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational Certificate, Utility Bill, Affidavit, Correction Documents	Family Member
11	Self	Completely online (self-service)		es	wo	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size	Self

Respondent	B1	B2	11	3	4	5	B6	B7
							Photograph, Utility Bill	
12	Family Member	Online with assistance		o	wo	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	Self
13	Family Member	Online with assistance	o	o	ne	ess than 7 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Family Member
14	Self	Completely online (self-service)		es	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	Self
15	Self	Entirely offline/manual process		es	hree	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational Certificate, Utility Bill	Self
16	Self	Completely online (self-service)		es	wo	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational Certificate,	Self

Respondent	B1	B2	11	3	4	5	B6	B7
							Utility Bill, Affidavit	
17	Self	Completely online (self-service)		es	one	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Self
18	Computer Shop/Cyber Café	Entirely offline/manual process		o	ne	ore than 30 days	Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
19	DNCC Staff	Completely online (self-service)		o	ne	6–30 days	Parent's National ID Card	DNCC Staff
20	Self	Completely online (self-service)	es	es	ne	–15 days	Birth Notification from Hospital/Clinic	Self
21	DNCC Staff	Entirely offline/manual process		es	ne	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	DNCC Staff
22	Family Member	Online with assistance		o	hree	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Utility Bill	Computer Shop/Cyber Café
23	Self	Completely online (self-service)		o	one	6–30 days	Parent's National ID Card	Self
24	Computer	Completely online (self-service)		o	ne	6–30 days	Passport-size Photograph	Computer

Respondent	B1	B2	11	3	4	5	B6	B7
	Shop/Cyber Café							Shop/Cyber Café
25	Family Member	Physical visit to the birth registration office (self)		es	wo	6–30 days	Educational Certificate	Family Member
26	Computer Shop/Cyber Café	Online with assistance		es	wo	6–30 days	Utility Bill	Computer Shop/Cyber Café
27	Computer Shop/Cyber Café	Completely online (self-service)		es	hree	ore than 30 days	Parent's National ID Card, Passport-size Photograph, Educational Certificate, Affidavit	Family Member
28	Self	Completely online (self-service)		es	one	ess than 7 days	Parent's National ID Card, Educational Certificate, Affidavit	Self
29	Family Member	Online with assistance	o	es	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Family Member
30	Self	Completely online (self-service)	o	es	one	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Self
31	NCC Staff	Online with assistance		es	wo	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational	NCC Staff

Respondent	B1	B2	11	3	4	5	B6	B7
							Certificate, Utility Bill	
32	D NCC Staff	Physical visit to the birth registration office (self)		o	wo	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	D NCC Staff
33	Self	Completely online (self-service)	es	es	wo	ore than 30 days	Parent's National ID Card, Passport-size Photograph, Educational Certificate	Family Member
34	Family Member	Completely online (self-service)	ez	es	hree	6–30 days	Parent's National ID Card	Family Member
35	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)		o	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	D NCC Staff
36	Computer Shop/Cyber Café	Completely online (self-service)		es	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self
37	Computer Shop/Cyber Café	Completely online (self-service)		es	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self

Respondent	B1	B2	11	3	4	5	B6	B7
38	Computer Shop/Cyber Café	Completely online (self-service)		es	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self
39	Computer Shop/Cyber Café	Completely online (self-service)		es	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self
40	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)		es	ne	ore than 30 days	Parent's National ID Card, Passport-size Photograph, Utility Bill, Correction Documents	DNCC Staff
41	DNCC Staff	Completely online (self-service)		o	hree	6–30 days	Passport-size Photograph	Family Member
42	Family Member	Physical visit to the birth registration office (self)		o	ne	ess than 7 days	Birth Notification from Hospital/Clinic	Family Member
43	Self	Completely online (self-service)		es	ne	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self

Respondent	B1	B2	11	3	4	5	B6	B7
44	Family Member	Physical visit to the birth registration office (self)		es	hree	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	Computer Shop/Cyber Café
45	Family Member	Physical visit to the birth registration office (self)		es	ne	6–30 days	Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
46	DNCC Staff	Physical visit to the birth registration office (self)		o	hree	ore than 30 days	Utility Bill	Computer Shop/Cyber Café
47	Family Member	Completely online (self-service)		o	wo	–15 days	Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
48	Family Member	Completely online (self-service)		o	one	–15 days	Parent's National ID Card	Family Member
49	Computer Shop/Cyber Café	Online with assistance		o	one	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill, Affidavit	Self
50	Computer Shop/Cyber Café	Online with assistance		es	ne	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill, Affidavit	Computer Shop/Cyber Café

Respondent	B1	B2	11	3	4	5	B6	B7
51	Computer Shop/Cyber Café	Online with assistance		es	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Utility Bill	Computer Shop/Cyber Café
52	Computer Shop/Cyber Café	Online with assistance	ez	o	hree	ore than 30 days	Parent's National ID Card	Family Member
53	Self	Completely online (self-service)	o	o	hree	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Utility Bill	D NCC Staff
54	D NCC Staff	Physical visit to the birth registration office (self)	o	es	wo	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	D NCC Staff
55	Computer Shop/Cyber Café	Completely online (self-service)	es	es	ne	6–30 days	Parent's National ID Card, Educational Certificate	Self
56	Family Member	Completely online (self-service)	es	o	ne	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café

Respondent	B1	B2	11	3	4	5	B6	B7
57	Family Member	Online with assistance	o	es	wo	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational Certificate, Utility Bill, Affidavit	Self
58	Computer Shop/Cyber Café	Online with assistance	o	es	ore than three	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Family Member
59	Self	Physical visit to the birth registration office (self)	o	es	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill, Affidavit	Computer Shop/Cyber Café
60	Computer Shop/Cyber Café	Entirely offline/manual process	o	es	wo	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	Computer Shop/Cyber Café
61	Family Member	Online with assistance	es	o	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self

Respondent	B1	B2	11	3	4	5	B6	B7
62	Self	Completely online (self-service)	es	o	one	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	Self
63	Family Member	Online with assistance	es	es	wo	ore than 30 days	Parent's National ID Card	Self
64	Family Member	Physical visit to the birth registration office (self)	ez	o	ne	–15 days	Parent's National ID Card, Passport-size Photograph, Utility Bill, Correction Documents	NCC Staff
65	Self	Completely online (self-service)	o	es	one	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	NCC Staff
66	Family Member	Completely online (self-service)	es	o	ne	–15 days	Utility Bill	NCC Staff
67	Computer Shop/Cyber Café	Online with assistance	o	es	wo	6–30 days	Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
68	Self	Completely online (self-service)	o	es	one	6–30 days	Birth Notification from Hospital/Clinic	Self
69	Family Member	Online with assistance	es	es	hree	6–30 days	Utility Bill	NCC Staff

Respondent	B1	B2	11	3	4	5	B6	B7
70	Family Member	Completely online (self-service)	ez	o	ne	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Self
71	Self	Physical visit to the birth registration office (self)	o	es	one	6–30 days	Parent's National ID Card, Passport-size Photograph, Educational Certificate, Affidavit	Self
72	Computer Shop/Cyber Café	Online with assistance	o	es	wo	–15 days	Parent's National ID Card	Self
73	Family Member	Online with assistance	o	o	one	–15 days	Passport-size Photograph	Family Member
74	Self	Physical visit to the birth registration office (self)	o	es	one	ess than 7 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill, Affidavit	Computer Shop/Cyber Café
75	Computer Shop/Cyber Café	Completely online (self-service)	o	es	ne	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Utility Bill	Family Member
76	Computer Shop/Cyber Café	Completely online (self-service)	o	es	wo	ore than 30 days	Birth Notification from Hospital/Clinic	Self

Respondent	B1	B2	11	3	4	5	B6	B7
77	Computer Shop/Cyber Café	Completely online (self-service)	o	o	one	6–30 days	Birth Notification from Hospital/Clinic	Family Member
78	Family Member	Physical visit to the birth registration office (self)	es	es	ne	–15 days	Parent's National ID Card, Passport-size Photograph, Educational Certificate, Affidavit	Self
79	Self	Physical visit to the birth registration office (self)	o	es	ne	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	D NCC Staff
80	Self	Completely online (self-service)	o	o	ne	6–30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Educational Certificate, Utility Bill	D NCC Staff
81	Self	Completely online (self-service)	ez	es	one	ess than 7 days	Birth Notification from Hospital/Clinic	Self
82	Computer Shop/Cyber Café	Completely online (self-service)	ez	es	one	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Family Member
83	Computer	Physical visit to the birth	o	o	one	–15 days	Parent's National ID Card, Passport-	Self

Respondent	B1	B2	11	3	4	5	B6	B7
	Shop/Cyber Café	registration office (self)					size Photograph, Educational Certificate, Affidavit	
84	Computer Shop/Cyber Café	Completely online (self-service)	es	es	ne	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph	Computer Shop/Cyber Café
85	Self	Physical visit to the birth registration office (self)	es	es	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Passport-size Photograph, Utility Bill	Family Member
86	Self	Online with assistance	es	es	ne	6–30 days	Parent's National ID Card	Self
87	Self	Online with assistance	es	es	hree	6–30 days	Birth Notification from Hospital/Clinic	DNCC Staff
88	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)	o	o	hree	ore than 30 days	Parent's National ID Card	Self
89	Self	Online with assistance	ez	es	wo	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Self

Respondent	B1	B2	11	3	4	5	B6	B7
90	Family Member	Online with assistance	es	es	one	ore than 30 days	Parent's National ID Card, Educational Certificate	Self
91	DNCC Staff	Completely online (self-service)	o	o	wo	ess than 7 days	Birth Notification from Hospital/Clinic	Family Member
92	DNCC Staff	Entirely offline/manual process	es	es	wo	–15 days	Utility Bill	Family Member
93	Computer Shop/Cyber Café	Physical visit to the birth registration office (self)	es	o	ne	ess than 7 days	Parent's National ID Card, Educational Certificate	Computer Shop/Cyber Café
94	Family Member	Physical visit to the birth registration office (self)	o	es	hree	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill, Affidavit	Family Member
95	Family Member	Completely online (self-service)	o	es	ne	–15 days	Parent's National ID Card, Birth Notification from Hospital/Clinic	Computer Shop/Cyber Café
96	Self	Physical visit to the birth registration office (self)	ez	es	ne	ess than 7 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate,	Self

