Citizens' Trust in E-Governance Platforms: A Case of E-taxation in Bangladesh.

-Md Foyjul Islam

Supervisors:
Azadeh Akbari Kharazi, PhD
Dr. Elifcan karacan

University of Twente

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By

Md Foyjul Islam

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Supervisors:

Azadeh Akbari Kharazi, PhD

Assistant Professor of Digital Transformation

University of Twente

Dr. Elifcan Karacan

Assistant Professor in Public Administration

University of Twente

Abstract

It is acknowledged that public trust is the cornerstone of effective governance. There is a considerable relationship between trust and the uptake of e-governance offerings. The study provides a comprehensive overview of e-governance and factors that affect citizen trust in the e-taxation system in Bangladesh. The thematic analysis has been the explicit focus of this investigation. For this method, both primary and secondary data were used. Semi-structured and unstructured interviews were the primary means of gathering data for this research. Eight interview subjects were selected based on the convenience sample approach and snowball sampling method. Several crucial conclusions are drawn from the thorough investigation of the variables influencing citizens' confidence in Bangladesh's e-taxation system as opposed to paper-based taxation. These include mass awareness, ease of use, information security, accuracy, transparency, support system, system quality, and user-friendly features. These elements are essential for fostering trust in e-taxation in Bangladesh.

Significant findings indicate that people are generally reluctant to accept new developments since they have not become accustomed to them. Thus, public awareness campaigns and support system are major in bringing taxpayers into the e-taxation system. taxpayers' perceptions are greatly influenced by ease of use. While most respondents believe e-taxation to be easier and more convenient than traditional paper-based tax systems, protecting personal and financial information is a significant issue. Respondents voiced concerns about information privacy, storage locations, and general security procedures. Most respondents have positive perceptions of the e-taxation system's accuracy. In e-taxation, automation lowers computational mistakes when compared to manual calculations. Additionally, a top-notch platform minimises server lag and guarantees user privacy. The results emphasise the significance of having user-friendly interfaces with options for the native language, a robust quality system to prevent server slowdown and safeguard information privacy, face detection installed for secure site login, automated software to detect fraud and gaps in tax returns to avoid tax evasion, and sufficient digital literacy to promote trust in e-governance platforms. By putting these findings into practice, Bangladesh might improve its e-governance system and provide public services more efficiently, transparently, and inclusively.

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List of Abbreviations

A2i= Access to Information Programme

B2B= Business to Business

BANBEIS= Bangladesh Bureau of Educational Information and Statistics

BBS= Bangladesh Bureau of Statistics

BCC= Bangladesh Computer Council

BNDA= Bangladesh National Digital Architecture

BTP= Bangladesh Trade Portal

C2G= Citizen to Government

CPD= Centre for Policy Dialogue

EGDI= E-Government Development Index

E-GIF= Electronic Government Interoperability Framework

EPI= E-Participation Index

G2G= Government to Government

G2P= Government to Person

GDP= Gross Domestic Product

Gob= Government of Bangladesh

ICT= Information and Communication Technology

IT= Information Technology

LICT= Leveraging ICT For Growth Employment and Governance

LOSI= Local Online Service Index

NBR= National Board of Revenue, Bangladesh

NID= National Identification

SDG= Sustainable Development Goals

SICT= Support to the ICT Task Force

TIN= Taxpayer Identification Number

UDCs= Union Digital Centres

UN= United Nations

UNDP= United Nations Development Programme

1. Introduction

The trust that people have in their governments has been slowly falling around the world. Public trust is recognised as the foundation of good administration (Hitlin & Shutava, 2022; Rothstein, 2011). The level of trust that citizens have in public institutions is crucial as it serves as a measure of effective governance and has an impact on the efficacy and proficiency of public policies (Ramesh, 2017). Trust has a favourable impact on attitudes, perceptions, behaviours, and performance results in organisational settings (Dirks & Ferrin, 2001). According to Vanneste and Yoo (2015), trust-based governance is more effective when there is a clear differentiation between reliable and unreliable partners, and when organisations are willing to take risks despite uncertainties regarding reliability. Nevertheless, the connection between preexisting trust and governance complexity might vary, either positively or negatively, based on unique circumstances and whether trust enhances or diminishes the effectiveness of governance processes (Puranam & Vanneste, 2009). Trust has a significant impact in the adoption of e-government services. By comprehending different forms of trust and their specific aspects and prerequisites, it is possible to enhance trust in e-government services (Bayaga et al., 2020). The trustworthiness cues found in e-services, such as the immediate impact of outcomes on individuals, influence their faith in government entities (Smith, 2010). Trust has an important impact in deciding the extent to which e-government is adopted in various countries, even when taking into account economic and socio-economic factors (Das et al., 2009). The degree of trust placed in governmental organisations and the calibre of electronic services play a pivotal role in influencing the level of adoption of e-government (Teo et al., 2008; Pinem et al., 2018).

Lo et al. (2022) explains e-governance as a streamlined procedure that facilitates interactions between the government, individuals, and enterprises while improving confidence and security in governmental payments. E-governance promotes effectiveness in the provision of public services and presents boundless opportunities to address corruption and bureaucratic issues in the public administration system (Islam & Ehsan, 2013). According to Al-Rzoky et al. (2019), E-governance involves the integration of technology-based tools and components that are accessible to the public. This enables the use of real-time analytics and the deployment of online services without any delay and with increased precision.

E-taxation is a widely used e-government service, and its effectiveness relies on the willingness and acceptance of taxpayers to utilise it (Gercek et al., 2015). Nisha et al. (2016) state that e-tax filing is a developing aspect of e-government that seeks to enhance the tax filing process. Trust, effort expectation, performance expectation, and individual innovativeness all have an impact on e-taxation adoption. One important way to raise the value of services provided to citizens is through e-taxation. The study by Hossain and Azam (2019) highlights the effectiveness of e-taxation in building e-governance. Currently, it is believed that using electronic tax (e-tax) filing is essential for streamlining and cutting costs associated with tax collection, hence increasing the effectiveness and transparency of government services (Chen, 2010; Hossain & Azam, 2019). It will be successfully implemented when e-taxation can offer a mandatory service delivery channel via the electronic platform. Businesses and individuals can use e-taxation to file their tax returns electronically and make payments online. Utilising e-tax offers taxpayers significant advantages, such as enhanced precision and efficiency compared to traditional paper-based filing, reduced expenses, and expedited refunds (Hossain & Azam, 2019). E-filing can lower tax return errors, streamline data analysis and "risk-based audit" selection, and lessen the likelihood of dishonest interactions between taxpayers and tax authorities (Fjord et al., 2023). In many nations worldwide, acceptance of e-taxation has emerged as a crucial e-government indicator (Chen & Huang, 2006).