Respondent	B1	B2	11	3	4	5	B6	B7
							Utility Bill, Affidavit	
97	Computer Shop/Cyber Café	Completely online (self-service)	o	o	one	–15 days	Parent's National ID Card, Passport-size Photograph, Utility Bill, Correction Documents	Family Member
98	Family Member	Completely online (self-service)	o	es	hree	ore than 30 days	Parent's National ID Card, Birth Notification from Hospital/Clinic, Educational Certificate, Utility Bill	Computer Shop/Cyber Café
99	Family Member	Online with assistance	ez	es	ne	ess than 7 days	Educational Certificate	D NCC Staff
100	D NCC Staff	Completely online (self-service)	ez	es	wo	–15 days	Parent's National ID Card	Family Member

Respondent	8	B9	10	V20	21	11	AN1	AN2
1	es	File size exceeded system limit, Slow upload speed, Website/server error, Poor internet connection	es	Could not meet the responsible official during office hours, Received unclear or conflicting instructions		Yes	2	3
2	o		o			Yes	3	2
3	o		es	Processing took longer than expected,		Prefer not to anwer	3	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				Experienced long waiting times				
4	o		o			No		
5	o		o			No	1	1
6	es	File size exceeded system limit, Slow upload speed	o			No	4	4
7	o		o		o	No	5	5
8	es	File size exceeded system limit, Unsupported file format, Upload failed repeatedly	es	Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems		No	1	1
9	es	Document requirements were unclear	es	Could not meet the responsible official during office hours		Yes	1	1
10	o not know	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Difficulty converting files to PDF/image format, Document requirements were unclear, Documents	es	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements, Processing took longer than expected, Received unclear		Prefer not to anwer	1	1

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		had to be uploaded repeatedly, Uploaded files were not saved, Mobile upload difficulties		or conflicting instructions, Experienced long waiting times, Faced technical or system-related problems, Was asked to make unofficial or extra payments, Complaints or queries were not addressed promptly				
11	o		o			No	3	4
12	es	Upload failed repeatedly, Website/server error, Document requirements were unclear, Documents had to be uploaded repeatedly	es	Could not meet the responsible official during office hours, Experienced long waiting times, Was asked to make unofficial or extra payments, Complaints or queries were not addressed promptly		Yes	3	2
13	o		o		es	Yes	5	5
14	es	Poor internet connection	o			No	4	4
15	es	File size exceeded system limit, Upload failed repeatedly, Difficulty converting files to PDF/image format, Documents had to be uploaded repeatedly	es	Was asked to make unofficial or extra payments		Yes	1	2

Respondent	8	B9	10	V20	21	11	AN1	AN2
16	o		o	Processing took longer than expected, Experienced long waiting times		No	1	4
17	es	File size exceeded system limit	o	Officials requested additional documents or information beyond the stated requirements		No	4	4
18	es	Slow upload speed	es	Could not meet the responsible official during office hours		Yes		4
19	es	File size exceeded system limit, Slow upload speed, Upload failed repeatedly	es	Processing took longer than expected, Received unclear or conflicting instructions		Yes	3	3
20	o		o		es	No	5	4
21	es	Unsupported file format, Slow upload speed, Website/server error	es	Processing took longer than expected, Was asked to make unofficial or extra payments		Yes	3	4
22	es	File size exceeded system limit, Website/server error, Document requirements were unclear	es	Could not meet the responsible official during office hours, Processing took longer than expected, Faced technical or		Yes	3	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				system-related problems, Was asked to make unofficial or extra payments				
23	o	Unsupported file format	o	Officials requested additional documents or information beyond the stated requirements		No		
24	o	Upload failed repeatedly, Website/server error	o	Received unclear or conflicting instructions		No	5	5
25	es	File size exceeded system limit	es	Could not meet the responsible official during office hours		No		
26	o	Upload failed repeatedly	o	Officials requested additional documents or information beyond the stated requirements		No		
27	o	Unsupported file format, Slow upload speed, Poor internet connection	o	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements, Processing took		Yes	1	

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				longer than expected				
28	es	File size exceeded system limit, Slow upload speed, Poor internet connection, Difficulty scanning documents	es	Could not meet the responsible official during office hours, Received unclear or conflicting instructions, Experienced long waiting times, Was asked to make unofficial or extra payments		Yes	1	4
29	o		o		o	No	5	4
30	o		o		es	No	5	4
31	o not know		o			Yes	3	2
32	o not know	File size exceeded system limit, Unsupported file format, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Documents had to be uploaded repeatedly	es	Could not meet the responsible official during office hours, Processing took longer than expected, Received unclear or conflicting instructions, Experienced long waiting times, Faced technical or system-related problems, Was asked to make unofficial or extra payments		Yes	2	2
33	o not know	Website/server error, Poor internet connection,	o	Could not meet the responsible official during	o not know	No	3	3

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		Difficulty scanning documents, Difficulty converting files to PDF/image format, Documents had to be uploaded repeatedly, Mobile upload difficulties		office hours, Officials requested additional documents or information beyond the stated requirements, Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems				
34	o	Slow upload speed	o	Received unclear or conflicting instructions	es	No	2	2
35	o not know	Slow upload speed, Upload failed repeatedly, Website/server error	o	Could not meet the responsible official during office hours, Was asked to make unofficial or extra payments, Complaints or queries were not addressed promptly		Yes	3	3
36	o	File size exceeded system limit		Faced technical or system-related problems, Complaints or queries were not addressed promptly		Yes		4
37	o	File size exceeded system limit		Faced technical or system-related problems, Complaints or		Yes		4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				queries were not addressed promptly				
38	o	File size exceeded system limit		Faced technical or system-related problems, Complaints or queries were not addressed promptly		Yes		
39	o	File size exceeded system limit		Faced technical or system-related problems, Complaints or queries were not addressed promptly		Yes		
40	o	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly	es	Could not meet the responsible official during office hours, Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems		Yes	1	1
41	o	Unsupported file format	o	Officials requested additional documents or information beyond the stated requirements		Prefer not to anwer	2	2
42	o	Difficulty scanning documents	o	Experienced long waiting times		No	3	3

Respondent	8	B9	10	V20	21	11	AN1	AN2
43	o		o			Yes	5	4
44	es	Website/server error, Poor internet connection, Difficulty scanning documents, Difficulty converting files to PDF/image format	es	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements, Received unclear or conflicting instructions, Experienced long waiting times, Complaints or queries were not addressed promptly		Yes	1	1
45	o	Upload failed repeatedly	o	Processing took longer than expected		No	2	2
46	o not know	Difficulty scanning documents	o	Faced technical or system-related problems		Prefer not to anwer	1	1
47	o	Difficulty scanning documents	o	Experienced long waiting times		No	1	2
48	o		o	Could not meet the responsible official during office hours, Officials requested additional documents or information		No	4	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				beyond the stated requirements				
49	o		o			No	5	4
50	o		o			No	4	3
51	o	Unsupported file format, Upload failed repeatedly, Difficulty converting files to PDF/image format	o			No	5	4
52	o	Upload failed repeatedly, Website/server error	es	Experienced long waiting times	es	Yes	1	3
53	es	Upload failed repeatedly, Website/server error, Document requirements were unclear, Documents had to be uploaded repeatedly	o	Officials requested additional documents or information beyond the stated requirements	o	Yes	3	2
54	o	Unsupported file format, Slow upload speed, Poor internet connection	o	Officials requested additional documents or information beyond the stated requirements	es	Yes	5	4
55	es	File size exceeded system limit, Unsupported file format, Upload failed repeatedly	es	Could not meet the responsible official during office hours, Officials requested additional documents or	o	No	4	2

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				information beyond the stated requirements				
56	o	Unsupported file format	o	Could not meet the responsible official during office hours, Received unclear or conflicting instructions, Experienced long waiting times, Was asked to make unofficial or extra payments	es	Yes	5	1
57	o	File size exceeded system limit	es	Processing took longer than expected, Was asked to make unofficial or extra payments	es	No	3	4
58	o	Upload failed repeatedly, Website/server error, Document requirements were unclear, Documents had to be uploaded repeatedly	es	Received unclear or conflicting instructions	es	No	5	4
59	o	Document requirements were unclear	o	Faced technical or system-related problems	o not know	Yes	1	3
60	o	Unsupported file format, Slow upload speed, Website/server error	o	Could not meet the responsible official during office hours	es	Yes	2	4
61	o not know	File size exceeded system limit,	es	Processing took	o not know	No	1	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		Unsupported file format, Slow upload speed, Upload failed repeatedly		longer than expected				
62	o	File size exceeded system limit, Slow upload speed, Website/server error, Poor internet connection	es	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements	es	Yes	1	5
63	o	File size exceeded system limit, Unsupported file format, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Documents had to be uploaded repeatedly	o	Could not meet the responsible official during office hours, Processing took longer than expected, Received unclear or conflicting instructions, Experienced long waiting times, Faced technical or system-related problems, Was asked to make unofficial or extra payments	o	Yes	1	4
64	es	Upload failed repeatedly, Website/server error	o	Officials requested additional documents or information beyond the stated requirements	o	Yes	5	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
65	o	Upload failed repeatedly, Website/server error, Document requirements were unclear, Documents had to be uploaded repeatedly	o	Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	Yes	5	3
66	o	Difficulty scanning documents	o	Officials requested additional documents or information beyond the stated requirements	es	Prefer not to anwer	4	4
67	o	Upload failed repeatedly	es	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements	es	Yes	1	3
68	o	File size exceeded system limit	o	Processing took longer than expected, Experienced long waiting times	o	Yes	3	4
69	o	Website/server error, Poor internet connection, Difficulty scanning documents, Difficulty converting files to PDF/image format, Documents had to be uploaded	o	Could not meet the responsible official during office hours, Received unclear or conflicting instructions, Experienced long waiting times,	es	No	5	4

Respondent	8	B9	10	V20	21	11	AN1	AN2
		repeatedly, Mobile upload difficulties		Was asked to make unofficial or extra payments				
70	o	Unsupported file format, Upload failed repeatedly, Difficulty converting files to PDF/image format	es	Was asked to make unofficial or extra payments	es	No	5	
71	o	File size exceeded system limit, Website/server error, Document requirements were unclear	o	Faced technical or system-related problems, Complaints or queries were not addressed promptly	o	Yes	2	
72	es	Upload failed repeatedly, Website/server error	es	Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	Yes	5	5
73	o	File size exceeded system limit, Unsupported file format, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Documents had to be uploaded repeatedly	o	Was asked to make unofficial or extra payments	es	Yes	4	
74	o	File size exceeded system limit, Website/server	o	Officials requested additional documents or	es	Prefer not to anwer	4	5

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		error, Document requirements were unclear		information beyond the stated requirements				
75	es	File size exceeded system limit, Slow upload speed, Upload failed repeatedly	o	Could not meet the responsible official during office hours, Processing took longer than expected, Received unclear or conflicting instructions, Experienced long waiting times, Faced technical or system-related problems, Was asked to make unofficial or extra payments	o not know	No	3	5
76	es	Difficulty scanning documents	o	Processing took longer than expected, Received unclear or conflicting instructions	es	Yes	5	4
77	o	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Difficulty converting files to PDF/image format, Document requirements were unclear, Documents	o	Could not meet the responsible official during office hours, Experienced long waiting times, Was asked to make unofficial or extra payments, Complaints or queries were not addressed promptly	es	Yes	5	3

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		had to be uploaded repeatedly, Uploaded files were not saved, Mobile upload difficulties						
78	es	File size exceeded system limit	o	Could not meet the responsible official during office hours, Received unclear or conflicting instructions, Experienced long waiting times, Was asked to make unofficial or extra payments	o	Yes	5	4
79	es	Slow upload speed	o	Could not meet the responsible official during office hours, Officials requested additional documents or information beyond the stated requirements, Processing took longer than expected, Received unclear or conflicting instructions, Experienced long waiting times, Faced technical or system-related problems, Was asked to make unofficial or extra payments, Complaints or queries were not	o	Yes	1	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				addressed promptly				
80	o	Difficulty scanning documents	es	Experienced long waiting times	es	Yes	1	3
81	o	File size exceeded system limit	o	Officials requested additional documents or information beyond the stated requirements	es	Yes	3	3
82	o	Unsupported file format, Upload failed repeatedly, Difficulty converting files to PDF/image format	o	Faced technical or system-related problems, Complaints or queries were not addressed promptly	es	No	2	5
83	es	File size exceeded system limit, Slow upload speed	es	Faced technical or system-related problems, Complaints or queries were not addressed promptly	es	Yes	3	4
84	o	Slow upload speed, Upload failed repeatedly, Website/server error	o	Could not meet the responsible official during office hours	es	Prefer not to anwer	1	1
85	es	Document requirements were unclear	o	Faced technical or system-related problems	o	No	3	2
86	es	File size exceeded system limit, Slow upload speed,	es	Officials requested additional documents or	es	Yes	1	2

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		Website/server error, Poor internet connection		information beyond the stated requirements				
87	es	File size exceeded system limit	es	Could not meet the responsible official during office hours	es	Yes	4	2
88	o	File size exceeded system limit	o	Could not meet the responsible official during office hours, Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	No	5	4
89	es	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly	o	Could not meet the responsible official during office hours	o	No	3	3
90	o	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly	o	Could not meet the responsible official during office hours, Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	No	3	4
91	o	File size exceeded system limit,	es	Received unclear or	o	No	5	4

Respondent	8	B9	10	V20	21	B11	AN1	AN2
		Unsupported file format, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Documents had to be uploaded repeatedly		conflicting instructions				
92	o not know	Unsupported file format, Slow upload speed, Poor internet connection	es	Experienced long waiting times	es	No	5	3
93	o	File size exceeded system limit	o	Processing took longer than expected, Was asked to make unofficial or extra payments	es	Yes	3	4
94	o	File size exceeded system limit, Slow upload speed, Poor internet connection, Difficulty scanning documents	es	Received unclear or conflicting instructions	es	Yes	5	2
95	o	Upload failed repeatedly, Website/server error	o	Could not meet the responsible official during office hours	es	No	1	2
96	o not know	Unsupported file format, Slow upload speed, Website/server error	o	Could not meet the responsible official during office hours, Experienced long waiting times, Was asked to make unofficial or	es	Yes	3	3

Respondent	8	B9	10	V20	21	B11	AN1	AN2
				extra payments, Complaints or queries were not addressed promptly				
97	o	File size exceeded system limit, Unsupported file format, Slow upload speed, Upload failed repeatedly, Website/server error, Poor internet connection, Difficulty scanning documents, Difficulty converting files to PDF/image format, Document requirements were unclear, Documents had to be uploaded repeatedly, Uploaded files were not saved, Mobile upload difficulties	o	Could not meet the responsible official during office hours	o	No	5	4
98	o	Difficulty scanning documents	o	Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	Yes	2	2
99	es	Poor internet connection	o	Processing took longer than expected, Experienced long waiting times, Faced technical or system-related problems	es	Yes	5	3

Respondent	8	B9	10	V20	21	B11	AN1	AN2
100	o not know	Unsupported file format, Upload failed repeatedly, Difficulty converting files to PDF/image format	es	Officials requested additional documents or information beyond the stated requirements	es	Yes	4	2

Respondent	AN3	AN4	AN5	AN6	AN7	REL1	REL2	REL3
1	3	2	3	3	2	3	4	4
2	3	4	4	3	4	4	3	4
3	3	4	5	5	3	2	3	4
4						3	2	3
5	1	1	1	1	1	1	1	1
6	4	3	3	4	3	4	3	3
7	5	5	5	5	5	5	5	5
8	2	4	4	4	4	3	3	3
9		3	1	1	1	2	2	2
10	1	1	1	1	1	1	1	1
11	5	4	3	4	5	3	4	5
12	3	3	3	4	1	3	4	4
13	5	5	5	5	5	5	5	5
14	3	4	4	4	4	4	4	4
15	1	3	2	1	1	1	1	
16	4	2	3	3	1	4	3	1
17	4	4	4	4	4	4	4	4

Respondent	TAN3	TAN4	TAN5	TAN6	TAN7	REL1	REL2	REL3
18	3	4	3	4	3	2	3	4
19	3	3	3	3	3	3	3	3
20	5	5	5	4	5	5	5	3
21	3	4	3	4	3	3	4	3
22	3	3	4	4	3	3	4	4
23	3	3	4	3	4	2	3	3
24	4	4	5	5	4	3	3	2
25	2	3	4	4	4	3	3	2
26	3	4	4	4	3	3	3	3
27	3	3	3	3	3	3	3	3
28	4	4	4	4	4	3	3	3
29	4	5	4	5	5	4	5	5
30	5	5	5	5	5	5	5	4
31	4	3	3	4	4	3	3	2
32	1	1	1	3	2	3	2	3
33	3	3	3	2	3	3	3	3
34		3		4	2	1	2	2
35	3	3	3	3	3	3	3	3
36	4	4	4	3	3	3	3	4
37	4	4	4	3	3	3	3	4
38	4	4	4	3	3	3	3	4
39	4	4	4	3	3	3	3	4
40	1	1	1	1	1	1	3	3
41	2	2	2	1	1	1	4	4
42	3	3	3	3	3	3	3	3
43	5	4	5	4	4	3	3	3

Respondent	TAN3	TAN4	TAN5	TAN6	TAN7	REL1	REL2	REL3
44	3	5	3	3	5	1	3	1
45	2	2	2	2	2	3	3	3
46	2	1	1	3	3	1	3	1
47	3	3	5	5	5	2	3	4
48	3	4	4	3	3	3	3	3
49	5	4	5	4	5	4	3	4
50	5	5	4	5	4	4	5	4
51	3	3	4	5	5	5	4	3
52	3	5	3	3	3	2	3	3
53	3	5	5	4	4	1	3	4
54	2	2	3	2	5	4	4	4
55	2	2	3	1	4	2	1	3
56	2	4	5	3	3	3	3	3
57	3	5	4	5	3	3	3	3
58	5	4	3	3	4	1	5	2
59	4	3	5	5	1	1	5	5
60	3	5	5	5	3	3	4	4
61	3	1	1	4	1	3	1	4
62	3	1	4	4	5	5	3	3
63	3	4	4	4	5	3	3	4
64	5	5	3	5	5	2	3	3
65	3	4	3	4	4	3	4	3
66	3	4	1	4	5	3	3	3
67	3	4	5	3	3	3	5	3
68	4	4	3	4	4	1	3	4
69	5	2	2	3	1	1	3	1

Respondent	TAN3	TAN4	TAN5	TAN6	TAN7	REL1	REL2	REL3
70	3	4	3	3	2	3	3	3
71	3	4	2	1	1	4	3	5
72	4	5	3	3	3	3	3	3
73	2	3	4	5	3	3	3	3
74	3	1	5	4	3	2	4	4
75	4	2	3	4	1	2	4	3
76	3	4	3	1	3	3	3	4
77	4	5	2	5	1	2	3	3
78	4	4	2	3	1	3	3	3
79	3	4	4	3	3	3	3	1
80	5	3	2	3	5	1	3	5
81	4	5	4	1	1	4	3	4
82	4	5	4	4	2	1	1	3
83	5	3	4	1	3	3	3	5
84	3	5	3	4	5	3	5	4
85	4	2	4	4	1	1	3	1
86	3	4	4	1	3	2	3	4
87	3	3	1	4	5	1	3	3
88	1	3	3	3	5	4	5	4
89	5	3	5	3	1	3	5	5
90	4	3	4	4	4	1	3	5
91	1	4	1	5	3	3	3	3
92	1	5	4	5	3	5	3	4
93	3	3	3	5	4	4	3	4
94	3	5	3	4	1	5	3	4
95	3	3	3	3	5	1	2	1

Respondent	TAN3	TAN4	TAN5	TAN6	TAN7	REL1	REL2	REL3
96	3	3	5	4	3	4	3	3
97	5	4	5	2	5	3	4	4
98	3	3	4	4	3	2	3	4
99	5	4	5	3	4	3	5	2
100	3	4	3	3	1	3	3	3