On the contrary, Bangladesh's situation diverges from other nations due to the nascent adoption and acceptability of electronic tax filing (Hossain & Azam, 2019). A notable proportion of electronic tax ID number (e-TIN) owners, specifically around 2.2 million out of a total of 4.6 million, submitted tax returns for the fiscal year 2019-2020 (NBR, 2020). Only 4 to 5 per cent of these files were submitted electronically, and fewer than 1 per cent of taxpayers used the online payment method in the same assessment period. (Hossain & Azam, 2019). It depends on things like confidence in the Internet, faith in the e-filer, perceived risks, and feelings of optimism whether or not someone wants to use e-filing (Schaupp & Carter, 2008). Shukla and Kumar (2019) state that trust is crucial in the adoption of e-tax filing. Its purpose is to build credibility and guarantee the accuracy of information. The study will give a thorough picture of e-governance in Bangladesh and the trust factors of Bangladeshi citizens in the e-taxation system.

1.1. Research Questions

The general research question is, What factors affect citizens' trust in Bangladesh's e-taxation system compared to paper-based taxation?

Sub- Questions are-

- What is the current status of e-governance in Bangladesh?
- What are the distinguished features of e-taxation compared to paper-based taxation in Bangladesh?
- What factors affect the trust of citizens in the e-taxation system in Bangladesh?

1.2. Relevance and Contribution of the Thesis

This thesis substantially improves the comprehension of the implementation of e-governance in developing countries. This study elucidates the degree to which trust impacts taxpayer behaviour towards the e-tax filing system, underscoring the crucial significance of trust. The study provides insights that are relevant to the Bangladeshi context as well as contributes to the broader discussion on digital governance by emphasizing the attributes of trust that promote user acceptance. This is especially pertinent because governments worldwide are progressively adopting digital platforms to increase service delivery, streamline operations, and boost transparency. The findings can provide valuable insights for policy-making and development of e-governance initiatives, increase citizens' alignment with trust-related issues, and ultimately increase their level of involvement and compliance.

2. Theoretical framework

This chapter presents the theoretical framework and discusses the analytic and theoretical lens through which the thesis is conducted. This thesis examines how ICTs in government, and society have been significantly greater. The study aims to identify the factors influencing citizens' trust in Bangladesh's e-taxation system compared to paper-based taxation. The chapter discusses the conceptual clarification and literature review to provide the necessary insights into citizens' trust in e-governance systems.

2.1. Literature Review

E-governance is a potent instrument for raising public participation, raising the standard of service delivery, and strengthening internal government efficacy (Parent et al., 2005). E-government provides citizens with greater autonomy regarding their interactions with the government. Instead of physically going to a specific department or contacting government officials at a specific time, citizens have the flexibility to get these services at their place and time (Vinod et al., 2007). Consequently, various e-government initiatives have been implemented to construct services that are tailored to the requirements of citizens, enhancing the accessibility of government offerings to the public (Saha, 2008). In other words, the e-government can deliver public services in a manner that is truly uniform, unbiased, effective, and comfortable for both the service provider and the service recipient. Governmental agencies can also act as recipients of e-government services in specific cases (Berdykhanova et al., 2010). In economic terms, the transaction costs associated with government services are reduced by the ability of citizens to access them at any time and from any location (Lee et al. 2008). In particular, online taxation is a critical function of e-government due to its close connection to the daily lives of citizens (Wu & Jian-Liang, 2005).

According to Kalikakis et al. (2008), e-taxation aims to reduce bureaucratic procedures and improve transparency in tax filing and payment processes. However, it needs to address the issue of how tax revenues are utilised. Electronic taxation (e-taxation) facilitates paying taxes remotely from home, the office, a shop, or while travelling. This system has enhanced tax compliance in several countries (Umenweke & Ifediora, 2016). In addition, the e-tax, a widely used e-government platform, provides substantial advantages to the government and citizens. It helps lower costs, minimise errors by human, and shorten the processing duration for income tax returns (Rahman et al., 2020). E-tax impacts the dynamics between the government and citizens more than any other e-service (Wu & Chen, 2005). Individuals and organisations can file taxes and make payments online thanks to e-taxation (Chatfield, 2009).

Using e-tax can provide significant advantages for taxpayers, such as reduced expenses, quicker refunds, and increased efficiency and accuracy compared to paper-based filing (Peterson & Washington, 1993). Pant et al. (2004) state that e-taxation presents several benefits over conventional paper-based tax reporting, including expedited processes, reduced costs, and enhanced efficiency.

Manly et al. (2005) state that e-tax filing systems are a rapidly developing e-government application worldwide. Acceptance of e-taxation has grown to be a crucial metric for evaluating e-government worldwide (Chen & Huang, 2006). However, Bangladesh's situation differs from other countries, as e-tax filing is still relatively new and has yet to be widely accepted. Though the country's declared aim is to create a society focused on digital technology, Bangladesh is presently undergoing a period of transformation. It is observing a notable advancement in creating digital operations across many government departments. During the development process, the government established several networks to connect citizens in various interior places to the government's primary network. This initiative, known as "Digital Bangladesh," aims to make digital technology the primary engine propelling the country's economy (Hossain & Azam, 2019). Online income tax filing, or "E-filing," is currently being implemented in Bangladesh (Sarker & Ahmed, 2022).

The majority of studies on e-governance primarily examine the technological and practical aspects, neglecting a crucial factor: the requirements of citizens, who are the users (Bertot & Jaeger, 2006). Trust is an essential factor which motivates people to utilise e-governance technologies (Jafari et al., 2022). Trust is widely recognised as a fundamental factor driving the smooth implementation and acceptance of technological advancements, especially in e-government frameworks (Shirish & Thompson, 2005; Warkentin et al., 2002). Trust and satisfaction with e-government services are tightly interconnected, with satisfaction being influenced by individuals' impressions of the service, particularly the government's provision of dependable information and the convenience of the service (Alsaghier et al., 2009). Trust is the anticipated result of delivering e-government products (Welch, 2004). The deficiency in trust may be the fundamental reason for the below-average performance of e-government systems, and the reinstatement of confidence can be accomplished through the improvement of service quality. Put simply, individuals need to have trust in the intelligence and technical capabilities of government agencies to successfully implement and safeguard these systems (Bélanger & Carter, 2008).

Trust in e-governance platforms is contingent upon various elements, including confidence in the government, the standard of services rendered, the degree of security and privacy, and the user's firsthand encounters. The degree of trust in government plays a pivotal role in deciding the level of trust in e-government platforms, whereas faith in technology alone has a lesser impact (Alzahrani et al., 2017; Li & Xue, 2021 and Teo et al., 2008). The essential factors for establishing trust in e-government offerings are the quality of information, systems, and service. The aforementioned studies (Kanaan et al., 2023; Teo et al., 2008; Pinem et al., 2018; Santa et al., 2019; Li & Xue, 2021) have identified certain quality elements that have a beneficial impact on consumers' trust and their propensity to utilise the services. The trustworthiness of e-government services is contingent upon the perception of their privacy and security. The trust and utilisation of e-government platforms by users depend on their sense of security and protection of data privacy (Kanaan et al., 2023; Li & Xue, 2021; Alharbi et al., 2016). Positive user experiences, which encompass user-friendly interfaces and high levels of satisfaction with the service, have a crucial impact in establishing trust in e-government platforms. The confidence of users is also affected by the benefits they perceive and their happiness with using the service (Pinem et al., 2018; AlAwadhi et al., 2023; Khan et al., 2023; Li & Xue, 2021). Trust can be bolstered by placing confidence in endorsements from credible sources and acquiring a comprehensive comprehension of the e-government system. Training along with socialisation programs can improve users' familiarity and trust in the system (Pinem et al., 2018; Santa et al., 2019). Isaac (2007) found that making government information available to citizens is critical to developing trust of public in e-governance interfaces.

The perceived level of convenience of digital government offerings significantly influences the level of trust users place in these services. This, in turn, affects their desire to utilise these services. Several studies have supported this relationship, including those conducted by Carter et al. (2016), Ayyash et al. (2013), AlAwadhi et al. (2023), and Turel & Gefen (2013). According to Mensah (2018), having trust in the internet is a strong indicator of how easy it is considered to use. However, it may not necessarily affect how beneficial it is perceived to be.

Users’ express apprehension regarding the security measures in place while sharing sensitive information online and will only engage in transactions if they have established a certain degree of trust (Saha, 2008). The relationship between security and trust has been the subject of numerous studies. According to Tassabehji and Elliman (2006), for citizens to have confidence in e-taxation, they must have faith in the security of their sensitive data

throughout online transactions. The issue of the security of digital transactions was brought up with the extensive implementation of e-taxation technology in Brazil, as demonstrated by the case study. Security concerns were recognised as a major barrier to the mainstream acceptance of public services in e-government in other nations. Security refers to the protection of information or systems from unauthorised intrusions or leaks. Most research has identified that the creation and expansion of information systems are impacted by concerns about inadequate security (De Vasconcellos & Rua, 2005). Privacy and trust are significant determinants of people's future intentions to avail e-government services. This emphasises the importance of integrating these attributes into the creation and implementation of e-governance platforms (Iqbal et al., 2018). Therefore, the users' perception of the electronic tax-filing systems' capacity to ensure secure transactions is a pivotal determinant that might influence the acceptance and use of these systems (Berdykhanova et al., 2010).

New vulnerabilities and risks can impact the trust that individuals have in online services. Despite the lack of reliable numbers, experts unanimously agree that the financial implications of online crimes, such as website defacement, virus and Trojan horse distribution, denial of service assaults, and unauthorised access, are significant. Moreover, the possible outcomes of a coordinated and intentional attack on our digital civilisation by determined opponents are a major worry (Pearson & Balacheff, 2003). System quality in e-government can be assessed by evaluating an online system's integrity, usability, dependability, flexibility, and reaction time. It denotes the website's technological competence in offering users easy, fast and integrated information access while guaranteeing security and reliability. User satisfaction is contingent upon comfort, accessibility, interactivity, user-friendliness, stability, and ease of use (Rana & Rahman, 2022). The perceived utility of a system refers to how much one believes it can improve productivity at work. Rana and Rahman (2022) define perceived ease of use refers to the notion that utilising a particular technology necessitates minimal effort. Bhattacherjee (2001) discovered a strong association between the perceived utility of a technology, the user's satisfaction, and their intention to sustain its usage. Liao et al. (2009) discovered a link between user pleasure, perceived utility, and willingness to continue using government-provided e-services in Bangladesh.

The connection between transparency in e-governance and trust among the public is a crucial field of research, particularly as governments progressively embrace digital channels for engaging with citizens. Transparency in electronic governance typically increases the

citizens' confidence level in the government (Hartanto et al., 2021; Kim & Lee, 2012; Yu & Qing-liang, 2012). The level of transparency that individuals see has an indispensable impact on how they perceive usefulness and utilise of e-government services. This, in turn, promotes trust in these services (Mensah, 2018). According to Gritzalis et al. (2019), citizens perceive transparency-enabling information systems as dependable and capable of potentially increasing confidence. The impact of openness on trust-building is influenced by factors such as information accuracy, simplicity of use, and customisation of e-government offerings (Venkatesh et al., 2016). Nevertheless, there are situations in which enhanced openness does not result in greater trust, especially when citizens often express their opinions, which might create a poor sense of reliability (Porumbescu, 2015).

2.2. Conceptualisation

2.2.1. E-taxation

ICTs are used in electronic governance, which is the process of providing government services by integrating numerous stand-alone systems between citizens-to-government (C2G), government-to-government (G2G), and business-to-business (B2B) services. It is frequently associated with administrative tasks and communications within the government. The populace may conveniently, effectively, and transparently access government services thanks to e-governance (Dasgupta, 2013). The aim behind e-governance is to use ICTs to enable the government to carry out its policy, service, and development duties to manage and steer stakeholder relations across many sectors non-hierarchically (Islam, 2012). They apply newly developed ICT to streamline public administration and government procedures. It is about giving people the freedom to decide how they want to communicate with their governments.

Taxes are considered a constituent part of government revenue and, in principle, a significant revenue stream for the administrations of several nations (Adeniyi & Adesunloro, 2017). Tax collection primarily depends on taxpayers so that any noncompliance may impede income generation. Opportunity costs for time and other resource inputs, as well as psychological costs like stress and anxiety from adhering to tax regulations, often cause taxpayer noncompliance (Tran-Nam and Evans, 2014). E-taxation is a cornerstone of e-government services, garnering widespread popularity. Facilitating taxpayers and media outlets to submit tax claims at their convenience effortlessly is pivotal to e-government initiatives (Haruna et

al., 2021). It is a procedure for receiving, managing, and evaluating money via an electronic channel. It is a method by which governments everywhere use ICT to enhance how they provide citizens with information and services (Haruna et al., 2021). E-taxation facilitates online tax filing and payment for individuals and organisations (Chatfield, 2009). E-taxation saves time and money for the taxpayer and the tax collector by allowing online return preparation, submission, and payment from the comfort of one's home. Electronic tax filing also improves tax authorities' efficiency in evaluating and collecting taxes. It is believed that filing taxes electronically will lessen corruption and inefficiencies in the tax administration process. Governments worldwide have established digitally based tax filing systems or are preparing to do so after realising the many advantages of electronic filing (Hossain & Azam, 2019). According to Pant et al. (2004), there are several advantages for taxpayers who use e-tax, such as increased efficiency and accuracy compared to paper-based filing, reduced expenses, and quicker refunds. Nonetheless, significant disparities still exist amongst international tax payment systems. Although taxpayers in certain nations are considering using the system, taxpayers in more technologically advanced countries are used to it since they have sophisticated infrastructure and state-of-the-art e-tax filling technology (Hossain & Azam, 2019).