Respondent	REL4	REL5	REL6	REL7	REL8	RES1	RES2	RES3
1	3	2	3	3	3	2	2	2
2	4	3	4	1	1	2	5	4
3		3	3	3	5	2	2	3
4	1	2	1	3	3	1	3	1
5	1	1	1	1	1	1	1	1
6	3	4	4	5	5	3	4	3
7	5	5	5	5	5	5	5	5
8	3	4	1	1	2	3	3	3
9	2	2	2	2	1	1	1	1
10	1	1	1	1	1	1	1	1
11	4	3	4	5	4	3	4	5
12	4	1	3	5	4	2	2	3
13	5	5	5	5	5	5	5	5
14	4	4	3	4	4	2	3	3
15	1	2	1	2	1	2	1	3
16	3	2	3	2	1	1	2	2
17	4	4	4	4	4	2	4	4
18	3	2	1	3	2	2	3	4

Respondent	R EL4	R EL5	R EL6	R EL7	R EL8	R ES1	R ES2	R ES3
19	3	3	3	3		3	3	3
20	4	5	5	5	4	5	4	5
21	4	3	4	3	4	3	4	3
22	5	3	3	4	3	2	2	3
23	2	3	4	4	5	3	3	2
24	3	2	2	3	3	3	3	2
25	3	3	3	4	4	3	3	3
26	3	3	3	5	4	3	4	4
27	3	3	3	3	3	2	2	3
28	3	3	3	3	3	4	4	4
29	4	5	5	4		5	4	5
30	4	4	5	5	4	5	5	4
31	4	3	4	4	3	2	3	3
32	2	3	2	3	2	3	2	4
33	3	3	3	3	3	3	3	3
34	2	1	2	1	2	1	3	1
35	3	3	3	3	3	3	3	3
36	4		4	4	5	3	3	3
37	4		4	4	5	3	3	3
38	4		4	4	5	3	3	3
39	4		4	4	5	3	3	3
40	3	1	3	3	3	2	2	2
41	2	3	3	3	3	3	3	3
42	3	3	3	3	3	3	2	2

Respondent	R EL4	R EL5	R EL6	R EL7	R EL8	R ES1	R ES2	R ES3
43	3	3	3	3	3	3	3	3
44	3	3	4	3	2	1	2	3
45	3	3	3	3	3	3	3	3
46	3	2	5	4	5	2	1	3
47	5	5	5	5	5	5	3	5
48	4	4	2	1	1	1	1	1
49	5	4	4	5	4	3	5	4
50	3	4	5	4	3	3	4	5
51	4	5	4	3	4	5	4	4
52	3	4	3	2	5	3	3	2
53	4	2	1	3	2	3	3	5
54	3	2	4	3	4	2	2	5
55	4	4	4	5	4	2	5	3
56	4	3	4	3	3	5	3	4
57	5	2	1	5	2	3	4	3
58	4	3	3	1	5	3	3	5
59	4	2	4	3	5	2	3	1
60	5	1	3	5	4	2	3	3
61	3	4	4	3	4	2	3	2
62	4	4	3	4	5	3	3	3
63	4	2	3	3	1	2	1	3
64	3	2	3	2	5	4	2	3
65	4	3	5	5	5	3	4	5
66	2	2	3	3	3	3	3	3
67	3	3	1	3	2	2	5	3
68	4	3	3	3	5	5	2	3

Respondent	R EL4	R EL5	R EL6	R EL7	R EL8	R ES1	R ES2	R ES3
69	4	3	4	4	4	3	4	3
70	4	4	4	4	4	2	3	3
71	5	3	5	3	5	3	3	1
72	2	2	3	4	3	2	5	3
73	2	5	2	4	3	3	5	3
74	4	3	4	2	3	5	4	3
75	3	5	2	4	5	2	4	3
76	3	3	3	4	3	2	3	4
77	4	3	3	5	4	2	2	5
78	3	4	3	1	4	3	1	3
79	4	1	3	3	5	2	1	3
80	4	1	1	3	5	2	3	3
81	2	2	4	1	1	3	3	3
82	3	3	4	5	2	3	3	3
83	3	4	4	4	3	1	2	1
84	3	1	3	3	5	2	4	5
85	3	5	4	3	3	3	3	4
86	3	3	5	1	5	3	2	3
87	3	3	3	4	3	3	3	3
88	5	3	3	4	3	1	2	1
89	4	5	2	4	1	1	1	5
90	2	4	2	2	5	2	1	3
91	1	1	4	4	2	5	4	3
92	2	3	4	4	1	3	2	5
93	3	3	3	1	1	3	3	3
94	4	3	4	3	5	3	1	3

Respondent	REL4	REL5	REL6	REL7	REL8	RES1	RES2	RES3
95	4	4	4	4	1	3	4	3
96	3	4	4	5	4	1	3	2
97	3	5	4	3	3	2	3	3
98	4	4	3	1	5	4	1	4
99	1	3	1	3	3	3	1	2
100	2	3	4	3	5	3	5	4

Respondent	RES4	RES5	ASS1	ASS2	ASS3	ASS4	ASS5	EMP1
1	3	3	3	3	2	2	2	3
2	3	4	3	3	2	1	1	3
3	1	2	3	3	3	4	5	2
4	2	4	2	4	2	1	1	1
5	1	1	1	1	1	1	1	1
6	5	4	3	5	5	4	4	3
7	5	5	5	5	5	5	5	5
8	3	3	2	4	3	3	1	2
9	2	1	2	2	1	2	2	2
10	1	1	1	1	1	1	1	1
11	4	3	3	4	5	4	3	3
12	3	3	3	3	4	3	4	3
13	5	5	5	5	5	5	5	5
14	4	4	4	4	4	4	4	4
15	2	2	2	1	4	2	1	1
16	3	3	3	3	3	3	3	3
17	4	4	4	4	4	4	4	4

Respondent	RES4	RES5	ASS1	ASS2	ASS3	ASS4	ASS5	EMP1
18	3	2	4	3	2	3	4	4
19	3	3	3	4	3	4	3	3
20	4	5	5	4	5	5	5	4
21	4		3	4	3	4	3	3
22	3	3	3	2	2	2	3	2
23	3	3	3	3	3	2	3	3
24	3	3	5	5	4	4	5	5
25	4	4	2	2	3	3	3	2
26	3	3	5	5	5	4	4	3
27	3	3	1	3	2	2	3	3
28	4	4	4	4	4	4	4	4
29	4	5	5	5	4	5	4	5
30	5	5	5	4	5	4	5	5
31	2	4	3	3	2	3	3	2
32	3	2	3	2	3	2	4	2
33	3	3	3	3	3	3	3	3
34	3	2	2	2	3	3	1	1
35	3	3	3	3	3	3	3	3
36	3	3	4	4	4	4		3
37	3	3	4	4	4	4		3
38	3	3	4	4	4	4		3
39	3	3	4	4	4	4		3
40	2	2	2	2	2	2	2	2
41	4	4	3	3	3	2	2	3

Respondent	RES4	RES5	ASS1	ASS2	ASS3	ASS4	ASS5	EMP1
42	2	2	2	2	2	2	2	3
43	4	4	5	4	5	4	5	3
44	3	2	2	3	4	4	4	4
45	3	3	2	2	2	2	2	3
46	1	2	1	3	1	2	1	1
47	3	5	2	5	5	5	3	2
48	1	1	2	2	1	1	2	2
49	5	4	3	5	4	5	4	4
50	4	4	3	3	3	3	3	4
51	5	4	5	4	3	4	5	4
52	3	3	2	5	4	2	4	5
53	4	3	4	4	3	2	3	4
54	3	3	2	2	5	5	2	3
55	5	1	5	4	4	4	3	4
56	4	4	1	3	5	3	5	3
57	4	1	2	2	2	4	4	3
58	2	2	2	4	3	1	2	4
59	5	5	5	5	3	3	4	1
60	1	4	3	3	5	5	1	1
61	3	4	3	4	5	4	3	4
62	3	2	3	2	4	1	3	3
63	4	3	3	4	1	2	1	2
64	3	2	3	2	3	2	3	1
65	1	3	1	3	5	4	5	2
66	3	4	5	1	5	1	3	4
67	1	3	3	5	4	2	4	3

Respondent	RES4	RES5	ASS1	ASS2	ASS3	ASS4	ASS5	EMP1
68	5	3	5	3	5	4	5	2
69	3	2	5	2	3	1	3	3
70	4	4	2	4	5	4	3	4
71	5	4	4	1	2	4	4	3
72	4	2	3	3	4	3	4	3
73	5	4	2	2	3	4	4	1
74	4	1	3	4	3	2	1	4
75	2	3	2	3	3	2	2	1
76	5	4	3	3	2	5	2	2
77	2	4	4	2	4	4	1	1
78	3	5	3	3	3	2	1	3
79	2	4	5	2	3	4	3	2
80	4	4	3	2	4	4	2	3
81	4	1	3	5	2	5	2	4
82	2	5	3	5	3	2	4	1
83	1	4	3	4	3	1	1	4
84	3	3	3	1	3	3	4	1
85	1	5	1	4	5	3	2	2
86	3	2	3	3	3	3	1	2
87	3	4	1	4	2	3	3	3
88	3	5	3	4	5	2	4	4
89	2	2	4	5	1	5	3	4
90	4	4	1	4	5	3	5	4
91	5	4	3	5	3	1	5	3
92	1	4	5	3	3	5	5	5
93	1	3	5	2	4	2	4	3

Respondent	RES4	RES5	ASS1	ASS2	ASS3	ASS4	ASS5	EMP1
94	3	4	2	3	1	2	3	2
95	3	3	5	2	5	2	3	4
96	2	4	4	2	3	4	3	3
97	5	2	2	3	4	4	3	1
98	3	3	3	2	5	3	5	3
99	3	3	1	3	3	5	4	3
100	3	3	3	5	3	4	1	2

Respondent	EMP2	EMP3	EMP4	EMP5	PU1	PU2	PU3	PU4
1	2	3	3	3	3	3	3	3
2	3	4	4	5	5	5	5	5
3	1	3	4	4	5	5	5	5
4	2	1	2	2	2	2	2	1
5	1	1	1	1	1	1	1	1
6	5	4	4	5	5	5	5	3
7	5	5	5	5	5	5	5	5
8	4	3	2	3	4	3	3	2
9	1	1	2	3	4	3	2	2
10	1	1	1	1	1	1	1	1
11	4	5	4	3	3	4	5	4
12	2	3	3	3	4	4	4	4
13	5	5	5	5	5	5	5	5
14	4	4	4	4	4	4	4	4
15	2	2	2	2	1	1	2	2
16	4	4	3	3	5	5	4	4

Respondent	EMP2	EMP3	EMP4	EMP5	PU1	PU2	PU3	PU4
17	4	4	4	4	4	3	4	3
18	3	2	3	4	2	3	4	3
19	4	3	4	3	3	4	3	4
20	5	5	5	4	4	5	5	5
21	4	3	4	5	4		5	5
22	2	2	4		3	4	3	2
23	2		3	3	3	3	2	2
24	5	5	5	4	5	5	4	4
25	2	2	3	3	5	5	4	4
26	3	4	4	4	4	4	3	3
27	3	1	3	3	1	3	3	2
28	4	4	4	4	4	4	4	4
29	5	4	4	5	5	5	4	5
30	5	5	5	5	5	5	5	5
31	3	2	2	4	3	3	3	2
32	4	3	2	4	3	2	2	3
33	3	3	3	3	3	3	3	3
34	3	1	3	1	2	2	3	3
35	3	3	3	3				
36	2	2	2		3	3	4	2
37	2	2	2		3	3	4	2
38	2	2	2		3	3	4	2
39	2	2	2		3	3	4	2

Respondent	EMP2	EMP3	EMP4	EMP5	PU1	PU2	PU3	PU4
40	2	1	2	3	2	3	3	3
41	3	2	2	2	3	3	3	3
42	2	2	2	2	3	3	3	2
43	4	5	4	5	3	4	5	4
44	3	4	4	4	4	3	3	4
45	3	3	3	3	2	2	2	2
46	5	5	1	3	1	3	5	2
47	3	3	1	2	1	2	3	1
48	4	3	3	3	3	4	4	3
49	5	4	5	4	5	4	5	4
50	4	5	5	5	4	3	4	3
51	4	3	4	3	4	4	5	4
52	4	1	4	5	3	3	4	4
53	4	1	4	3	4	4	3	5
54	3	1	2	5	3	3	2	2
55	4	4	4	4	4	3	3	3
56	2	5	3	3	4	3	3	4
57	5	3	3	2	4	3	4	4
58	3	1	4	4	3	5	4	1
59	1	5	3	3	1	4	5	5
60	1	2	3	3	5	3	5	2
61	2	3	2	3	3	5	4	4
62	2	1	5	5	2	3	3	4
63	3	3	2	5	4	4	5	2
64	2	3	2	4	4	5	4	3
65	2	2	3	5	4	4	3	1

Respondent	EMP2	EMP3	EMP4	EMP5	PU1	PU2	PU3	PU4
66	4	5	4	4	5	5	4	2
67	5	3	2	2	5	3	5	2
68	4	3	5	4	1	1	2	3
69	5	5	5	2	3	1	1	1
70	4	3	4	4	5	4	3	3
71	4	5	4	3	5	1	4	4
72	3	5	3	3	3	3	5	5
73	4	1	1	5	3	3	4	3
74	5	2	4	4	3	1	5	1
75	2	1	4	3	3	3	5	2
76	1	1	2	3	3	4	2	3
77	2	3	3	2	5	4	5	2
78	2	5	1	3	4	3	4	3
79	5	2	2	3	1	3	4	2
80	5	3	5	4	4	5	5	5
81	4	4	4	4	4	1	2	3
82	3	2	2	2	3	1	5	1
83	1	3	1	5	5	4	2	4
84	3	2	2	1	3	5	2	4
85	3	2	4	4	4	1	3	1
86	1	4	3	5	1	5	3	3
87	2	3	3	3	1	3	5	3
88	3	3	4	3	4	4	5	3
89	2	5	4	4	5	5	4	2
90	5	3	5	2	5	4	3	5
91	4	2	2	4	5	3	5	2

Respondent	E MP2	E MP3	E MP4	E MP5	P U1	P U2	P U3	P U4
92	5	2	2	4	4	3	3	1
93	4	1	5	3	5	1	4	3
94	2	5	3	3	4	5	5	4
95	3	2	4	4	3	3	3	3
96	4	4	5	5	1	5	3	2
97	3	4	3	4	2	2	5	2
98	5	3	2	2	3	2	4	5
99	4	4	3	3	3	5	5	2
100	2	5	1	5	1	5	5	3

Respondent	U5	P EOU1	P EOU2	P EOU3	P EOU4	P EOU5	P EOU6	P EOU7
1		2	2	3	3	3	2	2
2		3	2	3	3	2	4	2
3		5	5	5	5	5	5	5
4		1	2	2	1	1	1	1
5		1	1	1	1	1	1	1
6		3	4	4	3	3	5	4
7		5	5	5	5	5	5	5
8		1	2	3	4	1	1	5
9		1	2	1	2	2	2	3
10		1	1	1	1	1	1	1
11		3	4	5	4	3	4	5
12		4	3	3	4	4	2	3
13		5	5	5	5	5	5	5
14		2	4	4	4	4	4	4

Respondent	U5	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	PEOU6	PEOU7
15		1	2	3	2	1	2	2
16		4	4	3	3	3	2	3
17		3	4	4	4	4	4	4
18		2	3	4	3	4	3	3
19		3	2	3	2	3	4	3
20		5	4	5	5	5	3	
21		5	4	5	4	4	5	5
22		4	4	4	3	4	3	4
23		3	2	3	3	3	3	3
24		2	3	3	3	2	3	2
25		3	3	2	2	4	4	4
26		4	5	5	5	4	4	4
27		1	2		3	2	2	2
28		4	4	4	4	4	4	4
29		4	5	5	4	5	5	4
30		3	5	4	5	4	5	4
31		2	4	4	2	4	3	3
32		3	3	3	3	3	2	2
33		3	3	3	3	3	3	3
34		2	2		2	5		5
35								
36		2	2	2	2	2	2	4
37		2	2	2	2	2	2	4

Respondent	U5	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	PEOU6	PEOU7
38		2	2	2	2	2	2	4
39		2	2	2	2	2	2	4
40		1	2	2	1	2	1	2
41		4	4	3	3	3	3	3
42		3	3	3	3	2	2	2
43		3	4	3	4	3	4	3
44		3	4	3	3	4	4	4
45		3	3	3	3	2	2	3
46		3	5	3	1	3	5	4
47		2	5	5	3	2	3	4
48		3	3	5	5	4	2	
49		3	3	4	3	3	4	3
50		4	5	4	5	4	5	4
51		5	4	5	4	5	4	5
52		5	1	4	3	5	2	2
53		2	2	5	3	1	2	4
54		2	2	5	4	4	2	4
55		2	5	2	3	2	5	4
56		5	4	4	3	4	5	3
57		2	1	5	4	3	1	4
58		3	2	5	3	1	2	3
59		1	2	2	3	4	4	5
60		1	4	4	3	3	3	3
61		2	5	4	4	4	4	4
62		3	2	5	3	3	4	2

Respondent	U5	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	PEOU6	PEOU7
63		1	5	4	3	2	4	3
64		3	2	4	1	2	4	2
65		1	2	5	4	4	4	4
66		4	3	4	3	1	2	3
67		5	2	3	4	4	4	3
68		3	4	3	4	2	2	3
69		3	5	4	2	4	4	5
70		4	4	5	3	3	2	2
71		1	2	3	1	5	4	3
72		2	3	3	3	3	4	2
73		1	5	3	4	2	2	2
74		4	4	3	5	5	5	3
75		2	5	3	3	3	2	4
76		1	3	3	3	2	2	4
77		3	2	3	3	3	3	5
78		3	3	5	5	3	5	5
79		1	5	5	2	4	1	5
80		5	3	4	3	5	3	5
81		1	5	3	2	2	2	5
82		2	3	3	4	4	3	3
83		3	3	2	3	3	3	4
84		5	3	1	3	3	5	2
85		2	5	3	4	5	4	4
86		4	5	4	2	2	4	4
87		2	2	3	1	2	1	2
88		5	4	5	3	5	2	2

Respondent	U5	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	PEOU6	PEOU7
89		2	3	5	3	1	5	3
90		2	4	4	2	2	2	4
91		5	2	5	2	3	5	2
92		3	3	4	2	1	4	1
93		1	3	3	4	4	4	5
94		1	2	4	5	4	4	4
95		1	4	5	1	3	3	4
96		4	4	3	1	4	5	3
97		3	5	5	2	3	5	3
98		1	3	4	1	4	2	3
99		3	4	4	5	2	3	3
100		2	3	2	2	1	5	2

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
1	es	Correction Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	3	3	2	2	1
2	es	Correction Fee	BDT 301–500					
3	es	Government Fee	BDT 301–500	2	3	3	3	3
4	o	Government Fee	BDT 101–300	1	1	2	1	1
5	o	Government Fee	BDT 501–1000	1	1	1	1	1

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
6	es	Government Fee	BDT 301–500	5	5	4	4	3
7	es	Government Fee	Less than BDT 100	5	5	5	5	5
8	o	Government Fee, Photocopy/Printing Cost, Scanning Cost, Transportation Cost	BDT 501–1000	5	4	3	4	5
9	o	Government Fee, Correction Fee, Photocopy/Printing Cost, Internet/Cyber Café Cost	BDT 501–1000	2	3	1, 2	2	2
10	es	Government Fee, Correction Fee, Affidavit Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	1	1	1	1	1
11	o	Government Fee	BDT 501–1000	1	2	3	4	5
12	es	Government Fee, Photocopy/Printing Cost, Transportation Cost	BDT 501–1000	3	3	4, 5	4	2, 4
13	es	Government Fee	BDT 101–300	5	5	5	5	5
14	es	Government Fee	BDT 301–500	4	4	4	4	4
15	es	Government Fee	BDT 101–300	2	1, 3	2		
16	es	Government Fee						

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
17	o	Government Fee	BDT 501–1000	4	4	4	4	4
18	es	Government Fee, Internet/Cyber Café Cost, Transportation Cost	BDT 301–500	2	3	2	4	3
19	es	Government Fee, Correction Fee	BDT 501–1000	3	2	3		
20	es	Government Fee	BDT 101–300	5	5	4	5	5
21	es	Government Fee	BDT 301–500	4	4	3	4	4
22	es	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	3	4	3	5	3
23	o	Government Fee	More than BDT 1000	3	2	3	3	3
24	o	Photocopy/Printing Cost	More than BDT 1000	2	3	3	3	3
25	es	Correction Fee, Photocopy/Printing Cost	BDT 101–300	3	3	3	3	4
26	o	Scanning Cost	BDT 301–500	3	3	3	3	3
27	es	Government Fee, Correction Fee, Affidavit Fee, Photocopy/Printing Cost, Scanning Cost, Transportation Cost	More than BDT 1000	1	2	2	1	2