In Bangladesh, The National Board of Revenue (NBR) developed the e-tax filing method to decrease incomplete forms, which are common when conventional tax returns are used (Habib, 2018). The NBR gets many annual partial or extremely erroneous income tax returns (Rinaudo 2019). The NBR's processing and administrative expenses for tax refund activities are increased by incomplete tax forms (Mannan et al., 2020). Because the E-file system ensures taxpayers pay attention to important information before proceeding to the next stage of the tax filing process, taxpayers are expected to submit accurately completed tax returns. Moreover, E-filing reduces the possibility of any computation errors because it automatically determines the amount of tax that must be paid (Mannan et al., 2021). E-filing, e-payment, and universal self-assessment have lowered the burden on Bangladesh taxpayers, but have not appreciably altered the tax structure (Ete, 2023). “To establish dynamic revenue management in the tax department and to comply with government’s vision of establishing digital Bangladesh, NBR has initiated to establish many online services like online tax registration, online Tax Payer Identification Number (TIN) registration and online VAT calculation. Online tax filing system in Bangladesh, although in existent, does not provide convenience to the individual taxpayer. For example, the official website of NBR provides a

window to submit income tax return online which requires scanned copy of manually prepared income tax return form. Tax payers must have a user ID and password which is designed to be provided by the local income tax office for online return submission following the above-mentioned procedures which projects a slow move in digitalization process in tax collection system. The comprehensive implementation of online tax filing system in Bangladesh is still underway which posits a question how to implement the system by providing user convenience in the near future." (Hossain and Azam, 2019, p-3).

2.2.2. Trust

Trust is a complex idea in the social sciences with many interpretations and uses (Jamil & Askvik, 2015). Trust relies on something you have no control over, such as fate or chance, to acquire what you desire or need (Britannica, 2023). Being trustworthy makes one more reliable and reduces the cost of transactions (Kim, 2005). Transactions can be social connections (such as those between neighbours or coworkers) or commercial ties (such as those between buyers and sellers). A good experience interacting with another person reduces danger, uncertainty, and vulnerability while boosting trust. McEvily and Tortoriello (2011) assert that trust in psychology is based on two fundamental components: The necessity for the individual to exhibit vulnerability and the anticipation of receiving preferential treatment or having reasonable expectations regarding the actions, behaviour, or others' intentions.

The traditional notion of trust in e-government relates to confidence in a specific organisation—such as the government—and the reliability of the technology supporting it. Even with increased government financing for electronic services, citizens still prefer traditional methods of communicating with the government, such as phone calls or in-person visits, over online channels (Carter & Bélanger, 2005). Therefore, studies on e-government trust are essential for encouraging cooperative behaviour. The high reliability of e-government services and applications is the main reason for the rise in citizen engagement with online public services (Kumar et al., 2007). Nevertheless, Bélanger and Carter (2008) contend that a lack of confidence hinders the acceptance of e-government services by citizens. As government agencies invest additional expenditures to implement and sustain e-government programs, it is imperative for them to acknowledge and address trust issues that arise. Ensuring citizen trust is paramount for fostering receptivity towards information and active participation in the e-government system.

Dombrowski et al. (2014) defined Awareness refers to the level of consciousness an individual has regarding a certain service or e-government effort, as well as the benefits that the service can provide. Familiarity is a phase in which individuals employ their prior experiences (Luhmann, 1979), communications, and education to understand the reasons, locations, timetables, and actions of others (Gefen, 2000). Luhmann (1979) argues that trust is a necessary condition for familiarity, and that trust is formed inside a familiar setting. The modification of the well-known attributes of the world can subsequently impact the capacity for trust to cultivate in human relationships (Luhmann, 1988). Alsaghier et al. (2009) found that during the early phases of e-government, it is crucial for citizens to get a better understanding of the e-government environment. This understanding significantly impacts citizens' faith in e-government. The dissemination and digitisation of public information to the entire population, along with the implementation of specific conditions and regulations for the sharing, collection, safeguarding, and utilisation of information by individuals, the government, and the private sector through e-governance systems, are factors that enhance the trust of citizens in e-governance platforms (PaskalevaShapira, 2006; Dawes, 2008, 2009).

The perception of ease of use pertains to the level of simplicity in using the website (Corritore et al., 2003). AlAwadhi et al. (2023) state that users' faith in digital government services is significantly influenced by the content and design quality and the perceived ease of usage. This, in turn, affects their behavioural intentions and satisfaction. Users should be able to use e-government apps or websites with minimal effort. User trust is contingent upon the presence of user-friendly systems and aesthetically pleasing, well-structured designs that incorporate extensive, relevant, and accurate information. Trust, as delineated by Saha (2008), encompasses beliefs concerning the integrity, user-friendliness, competence, and predictability of e-services. According to Alsaghier et al. (2009), there is a significant correlation between the level of trust established and the satisfaction of people with e-government services. The usability and accuracy of government data significantly influence individuals' perceptions and levels of satisfaction with the service.

According to Nulhusna et al. (2017), the efficacy of e-government, specifically the calibre of information and systems, significantly influences the level of trust bestowed upon it by the people. Trust has an essential part in encouraging people to actively participate in e-government tasks regularly and share positive experiences through electronic word-of-mouth.

A study conducted by Studio Archetype and Sapient in 1999 found that the way websites are presented and how easy they are to use are important design elements that make people trust them more. A study by Teo et al. (2008) discovered that faith in government and e-government sites is linked to success. It is also good for the quality of information, processes, and services when people trust the government and e-government websites. The study conducted by Hwang and Kim in 2007 found that the perceived website quality, namely in terms of its service contents, has a favourable impact on e-trust. This effect is influenced by the user's degree of satisfaction and anxiety while utilising customer self-service platforms. The government should implement a complete digital infrastructure to streamline all government services, operations, and payments to cater to the citizens' requirements (AlAwadhi et al., 2023).

The incorporation of robust security measures in e-governance systems plays a crucial role in fostering trust among citizens (Jafari et al., 2022). According to Shareef et al. (2011), security concerns play a significant role in establishing confidence among residents when using e-governance technologies. Kanaan et al. (2023) state that factors like quality, security, and privacy make people trust internet-based government services and want to use them. Abbas et al. (2022) have highlighted the significant role of robust security measures in promoting the development of e-government and the utilisation of ICT in Asia. Wong, et al. (2007) found that having policy and regulation in place increases the feeling of security and confidence among individuals when they participate in digital interactions with the authorities. The existence of security and privacy regulations instils a sense of assurance among citizens regarding the authorities' commitment to thwarting criminal acts in the realm of cyberspace, specifically of privacy breaches and unauthorised access by hackers to any e-governance system (Jafari et al., 2022).