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
28	o	Correction Fee, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	Less than BDT 100	1	3	3, 4	1, 2, 3, 4	1, 2, 3
29	es	Government Fee	BDT 101–300	5	4	5	5	4
30	es	Government Fee	Less than BDT 100	5	4	5	4	5
31	es	Government Fee, Correction Fee, Internet/Cyber Café Cost	BDT 501–1000	3	4	3	3	1
32	es	Government Fee, Scanning Cost	BDT 501–1000	2	2	2	2	2
33	o	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	3	3	3	3	3
34	es	Correction Fee	BDT 101–300	3		2		3
35								
36	o	Correction Fee	BDT 101–300	3	3	3	3	3
37	o	Correction Fee	BDT 101–300	3	3	3	3	3
38	o	Correction Fee	BDT 101–300	3	3	3	3	3
39	o	Correction Fee	BDT 101–300	3	3	3	3	3

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
40	es	Correction Fee, Photocopy/Printing Cost	Less than BDT 100	1	2	2, 4	3	3
41	o	Photocopy/Printing Cost	BDT 101–300	3	3	3	3	3
42	o	Scanning Cost	BDT 501–1000	4	4	4	4	4
43	es	Government Fee, Correction Fee, Affidavit Fee	BDT 301–500	2	3	4	5	5
44	es	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	3	3	2	4	4
45	o	Scanning Cost	BDT 301–500	2	2	2	2	2
46	es	Transportation Cost	BDT 501–1000	2	1	3	5	5
47		Scanning Cost	BDT 501–1000	1	2	2	1	3
48	o	Correction Fee	BDT 101–300	1	2	3	1	3
49	es	Government Fee	BDT 301–500	4	5	4	5	4
50	o		BDT 501–1000	2	4	5	4	5
51	o		BDT 301–500	4	4	4	4	4

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
52	o	Government Fee	BDT 501–1000					
53	o	Scanning Cost	BDT 501–1000		, 3			
54	o	Transportation Cost	BDT 101–300					
55	o	Transportation Cost	BDT 101–300					
56	es	Photocopy/Printing Cost	BDT 501–1000					
57	o	Government Fee	BDT 301–500					
58	es	Government Fee, Correction Fee, Internet/Cyber Café Cost	BDT 101–300					
59	es	Government Fee	BDT 101–300					
60	o	Government Fee, Correction Fee, Internet/Cyber Café Cost	BDT 101–300					
61	o	Government Fee, Correction Fee	BDT 101–300					
62	es	Government Fee, Correction Fee, Affidavit Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	BDT 501–1000					
63	es	Correction Fee, Scanning Cost, Internet/Cyber Café	BDT 101–300					

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
		Cost, Transportation Cost						
64	o	Government Fee	Less than BDT 100	3	4	3	1	2
65	es	Government Fee	More than BDT 1000	2	3	4	4	3
66	es	Government Fee	BDT 501–1000	3	1	5	3	3
67	o	Government Fee	BDT 301–500	4	3	5	5	1
68	o	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	More than BDT 1000	5	4	3	3	3
69	es	Correction Fee	BDT 501–1000	2	4	2	4	1
70	es	Scanning Cost	More than BDT 1000	3	5	1	3	4
71	es	Government Fee	More than BDT 1000	2	1	3	3	5
72	o	Government Fee	BDT 101–300	5	2	3	3	4
73	es	Government Fee	More than BDT 1000	3	3	2	3	4
74	es	Government Fee, Scanning Cost	BDT 301–500	2	4	5	5	4
75	o	Government Fee	BDT 101–300	3	4	3	5	3

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
76	es	Scanning Cost	BDT 301–500	2	2	2	4	1
77	o	Government Fee	BDT 101–300	2	4	3, 4	1	5
78	es	Government Fee	More than BDT 1000	1	4	2	5	4
79	o	Government Fee, Correction Fee, Affidavit Fee, Photocopy/Printing Cost, Scanning Cost, Transportation Cost	More than BDT 1000	2	3	2	2	5
80	es	Government Fee	BDT 501–1000	5	3	4	2	1, 2, 3
81	es	Government Fee, Photocopy/Printing Cost, Scanning Cost, Transportation Cost	More than BDT 1000	4	1	2	5	4
82	o	Government Fee, Correction Fee, Internet/Cyber Café Cost	More than BDT 1000	2	2	3	3	1
83	es	Government Fee	BDT 501–1000	2	2	3	3	5
84	es	Correction Fee	BDT 301–500	1	1	5	3	3
85	o	Scanning Cost	More than BDT 1000	1	3	3	4	4
86	o	Government Fee, Scanning Cost	More than BDT 1000	3	3	4	5	2, 4
87	es	Correction Fee	BDT 101–300	3	5	3	4	4

Respondent	65	V66	V67	AY4	AY5	AY6	AY7	AY8
88	es	Government Fee, Scanning Cost	More than BDT 1000	2	3	3	3	3
89	es	Government Fee	BDT 501–1000	4	4	3	3	4
90	es	Correction Fee	BDT 101–300	3	5	3	3	3
91	es	Government Fee	BDT 301–500	4	5	3	3	2
92	es	Government Fee	BDT 101–300	4	3	4	5	2
93	es	Government Fee, Correction Fee, Internet/Cyber Café Cost	More than BDT 1000	2	3	3	4	3
94	o	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	Less than BDT 100	1	1	3	4	1
95	es	Correction Fee	BDT 501–1000	2	4	2	4	2
96	es	Scanning Cost	BDT 501–1000	1	4	2	1	4
97	es	Government Fee, Photocopy/Printing Cost, Scanning Cost, Internet/Cyber Café Cost, Transportation Cost	BDT 301–500	3	5	2	5	1, 2, 3
98	o	Government Fee, Internet/Cyber Café Cost, Transportation Cost	BDT 301–500	5	5	3	3	3

Respondent	65	V66	V67	P AY4	P AY5	P AY6	P AY7	P AY8
99	o	Government Fee	B DT 501–1000	1	3	1, 2	5	3
100	es	Scanning Cost	B DT 101–300	3	3	3	4	2, 4

Respondent	P AY9	S AT1	S AT2	S AT3	S AT4	S AT5	G OV1	G OV2
1	2	2	2	2	2	3	3	3
2		3	2	3	3	5		
3	2, 4	5	5	5	5	4	2	4
4	1	1	1	2	2	1	1	1
5	1	1	1	1	1	1	1	1
6	5	5	4	3	4	3	2	3
7	5	5	5	5	5	5	1	5
8	5	2	3	2	1	3	5	2
9	1	2	2	1	2	1	2	2
10	1	1	1	1	1	1	1	1
11	4	1	2	3	4	5	3	4
12	1, 4	4	4	3	1, 5	5	3	3
13	1	5	5	5	5	5	2	5
14	4	4	4	4	4	4	4	4
15		2	2	1	2	4	1	3
16		3	3	4	3	2, 3	3	2
17	4	4	4	4	4	4	4	4

Respondent	PAY9	SAT1	SAT2	SAT3	SAT4	SAT5	GOV1	GOV2
18	4	2	3	2, 4	4	3, 4	3	4
19	3	3	2	4	2	3	3	4
20	4	5	4	5	4	5	1	5
21	4	4	3	4	3	4	4	3
22	3	4	3	4	3	5	2	3
23	2	3	3	2, 3	3	3	3	2
24	3	5	5	4, 5	4	4	4	4
25	4	3	3	3	4	2	3	3
26	3	4	4	4	5	5	4	5
27	2	1	2	3	4	3	1	2
28	1, 2, 3	1, 2, 3, 4	1, 2, 3	1, 2, 3, 4	1, 2, 3	1, 2, 3	4	4
29	5	4	5	4	5	4	1	5
30	4	5	5	5	5	5	1	5
31	3	3	3	4	3	2	2	3
32	3	2	3	3	2	3	2	3
33	3	5	3	3	3	3	3	3
34	5	3	3	3	3	5	2	4
35								
36		3	3	3	3	3	3	3
37		3	3	3	3	3	3	3
38		3	3	3	3	3	3	3
39		3	3	3	3	3	3	3

Respondent	PAY9	SAT1	SAT2	SAT3	SAT4	SAT5	GOV1	GOV2
40	3	1	2	3	4	3	1	2
41	3	3	3	3	3	3	3	2
42	4	3	2	2	2	2	3	3
43	4	3	4	5	4	4	5	4
44	4	4	4	3	3, 4	3	3	4
45	2	3	3	3	3	3	2	1
46	4	1	2	3	1	1	1	2
47	3	1	4	3	2	2	1	2
48	5	5	5	3	4	4	2	3
49	5	5	4	5	4	5	4	5
50	4	4	5	4	5	4	3	4
51	4	5	4	5	4	5	5	4
52	4	5	2	2	2	1	3	5
53	5	1	4	3	3	4	5	5
54	5	3	1	3	3	4	1	2
55	4	3	3	3	1, 2, 3	2	3	3
56	3	5	3	4	2	3	1	3
57	4	2	3	4	4	4	2	4
58	5	2	4	3	3	3	1	3
59	4	4	2	3	3	1, 2, 3	3	3
60	2	4	3	5	3	4	4	2
61	4	4	2	3	2	5	2	3
62	3	3	3	3	4	3	1	2
63	4	3	5	3	3, 4	3	3	4

Respondent	PAY9	SAT1	SAT2	SAT3	SAT4	SAT5	GOV1	GOV2
64	4	4	4	3	3	3	4	2
65	5	4	2	2	4	2	1	1
66	1	4	4	3	3	3	5	3
67	2, 4	2	3	2	3, 4	5	1	4
68	4	3	2	3	1, 5	1	5	3
69	3	5	5	3	1	3	2	4
70	2	1	2	2, 3	4	3	1	2
71	1	5	4	4	3	4	4	2
72	4	4	5	4	2	5	3	4
73	4	2	1, 2, 3	4	5	5	3	2
74	2	3	5	3	4	5	3	3
75	3	1	3	4, 5	3	4	3	5
76	4	1	4	5	2	2	4	4
77	4	3	2	4	3	3	3	3
78	4	3	2	3	3	3	3	3
79	2, 4	4	2	3	1	3	3	4
80	1	5	5	5	4	2	3	3
81	1	2	2	3	5	2	2	4
82	3	2	2	4	2	1	1	1
83	4	2	4	3	3	5	2	3
84	5	2	3	3	2	1	2	3
85	4	2	3	3	4	4	1	1
86	5	3	2	3	2	5	1	5