As technology becomes increasingly intertwined with society, the importance of citizens' perspectives on the accuracy and reliability of e-services will increase. For government agencies to mandate individuals to reveal sensitive information and carry out private transactions on the web, they need to acknowledge and enhance citizens' confidence in the reliability of digital government services (Bélanger & Carter, 2008). The accuracy and completeness of information are essential factors that influence the willingness of individuals to use e-government services. Openness and confidence are crucial factors in this context (Venkatesh et al., 2016).

Transparency has an indispensable role in establishing trust in e-governance, as citizens tend to be content with the electronic dissemination of information (Welch, 2004). according to Nilashi et al. (2016) the level of transparency that consumers perceive is just as crucial as the quality of recommendations in establishing trust in e-governance. Hochstetter et al. (2023) argue that transparency in electronic operations has the effect of decreasing corruption and facilitating the sustainable and efficient use of financial resources in e-government procedures.

Utilising user assistance services, such as live chats and question forms, with experienced workers, is essential for efficiently resolving difficulties. Therefore, this can enhance the effectiveness of digital services and minimise redundant applications, so aiding in the prompt response to residents and restoring their confidence (AlAwadhi et al., 2023).

The current study approaches to look for possible depth analysis of following variables relating to trust in taxation in Bangladesh.

Independent Variables	Dependent Variable
• Mass awareness • Ease of use • Security of information • Accuracy • Transparency • Support system • System Quality • User-friendly features (field research)	**Citizens' trust in e-taxation in Bangladesh**

Figure 1: Analytical Framework of the Study.

Source: Prepared by the researcher on the basis of Alsaghier et al. (2009); Corritore et al., (2003); AlAwadhi et al. (2023); Jafari et al., (2022); Shareef et al. (2011); Venkatesh et al., (2016); Nilashi et al. (2016); Welch (2004); Teo et al. (2008) and field research.

Mass awareness

Mass awareness can be defined as the extensive and in-depth information and knowledge that a large population possesses about a specific issue. In this context, it pertains to the extensive distribution of information regarding e-taxation, ensuring that taxpayers are knowledgeable and comfortable in utilizing the platform.

Ease of use

In the context of e-taxation system, "ease of use" pertains to the level of simplicity and convenience in navigating and completing the online tax procedure.

Security of Information

Security of information refers to the measures and assurances that are implemented to safeguard personal and financial information from fraudulent access, breaches, and misuse. It entails the establishment of clear communication from the authorities regarding the protective measures, as well as the maintenance of confidentiality, integrity, and appropriate data management.

Accuracy

Accuracy is defined as the system's capacity to carry out standardised calculations that reduce computational errors and guarantee the correctness of the tax return using the available information.

Transparency

Transparency refers to the clarity and openness with which the tax filing process, security measures, and data storage protocols are communicated.

Support system

An e-taxation support system is a complete framework that aims to provide prompt and easily accessible assistance to taxpayers, specifically resolving technical concerns and simplifying the rectification of errors.

System Quality

System quality pertains to the server infrastructure's capacity to manage a large number of simultaneous logins without experiencing any downtime, while also encompassing seamless and secure login procedures.

User-friendly features

A platform that is accessible to a broad spectrum of users without technical expertise and is equipped with components and functionalities that facilitate navigation. These features are

designed to prioritise convenience and simplicity, thereby enabling users to complete their tasks with minimal effort and anxiety.

2.2.3. E-taxation and Trust Nexus

The acceptance of e-taxation has become a prominent indicator of e-government in numerous countries throughout the world (Chen & Huang, 2006). Interpersonal trust is assessed by factors such as mutual reciprocity, benevolence, and civic participation, as stated by Putnam (1993). The assessment of trust in public institutions is determined by citizens' confidence in them, meaning that they function per citizens' normative expectations (Kim, 2010).

Most countries are focusing on implementing electronic taxation systems. For an e-taxation system to be successful, taxpayers must embrace it. Several factors influence taxpayers' intentions to utilise electronic taxation (Gercek et al., 2015). The objective of e-government services is to establish trust (Welch et al., 2005). Insufficient trust may be the root of underperforming e-government systems, yet enhancing service quality can effectively address this issue. In another way, people need to think that government organisations are smart enough and have the means to put these systems in place and keep them safe (Bélanger & Carter, 2008).

3. Methodology

This chapter will describe the research methodologies used to answer the core research question and its sub-questions using the theoretical framework outlined in the previous chapter. Two phases comprised the research methods: data collection and data analysis.

3.1. Research Design

This study is exploratory research, aiming to delve into the factors that affect the trust in e-taxation compared to paper-based taxation. To acquire a comprehensive understanding, the researcher conducted interviews with both users and officials. This study has done explicitly on the thematic analysis. A research technique called thematic analysis was used to find and analyse themes or patterns in a set of data; it frequently produces new viewpoints and insight (Naeem et al, 2023). Discourse analysis and other qualitative techniques might benefit from the thematic analysis technique's guiding principles, which include coding data, locating themes, honing those topics, and summarising the results (Flick, 2022). Both primary and secondary data utilised in this technique. The primary data collection methods for the study were semi-structured and unstructured interviews. A total eight interviewees chosen based on snowball sampling method and convenience sampling method. The snowball began in a WhatsApp group of former Comilla University students in Bangladesh, where the researcher posted about looking for a taxpayer who had already filed a tax return online. Consequently, the interviews were carried out using Zoom, WhatsApp and Messenger app. The researcher prioritised the participants' preferences for selecting an online platform. The interviews were carried out in Bengali, and the researcher subsequently translated the transcripts. Notably, all participants used the e-taxation system in Bangladesh. The respondents demonstrated a clear understanding of the study's objectives and had prior experience with online interactions. They were fully informed of their right to withdraw from the study at any time without facing any negative consequences, ensuring that their participation was entirely voluntary and their responses remained anonymous. The participants actively given consent to participate in the interviews. The thematic method and the two data collection techniques were able to provide the appropriate insights into the citizens' trust in e-governance platforms through qualitative discussions and descriptions of the stakeholders. For secondary data, policy documents, annual reports, research publications, journal articles, books, and internet browsing are used to gather contemporary and substantial evidence. The secondary sources provide a knowledge base (Guarino, 1995) and help better understand and interpret the study issue.

3.2. Sampling

The entire sample size of this study was eight from the two segments. I noticed that no new themes or substantial variations in the data were emerging after conducting eight interviews. The recurrence of the same issues, benefits, and concerns suggested that I had reached data saturation. Continuing to conduct additional interviews would likely yield redundant information instead of new viewpoints. The snowball sampling method was employed to collect data through semi-structured interviews. Snowball sampling is a method that involves initially selecting a small number of participants and then, upon completion, requesting them to provide a list of prospective participants to identify further potential participants for sampling (Edgar & Manz, 2017). These semi-structured interviews were carried out to obtain taxpayers' perspectives on the e-taxation system, given that they are using the platform. Consequently, they were capable of elucidating the reality of the situation through their lenses. Six of the respondents were from diverse professional backgrounds, including two teachers, two bank employees, and two private service holders. Age category was 25 to 35 years. Because, Digital natives (under 34) are more inclined to adopt and use technology because of its functionality, user-friendly operation, fashion participation, and flow (Yang & Shih, 2020). Furthermore, educational background was considered during the respondent selection process. University graduates were participated in the interviews to ensure a more comprehensive understanding of taxation in Bangladesh. The unstructured interviews were conducted with two tax employees. The interviewees were chosen by convenience sampling method. Convenience sampling is a sampling method that involves selecting samples based on their convenient proximity to a specific place or internet service (Edgar & Manz, 2017). A mid-level tax employee and an upper mid-level tax employee were participated in the interviews.

Table 1: Summary of Respondents' Perspectives from Both Semi-Structured and Unstructured Interviews

Respondents	Category	Age	Profession/position	Educational qualification
1	Taxpayer	29	Private sector employee	Master’s degree
2	Taxpayer	32	Teacher	Master’s degree
3	Taxpayer	29	Banker	Master’s degree

4	Taxpayer	30	Private sector employee	Bachelor's degree
5	Taxpayer	34	Teacher	Master's degree
6	Taxpayer	31	Banker	Master's degree
7	Tax employee	35	Inspector	Master's degree
8	Tax employee	40	Deputy commissioner	Master's degree

3.3. Data Collection

The forthcoming methods employed in the process of data collection:

Semi-structured interviews: Data were collected through semi-structured interviews with taxpayers representing a range of ages, demographics, educational backgrounds, and professional experiences. The primary criterion for selecting interviewees was their experience with the e-taxation system. These interviews yielded valuable insights into the selection of the e-taxation system and the factors influencing trust in e-taxation.

Unstructured interviews: Data were gathered through two unstructured interviews with tax employees. The unstructured interview provides an opportunity to engage in open-ended discussions that allow for obtaining more than just data from the participants. Unstructured interviews were conducted with tax employees, who serve as crucial informants in the field of e-taxation due to their extensive knowledge of the platform. These employees offered valuable insights into the distinctive features of e-taxation compared to paper-based taxation systems, as well as the factors influencing citizens' trust in e-taxation.

3.4. Data Analysis

Thematic analysis, a commonly used tool in qualitative research, was employed to analyse the interview transcripts. According to Nowell et al. (2017), thematic analysis is a systematic research approach that involves the careful examination of textual data to derive significant and useful results. The study conducted a meticulous examination aimed at identifying keywords, coding data, generating themes, and conceptualising findings through the interpretation of these elements.

The conceptualisation of trust in e-taxation systems leads to some significant themes. These themes have guided researcher to define the concept of mass awareness, ease of use, security

of information, accuracy, transparency, support system, system quality and user- friendly features which are the core theoretical and empirical extract of this study. In data coding and analysis, concepts were crucial in developing the framework and evaluation criteria. For example, "mass awareness" has influenced attempts to make detailed documentation and tutorials publicly available, thereby enhancing user knowledge and comfort. "Ease of use" impacted the design of simple user interfaces and streamlined navigation routes; "information security" prompted to integrate robust encryption and authentication systems; and "accuracy" drew attention to exact algorithms to decrease tax computation errors. Transparency motivates user to talk explicitly about our procedures and security protocols. The "support System" was designed for real-time support and troubleshooting, allowing users to fix problems rapidly. "System quality" guides backend infrastructure decisions, delivering high availability and consistent performance under demand. Finally, "user-friendly features" prompted to develop the platform such that it was accessible and simple to use for all users, regardless of technical ability, ensuring an overall seamless and stress-free experience.

3.5. Ethical Considerations

This thesis is written in partial fulfilment of the degree of the Master of Public Administration at the Faculty of Behavioural, Management, and Social Science (BMS) at the University of Twente. Research involving human subjects, whether directly or indirectly, or utilizing potentially sensitive data requires approval from the faculty's ethical committee. Given that this study involves direct interaction with human subjects through interviews, the researcher submitted an ethical review request. The committee identified no ethical concerns, and the request was approved under file number 240697 by the Ethical Committee of the BMS Faculty at the University of Twente. Compliance with UT guidelines was ensured through measures such as conducting discreet and anonymous interviews, obtaining informed consent, and allowing participants to withdraw from the interview if necessary. All participants provided their consent and voluntarily engaged in the interviews, with their identities remaining anonymous.

4. Results

4.1. Current status of e-governance in Bangladesh

In the current digital era, e-governance is crucial. It increases accessibility, convenience, and efficiency for public services. When governments encourage accountability, transparency, and responsiveness, using ICT tools can increase public trust (Ntulo & Otike, 2013). Globally, the implementation of digital government holds promise for advancing sustainable and socially inclusive communities (Manoharan et al., 2022).

Bangladesh has effectively implemented e-government as part of the Digital Bangladesh programme, which has decreased the average wait time for a visit, boosted user satisfaction, and decreased the number of in-person journeys required to access government services. With positive outcomes, hundreds of public services have retrained thousands of public servants in digital delivery (Chowdhury, 2020).

4.1.1. Evolution of e-governance in Bangladesh

Following a long period of colonial rule, Bangladesh, a nation in South Asia with an area of 147,570 square kilometres and the eighth-largest population in the world at 163,882,000, achieved independence in 1971 after a violent war for liberation. Managing this immense population within a limited land area was a substantial governance obstacle for every successive administration. Bangladesh, a parliamentary democracy, has a constitutional duty to ensure that all of its inhabitants have equal access to all essential services. In this regard, e-government turned out to be the preferred method (Ahmad, 2021).

Siddiquee (2013) said that Bangladesh's e-government evolved over the course of three phases. Bangladesh Railway's ticketing system was automated in the mid-1990s, marking the beginning of the Infrastructure Building Phase (1990–2005). The computerization of the Bangladesh Bureau of Educational Information and Statistics (BANBEIS) and the Rajshahi City Corporation's e-birth registration initiative were two other noteworthy efforts during this time. These initiatives improved efficiency by automating current services. To support and carry out ICT and e-Government initiatives, a powerful ICT Task Force was established in 1997, and Support to the ICT Task Force (SICT) was established in 2001. Each ministry established an e-Governance Cell to coordinate e-Government initiatives. The Ministry of Information and Communication Technology changed its name to the Ministry of Science and Technology in 2002. The task of supporting e-Government initiatives fell to the National Computer Council, which was established in 1983 and subsequently renamed the Bangladesh