Respondent	PAY9	SAT1	SAT2	SAT3	SAT4	SAT5	GOV1	GOV2
87	3	1	5	3	3	3	4	2
88	3	5	3	3	3, 4	4	2	4
89	1, 2, 3	2	3	3	3	3, 4	4	2
90	2	5	5	1	4	3	5	3
91	4	5	4	3	5	3	2	4
92	2	1	4	3	3	2, 3	1	4
93	5	1	2	5	3	3	4	2
94	1	5	3	3	4	3	5	3
95	2	4	2	1	4	1	3	5
96	5	5	4	4, 5	3	1	1	2
97	1	1	3	4	1	5	1	4
98	4	4	2	3	4	4	2	4
99	1	3	5	5	3	5	3	2
100	4	3	4	1	3	4	5	2

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
1	3	3	3					
2								
3	1	5	5		DNCC should make the online application system more user-friendly, provide clearer instructions,	Overall, the online service is helpful, but it can be improved by making the process more		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					reduce processing time, and send regular SMS or email notifications about the application status. Increasing the number of service counters and improving staff responsiveness would also help	transparent and reducing the need for physical visits. Better customer support and a dedicated helpline for applicants would enhance the overall experience.		
4	2	2	2	Nothing	Make the process faster	No		
5	1	1	1	Nothing		No		
6	4	3	4	No major challenges. The process was straightforward.	Continue maintaining the current quality of service and keep the information updated.	Overall, I had a good experience. Thank you for the service.		
7	1	2	5	time				
8	4	4	3	Server failures	The system serves should be more powerful and optimized .	No		
9	2	3	4					
10	1	1	1					

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
11	5	4	3	Long waiting times at the registration office.	Improve online services, reduce processing time, provide clearer instructions, offer better customer support, and make the birth registration process faster and more user-friendly.	No additional comments.		
12	2	3	4	The biggest challenge was the lengthy processing time and the need to visit the office multiple times for document verification and updates.	Improve the online system to make it more user-friendly, reduce processing time, provide regular status updates, and minimize the need for physical office visits.	Overall, the service is helpful, but better communication, faster processing, and more responsive customer support would improve applicants' experience.		
13	3	4	5	No major challenge	Improve the online system by making it faster, more user-friendly, and reducing processing time.	No additional comments. Thank you.		
14	4	4	4	The process took longer than expected because of document verification and long waiting	The online system should be made more user-friendly, waiting times should be reduced, and	Overall, the service was satisfactory. Improving staff support, providing clearer		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
				times. Some instructions were also unclear.	applicants should receive regular SMS updates about their application status.	guidelines, and speeding up the process would make the experience much better.		
15	1	1	2	Delaying the process	To make the process easier			
16	3	4	3	When interface and lack of support hotline	A better, faster website service and properly informed and trained hands-on hotline support executives			
17	4	4	4	The biggest challenge was the long waiting time and the lack of clear information about the required documents and procedures.	DNCC should provide clearer instructions, reduce processing time, improve the online application system, and offer better customer support.	Overall, the service was satisfactory, but making the process faster and more user-friendly would improve the experience for everyone.		
18	2	4	2	Form Fill-up	Fast service			
19	3	4	3					
20	4	4	5	I did not face any major challenges during the process.	I recommend making the process faster, improving the online system, and reducing the need for			

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					multiple office visits.			
21	4	4	3					
22	4	2	1	Delays in processing and repeated visits due to document verification requirements.	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	Better customer support and real-time application tracking would make the service more user-friendly.		
23	3	3	5	The process took a long time, and it was difficult to understand all the required documents.	Make the process faster, provide clear instructions, and improve online services.	Overall, the service was good. I hope it becomes easier and quicker for everyone.		
24	4	4	5	I had to wait a long time, and the process was a little confusing.	It would be better to reduce waiting time, improve staff support, and make the online system easier to use	Thank you for the service. I hope the registration process becomes more simple and convenient for everyone.		
25	2	2	3	Time consuming	N/A	No		
26	5	5	4					
27	3	3	1					
28	4	2	3					

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
29	5	4	5	The biggest challenge I faced during the birth registration process was the lengthy administrative procedures and delays in processing the application.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates on application status.	No additional comments. Thank you for your service.		
30	5	4	3	The biggest challenge I faced during the birth registration process was the lengthy administrative procedures and delays in processing the application.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates on application status.	No additional comments. Thank you for your service.		
31	3	3	3	Waiting for progress	Make online portal more strong and easy to use			
32	3	3	2	Procces of making too long	Make process easy			
33	3	3	3	Do not know	Do not know	None		
34	4	5	2					
35								

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
36	3	3	3					
37	3	3	3					
38	3	3	3					
39	3	3	3					
40	2	2	2					
41	2	2	3					
42	3	3	2					
43	4	5	4					
44	2	2	1					
45	1	1	1					
46	3	3	5					
47	3	1	1					
48	3	5	5					
49	4	5	4					
50	3	4	3					
51	4	5	4					
52	4	3	5	Server failures	Make process easy	No		
53	4	5	1	The process took a long time, and it was difficult to	The online system should be made more user-friendly,	None		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
				understand all the required documents.	waiting times should be reduced, and applicants should receive regular SMS updates about their application status.			
54	5	3	4	Delays in processing and repeated visits due to document verification requirements.	Improve the online system by making it faster, more user-friendly, and reducing processing time.	Overall, the service is helpful, but better communication, faster processing, and more responsive customer support would improve applicants' experience.		
55	5	3	1	Wen interface and lack of support hotline	Make the process faster, provide clear instructions, and improve online services.	Thank you for the service. I hope the registration process becomes more simple and convenient for everyone.		
56	3	3	5	I did not face any major challenges during the process.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates	No additional comments.		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					on application status.			
57	3	1	1	I did not face any major challenges during the process.	Continue maintaining the current quality of service and keep the information updated.	Overall, I had a good experience. Thank you for the service.		
58	4	2	1	No major challenge	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates on application status.	No additional comments. Thank you for your service.		
59	3	5	3	The biggest challenge was the long waiting time and the lack of clear information about the required documents and procedures.	Make the process faster, provide clear instructions, and improve online services.	Overall, I had a good experience. Thank you for the service.		
60	3	3	1	Server failures	A better, faster website service and properly informed and trained hands-on hotline support executives	No		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
61	3	4	4	The process took longer than expected because of document verification and long waiting times. Some instructions were also unclear.	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	Overall, I had a good experience. Thank you for the service.		
62	3	5	3	No major challenges. The process was straightforward.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates on application status.	Overall, the online service is helpful, but it can be improved by making the process more transparent and reducing the need for physical visits. Better customer support and a dedicated helpline for applicants would enhance the overall experience.		
63	4	4	2	Delays in processing and repeated visits due to document verification requirements.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates	Better customer support and real-time application tracking would make the service more user-friendly.		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					on application status.			
64	3	4	4	The process took longer than expected because of document verification and long waiting times. Some instructions were also unclear.	Make process easy	No		
65	4	4	3	Nothing	Improve the online system by making it faster, more user-friendly, and reducing processing time.	No		
66	3	2	1	Server failures	A better, faster website service and properly informed and trained hands-on hotline support executives	No		
67	4	4	3	The process took longer than expected because of document verification and long waiting times. Some instructions were also unclear.	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates	Overall, the service was satisfactory. Improving staff support, providing clearer guidelines, and speeding up the process would make		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					on application status.	the experience much better.		
68	3	3	4	The biggest challenge was the long waiting time and the lack of clear information about the required documents and procedures.	DNCC should make the online application system more user-friendly, provide clearer instructions, reduce processing time, and send regular SMS or email notifications about the application status. Increasing the number of service counters and improving staff responsiveness would also help	Better customer support and real-time application tracking would make the service more user-friendly.		
69	1	4	1	Waiting for progress	N/A	No additional comments. Thank you.		
70	4	2	4	No major challenges. The process was straightforward.	A better, faster website service and properly informed and trained hands-on hotline support executives	No additional comments. Thank you for your service.		
71	4	2	3	Wen interface and lack of support hotline	Make online portal more strong and easy to use	Overall, the service was good. I hope it becomes easier and		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
						quicker for everyone.		
72	2	4	4	Waiting for progress	To make the process easier	None		
73	1	4	4	The biggest challenge I faced during the birth registration process was the lengthy administrative procedures and delays in processing the application.	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	Overall, the online service is helpful, but it can be improved by making the process more transparent and reducing the need for physical visits. Better customer support and a dedicated helpline for applicants would enhance the overall experience.		
74	3	2	3	I had to wait a long time, and the process was a little confusing.	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	None		
75	4	3	3	Nothing	Improve online services, reduce processing time, provide clearer instructions,	Thank you for the service. I hope the registration process becomes more		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
					offer better customer support, and make the birth registration process faster and more user-friendly.	simple and convenient for everyone.		
76	3	1	5	Wen interface and lack of support hotline	I recommend making the process faster, improving the online system, and reducing the need for multiple office visits.	Overall, the service was satisfactory. Improving staff support, providing clearer guidelines, and speeding up the process would make the experience much better.		
77	5	4	5	No major challenge	I recommend simplifying the application process, reducing processing time, improving the online system, and providing timely updates on application status.	None		
78	4	4	3	Delays in processing and repeated visits due to document verification requirements.	Make the process faster	No		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
79	4	4	2	Form Fill-up	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	Overall, the online service is helpful, but it can be improved by making the process more transparent and reducing the need for physical visits. Better customer support and a dedicated helpline for applicants would enhance the overall experience.		
80	3	4	3	The biggest challenge I faced during the birth registration process was the lengthy administrative procedures and delays in processing the application.	The system serves should be more powerful and optimized .	No		
81	4	4	1	No major challenge	Make the process faster, provide clear instructions, and improve online services.	Overall, the service was good. I hope it becomes easier and quicker for everyone.		
82	3	4	3	The process took longer than expected	I recommend simplifying the application	No		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
				because of document verification and long waiting times. Some instructions were also unclear.	process, reducing processing time, improving the online system, and providing timely updates on application status.			
83	2	3	5	Delays in processing and repeated visits due to document verification requirements.	N/A	No		
84	2	5	3	time	Make online portal more strong and easy to use	No additional comments.		
85	1	3	4	No major challenge	Improve the online system by making it faster, more user-friendly, and reducing processing time.	Overall, the service was satisfactory, but making the process faster and more user-friendly would improve the experience for everyone.		
86	4	4	3	The process took longer than expected because of document verification and long waiting times. Some instructions were also unclear.	Improve the online system, reduce processing time, and provide clearer instructions on required documents.	No		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
87	5	3	3	Form Fill-up	Make online portal more strong and easy to use	No		
88	4	4	5	The biggest challenge was the lengthy processing time and the need to visit the office multiple times for document verification and updates.	The online system should be made more user-friendly, waiting times should be reduced, and applicants should receive regular SMS updates about their application status.	No additional comments. Thank you for your service.		
89	4	4	3	Nothing	DNCC should make the online application system more user-friendly, provide clearer instructions, reduce processing time, and send regular SMS or email notifications about the application status. Increasing the number of service counters and improving staff responsiveness would also help	Overall, the service was satisfactory. Improving staff support, providing clearer guidelines, and speeding up the process would make the experience much better.		
90	4	4	3	I had to wait a long time, and the process	A better, faster website service and properly	No		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
				was a little confusing.	informed and trained hands-on hotline support executives			
91	4	4	5	The process took longer than expected because of document verification and long waiting times. Some instructions were also unclear.	To make the process easier	Overall, the service is helpful, but better communication, faster processing, and more responsive customer support would improve applicants' experience.		
92	3	3	1	Wen interface and lack of support hotline	Do not know	Overall, the service is helpful, but better communication, faster processing, and more responsive customer support would improve applicants' experience.		
93	3	5	3	Long waiting times at the registration office.	Make the process faster, provide clear instructions, and improve online services.	Better customer support and real-time application tracking would make the service more user-friendly.		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
94	3	3	2	The biggest challenge was the lengthy processing time and the need to visit the office multiple times for document verification and updates.	To make the process easier	No additional comments. Thank you.		
95	3	5	5	The process took a long time, and it was difficult to understand all the required documents.	Make the process faster	Overall, the service was satisfactory, but making the process faster and more user-friendly would improve the experience for everyone.		
96	2	3	1	The biggest challenge was the lengthy processing time and the need to visit the office multiple times for document verification and updates.	It would be better to reduce waiting time, improve staff support, and make the online system easier to use	No		
97	3	3	4	No major challenge	A better, faster website service and properly informed and trained hands-on hotline support executives	No additional comments.		