Computer Council (BCC) in 1990. In 2002, Bangladesh passed its first ICT policy designating ICT as a push sector. Planning among ministries and government offices began to gradually switch from a top-down to a participative approach during the Isolated E-services Phase (2006–2009). The fundamental objective of the Access to Information (a2i) Programme, which was initiated in 2006, is to guarantee that every person has trouble-free, affordable, and reliable access to high-quality government services. A2I seeks to empower public workers, encourage non-governmental organisations to collaborate with government agencies, and make it easier for individuals to participate in e-government initiatives by setting up physical and virtual access points where citizens can conveniently, reliably, and economically obtain public services. The government unveiled its vision for a digital Bangladesh in 2009. The vision was to construct a transparent and efficient government that can deliver services to the underprivileged, while also enhancing Bangladesh's capacity to compete more efficiently in the global economy. Both the ICT Act and Policy were enacted in 2009. The government's inclination to view e-government services as integrated, interconnected, and transactional rather than separate is exemplified by the Integrated and Transactional Services Phase (2010 to present). To integrate government services across agencies and platforms, significant measures have been taken. In 2014, a National Portal was created. A Digital Service Accelerator has been formed to assist ministries in efficiently delivering e-Services. Leveraging ICT for Growth Employment and Governance (LICT) (2013-2019) was a World Bank-funded project that improved the performance of the ICT sector and assisted the government in providing digital services. The Bangladesh Computer Council (BCC) developed the e-Government Interoperability Framework (e-GIF) and the Bangladesh National Digital Architecture (BNDA). Improved citizen-centric governance, cooperation and coordination amongst government agencies, economical and astute service delivery, recycling of infrastructure and services, and establishment of standards for ICT goods and services are among the advantages of the Big Data and Analytics (BNDA). The National E-Service Bus is being used by numerous departments to link their e-services. The renowned WSIS prize was won by BNDA. Bangladesh is implementing a "Whole of Government" ICT Strategy to give its citizens access to faster, more secure, and better digital services. BCC has effectively created the Blockchain platform, which is widely regarded as the world's most secure technology, to link online systems and services with the goal of more securely preserving documents. This platform will mainly monitor the usage of forged documents, such as admission cards (Ahmad, 2021).

4.1.2. Progress in E-Governance in Bangladesh

Bangladesh has made significant progress in e-governance, as proven by the government's extensive digitisation of public services. The government's unwavering commitment to the 'Digital Bangladesh' agenda has been pivotal in bringing about this transformation. (World Economic Forum, 2020; Rahman and Malik, 2020). Bangladesh's e-governance expansion has resulted in fewer in-person trips to receive government services, shorter waiting times per visit, and more customer satisfaction. With positive outcomes, hundreds of public services have benefited from retraining thousands of public employees in digital delivery. This is a component of the government's citizen-centric policy, aimed at providing individuals with a prompt, effortless, and transparent encounter (World Economic Forum, 2020).

The country has also made considerable strides in providing crucial services online. Bangladesh has inquired why it is not giving pension applications and national ID cards online and is looking for alternatives. This has been especially crucial for the younger generation, accustomed to e-commerce with rapid processing and real-time order tracking. However, it faces numerous challenges, such as inadequate infrastructure, insufficient governmental backing, insufficient human resources, the digital divide, etc. (Rahman & Malik, 2020). Despite these challenges, the country has achieved significant strides in its e-governance initiatives (Rahman & Malik, 2020).

E-Governance has made significant progress worldwide, with countries investing in digital infrastructure to improve public service delivery. Bangladesh is a prominent example of this accomplishment, having achieved significant strides in E-Government efforts. According to the UN E-Government Survey 2022, Bangladesh moved up eight notches, ranking 111th among 193 countries in this 2022 UN E-Government Development Index (The Daily Star, 2022). In 2014, eight years ago, it held the 148th position. This indicates a significant increase of 37 positions during a span of eight years. In 2020, the country ranked 119th. However, despite the challenges posed by a global epidemic, it has managed to improve its position by eight places in the preceding two years (Uzzaman, 2023). This rise in ranking demonstrates the country's commitment to embracing digital technologies for public service delivery (A2i, 2022). The EGDI is a composite metric that measures human capacity, telecommunication connectivity, and online service availability—three critical aspects of e-government. The objective of the EGDI is not to assess the absolute level of e-government development, but rather to provide a comparative evaluation of national governments' performance in this area (United Nations [UN], 2022).

Table 2. E-governance rankings of Bangladesh

Index	Year: 2022	Year: 2020
E-government development index (EGDI)	111th	119th
E-participation index (EPI)	75th	95th

Source: Uzzaman, (2023)

Bangladesh's EGDI value for 2022 was 0.563035, suggesting that its e-government infrastructure is developing positively. This development is a direct outcome of the government's diligent endeavours to enhance the fairness and straightforwardness of public service provision. The UN E-Government Survey 2022 is the 12th iteration of the UN assessment of digital governance among the 193 Member States. The survey encompasses an examination of data in both local and regional environments, an exploration of local e-government advancement within global and regional frameworks, an investigation into inclusion within the hybrid digital society utilising the United Nations Local Online Service Index (LOSI), and a concluding chapter that outlines forthcoming directions and trends in digital government (UN, 2022).

Bangladesh's climb in the EGDI rankings over the years demonstrates the country's dedication to digital transformation. The government has intensively created digital projects that improve public service delivery, increase transparency, and promote inclusive growth. Bangladesh's development in E-Governance, as evidenced by its improved placement on the UN E-Government Development Index, demonstrates its digital transformation journey. The government's commitment to using digital technology to offer public services has increased service quality while promoting inclusivity and openness. As Bangladesh invests in its digital infrastructure, it will likely improve its standing in future UN E-Government Surveys. Bangladesh's E-Participation Index (EPI) ranking indicates how successful e-participation has been. As an addition to the United Nations E-Government Survey, the E-Participation Index (EPI) is derived (UN, 2022). Bangladesh also achieved 75th place with a score of 0.5227 in the e-Participation Index (EPI) in the most recent survey (Dhaka Tribune, 2022), in 2020, the rank increased by 20 places to reach 95th position. Bangladesh holds the highest position among the least-developed countries (LDCs) on the list (Uzzaman, 2023). This achievement

underscores the country’s improvement in e-participation and its commitment to fostering an inclusive and participatory governance process (The Daily Star, 2022).

In 2021, the national web site received a monthly average of 60 million hits, hosted over 1 million e-directories, had more than 46,000 registered offices, served 2 million e-service users, and included 5 million goods. As of 2023, there were more than 1.05 crore subject-specific information and 657 e-services accessible on the internet. On average, the service receives a daily visit from 1.5 million users. In addition, the web provides access to programs like "Uttoradhikar Calculator," which has been downloaded by over 100,000 individuals from Bangladesh (Uzzaman, 2023).

At the moment, 16,170 entrepreneurs are working in 8,468 union digital sites across the country. There are more than 300 state and private services available at these centres, such as banking and online shopping. As of the beginning of 2022, these centres provided a total of 625 million services, which saved people an average of 17,450.2 working hours (78.14%) (Islam, 2023).