Respondent	GOV3	GOV4	GOV5	H1	H2	H3	87	88
98	3	3	3	Server failures	The online system should be made more user-friendly, waiting times should be reduced, and applicants should receive regular SMS updates about their application status.	No additional comments. Thank you for your service.		
99	4	5	2	I did not face any major challenges during the process.	Make process easy	Overall, the service is helpful, but better communication, faster processing, and more responsive customer support would improve applicants' experience.		
100	4	2	3	I had to wait a long time, and the process was a little confusing.	Make the process faster, provide clear instructions, and improve online services.	Overall, I had a good experience. Thank you for the service.		

Respondent	V89	V90	V91	V92
1				
2				

Respondent	V89	V90	V91	V92
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				

Respondent	V89	V90	V91	V92
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

Respondent	V89	V90	V91	V92
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				

Respondent	V89	V90	V91	V92
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				

Respondent	V89	V90	V91	V92
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				

Respondent	V89	V90	V91	V92
98				
99				
100				

Data source: DNCC_Test_Data_100_Respondents(1).xlsx. The calculations below are independently computed from the uploaded 100-respondent dataset using the same statistical procedures available in SPSS Version 26. They are provided as an annexure-ready calculation record.

Annexure A. Data and Measurement

Valid cases in the uploaded dataset: N = 100. Likert-scale items are coded 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Annexure B. SPSS 26 Procedures

• Frequency/percentage: Analyze → Descriptive Statistics → Frequencies.

• Mean and standard deviation: Analyze → Descriptive Statistics → Descriptives.

• Construct score: Transform → Compute Variable → MEAN(item1,item2,…).

• Reliability: Analyze → Scale → Reliability Analysis → Model: Alpha.

• For the final thesis, retain the SPSS Viewer output (.spv) or screenshots together with this annexure if your department requires original software evidence.

Annexure C. Construct-Level Descriptive Statistics from the Uploaded Data

Construct	No. of Items	Valid N	Mean	SD	Rank
Tangibility	7	99	3.29	0.82	2
Reliability	8	100	3.20	0.71	3
Responsiveness	5	100	3.02	0.78	5

Construct	No. of Items	Valid N	Mean	SD	Rank
Assurance	5	100	3.18	0.85	—
Empathy	5	100	3.13	0.86	—
Perceived Usefulness	5	99	3.36	0.87	1
Perceived Ease of Use	7	99	3.18	0.80	4
Payment Experience	6	97	3.12	0.76	—
Citizen Satisfaction	5	98	3.22	0.83	—
Governance	5	98	3.07	0.74	—

Note: Construct scores above are calculated as the respondent-level mean of the available numeric items. This is the appropriate way to reproduce a construct score from the raw questionnaire data.

Annexure D. Item-Level Descriptive Statistics for the Five Table 5.5 Dimensions

Perceived Usefulness

Item	Valid N	Minimum	Maximum	Mean
PU1 The online system saves time.	99	1	5	3.37
PU2 The online system reduces office visits.	98	1	5	3.39
PU3 The online service improves efficiency.	99	1	5	3.71

Item	Valid N	Minimum	Maximum	Mean
PU4 The online service makes registration more convenient.	99	1	5	3.00
PU5 Overall, the online birth registration service is useful.	95	1	5	3.32

Tangibility

Item	Valid N	Minimum	Maximum	Mean
TAN1 The website is visually attractive and professionally	94	1	5	3.09
TAN2 Information on the website is clearly presented.	99	1	5	3.21
TAN3 Instructions for the application are easy to understand.	97	1	5	3.29
TAN4 The online system is easy to navigate.	99	1	5	3.48
TAN5 Required forms and documents are easy to find.	98	1	5	3.41
TAN6 Document upload	99	1	5	3.42

Item	Valid N	Minimum	Maximum	Mean
instructions are clear and understandable.				
TAN7 Accepted file formats and file size limits are clearly	99	1	5	3.15

Reliability

Item	Valid N	Minimum	Maximum	Mean
REL1 The system processes applications accurately.	100	1	5	2.79
REL2 Information provided by DNCC is reliable.	100	1	5	3.24
REL3 Birth certificates are delivered within the expected timeframe.	99	1	5	3.29
REL4 Application status updates are accurate.	99	1	5	3.29
REL5 The system works without frequent technical errors.	96	1	5	3.04
REL6 Uploaded documents were	100	1	5	3.24

Item	Valid N	Minimum	Maximum	Mean
saved successfully on the first attempt.				
REL7 I did not need to resubmit documents because of system problems	100	1	5	3.30
REL8 The information on my birth certificate was accurate and free from errors	98	1	5	3.41

Perceived Ease of Use

Item	Valid N	Minimum	Maximum	Mean
PEOU1 Learning to use the system was easy.	99	1	5	2.73
PEOU2 Completing the online application was easy.	99	1	5	3.28
PEOU3 Uploading documents was easy.	97	1	5	3.58
PEOU4 Tracking the application status was easy.	99	1	5	3.03
PEOU5 The website is user-friendly.	99	1	5	3.08

Item	Valid N	Minimum	Maximum	Mean
PEOU6 The system accepted my uploaded documents without technical problems.	98	1	5	3.21
PEOU7 I was able to use the service using a mobile phone without difficulty.	97	1	5	3.37

Responsiveness

Item	Valid N	Minimum	Maximum	Mean
RES1 DNCC staff responded quickly to inquiries.	100	1	5	2.71
RES2 Assistance was available when I faced difficulties.	100	1	5	2.92
RES3 Problems were resolved promptly.	100	1	5	3.14
RES4 Complaint handling procedures were effective.	100	1	5	3.12
RES5 Application updates were communicated on time.	99	1	5	3.20

Annexure E. Reliability Analysis — Cronbach's Alpha

Construct	Items	Listwise Valid N	Cronbach's Alpha
Tangibility	7	92	0.779
Reliability	8	92	0.757
Responsiveness	5	99	0.733
Assurance	5	96	0.718
Empathy	5	94	0.751
Perceived Usefulness	5	94	0.757
Perceived Ease of Use	7	95	0.793
Payment Experience	6	75	0.751
Citizen Satisfaction	5	80	0.776
Governance	5	98	0.611

Interpretation: Alpha values around .70 or above are commonly treated as acceptable internal consistency. These values are calculated from the uploaded dataset using listwise complete cases; SPSS output can differ if a different missing-data option is selected.

Annexure F. Formulae

Percentage = (Frequency ÷ Total valid respondents) × 100.

Mean = $\Sigma X \div N$.

Sample standard deviation = $\sqrt{[\Sigma(X - \bar{X})^2 \div (N - 1)]}$.

Construct score = MEAN(all items belonging to the construct).

Cronbach's Alpha = $[k/(k-1)] \times [1 - (\Sigma \text{ item variances} / \text{total-score variance})]$.

Annexure G. Important Verification Note for Thesis Table 5.5

The uploaded raw dataset does not reproduce every published Table 5.5 figure exactly when the construct scores are recomputed from the questionnaire items. For example, the uploaded data gives Perceived Usefulness ≈ 3.36, Tangibility ≈ 3.29,

Reliability ≈ 3.20, Perceived Ease of Use ≈ 3.18, and Responsiveness ≈ 3.02. Therefore, before final submission, the researcher should verify the original SPSS .sav/.spv output and the exact Compute Variable procedure used to generate the published Table 5.5. Do not present reconstructed figures as original SPSS output without this verification.