E-mutation is an online platform that enables applicants to transfer the title of land ownership from the former owner to the present owner. Over 8.8 million applications have been submitted through the system up until now, with over 8.32 million of those cases being resolved. The digital filing system has substituted the traditional paper-based approach with an electronic one, resulting in time and cost savings. The digital filing system has currently released more than 21 million files (Uzzaman, 2023). Various government entities offer their services through a centralised digital platform known as 'MyGov'. As of July 2024, the my gov platform has a total of 4,187,915 registered members. Within this platform, 2,928,000 applications have been submitted for various services, and 2,710,272 of these applications have been resolved (mygov, n.d.).

4.1.3. E-Government Policy and Legal Regime in Bangladesh

To understand how the policy and legal regime in Bangladesh has influenced citizens' trust in e-governance platforms, specifically in the context of e-taxation, we must examine the evolution and impact of several key initiatives and policies outlined in recent years. The government's commitment to modernizing its infrastructure and governance through ICT advancements has been instrumental in this transformation.

4.1.3.1. Digital Bangladesh: Vision 2021

The goal of the government's Digital Bangladesh agenda is to digitalise the majority of a citizen's life (UNDP, 2021; ICT Division, 2019). Digitalising government services, such as e-banking, e-commerce, e-books, e-voting, e-health, e-filing, e-mutation, e-paper, and more, is the primary objective of this strategy. The tenets of Digital Bangladesh include safeguarding the democracy and rights of the populace, fostering accountability and openness, instituting justice, and utilising technology to bring public services directly to citizens' doorsteps. Human Resource Development, IT Industry Promotion, Digital Government, and Connecting Citizens are the four main parts of Digital Bangladesh (ICT Division, 2019).

As part of the Digital Bangladesh plan, the Bangladeshi government executed a nationwide e-governance system in most government offices (Uzzaman, 2023). To create a pro-citizen administration, this rollout used a citizen-centric approach to cut down on people's travel time and related expenses (Uzzaman, 2023). Without a doubt, the widespread implementation of digital technology across many sectors of society and government organisations has been the main factor behind the significant fourfold increase in the nation's GDP per capita over this period, as well as the enhancement in service provision (UNDP, 2021).

The Digital Bangladesh agenda's citizen-centric strategy has decreased the number of in-person trips required to obtain government services, reduced the time spent waiting between visits, and increased user satisfaction (World Economic Forum, 2020; Chowdhury, 2020). With positive outcomes, hundreds of public services have benefited from retraining thousands of public employees in digital delivery. Government process reengineering and streamlining initiatives, like Bangladesh's a2i (a joint programme between the PM's office, Cabinet office, and ICT ministry), have advanced rapidly (World Economic Forum, 2020). In addition to making life easier for the populace, this strategy has encouraged accountability and openness within the administration (Rahman and Malik, 2020). The Digital Bangladesh initiative and the nation's successful e-governance deployment have significantly improved public service delivery and national government. The main objective of this method was to minimise the time, expenses, and frequency of trips required to access a service, with a focus on the needs of the citizens. Additional services were placed atop the "foundational" services initially implemented (World Economic Forum, 2020). Bangladesh's continued adoption of the digital revolution is anticipated to make e-governance even more critical in determining the nation's course.

The government has declared the "Vision 2021" with the aim of creating a resourceful and contemporary country by 2021 through the proper utilisation of Information and Communication Technology (ICT), thus achieving a "Digital Bangladesh". The government has introduced many projects in the areas of e-governance, e-commerce, e-banking, and the expansion of mobile-phone network capabilities. (Habib & Baizid, 2010).

Several substantial initiatives aimed at establishing a digital Bangladesh by 2021 have already been implemented. The main goal of the digital Bangladesh program is to digitalise government services. Nowadays, a significant number of tasks can be efficiently completed remotely from the comfort of one's own home. Online payment is available for utility bills. Today, many services like as online registration, online income tax return filing, online public test result checking, and online transportation ticket booking are easily accessible. Mobile banking enables swift and effortless movement of funds between locations in a matter of seconds. Over one million textile industry employees have received their wages via mobile banking. The government has commenced the widespread implementation of the National Information and Communication Technology policy to cultivate a proficient workforce. A total of 39 ministries have participated in the execution of 306 action plans. A total of 385 land offices have been digitised. A total of 3800 unions have been connected to high-speed internet through the Digital Centre Optical Fibre. A total of 8000 educational institutions have established digital laboratories to generate employment opportunities in the field of information and communication technology (ICT). Additionally, plans are underway to establish an additional 5000 laboratories soon. A total of 250 Agriculture Information Centres have already been established. A pilot initiative known as Digital Village has been implemented in 100 rural areas to digitise agricultural practices. (“Digital Bangladesh - Vision 2021: The Secret of Bangladesh’s Transformation,” 2021)

52.58 million people in Bangladesh were using the internet as of January 2022. This suggests that there is a sizable user base for online services. At the beginning of 2022, 31.5 percent of people were using the internet. Between 2021 and 2022, Bangladesh's internet user base grew by 5.5 million (+11.6%) (Kemp, 2022). Over 12 million individuals in the country seek medical guidance by dialling 16263. Emergency services can be accessed exclusively by dialling 999. The government also aims to digitise 2800 services across 56 Ministries by 2025. The Teen Portal, also known as the Kishor Portal, is an effort that connects 2.7 million adolescents and provides access to over 31,000 educational resources. (“Digital Bangladesh - Vision 2021: The Secret of Bangladesh’s Transformation,” 2021).

4.1.3.2. National ICT Policy

Bangladesh's National Information and Communication Technology (ICT) Policy is a strategic framework for developing the country's ICT industry. The policy, launched in 2002, has been amended several times to keep up with the quickly changing technology world (ICT Division, 2021). Eight strategic issues are the focus of the most recent revision, the National ICT Policy 2018: social equity, digital governance, digital security, research and innovation, research and education, skill development, job creation, and bolstering domestic capacity to deal with emerging technologies (ICT Division, 2021). The Ministry of Science, Information, and Communication Technologies is in charge of implementing and monitoring the policy.

4.1.3.3. Digital Security Act, 2018

This new law, which replaced the ICT Act of 2006, was enacted to safeguard public safety and the country and prevent and control cybercrime. The definition of cybercrime has been expanded by this act to encompass propaganda against the Liberation War and the Father of the Nation, inciting hatred towards certain ethnic or religious groups, uploading objectionable content to hurt others, digital fraud and forgery, and cyberterrorism (Ahmad, 2021). It recommends severe penalties for many kinds of cybercrimes.

4.1.3.4. Information Security Policy Guideline, 2014

A thorough framework that offers direction on guaranteeing the security of information in numerous industries is Bangladesh's Information Security Policy Guideline 2014 (GoB, n.d.; ICB, 2015). Numerous subjects are covered by this guideline, such as identity and access management, network and infrastructure security, incident management, threat and vulnerability management, physical and environmental security, application security, data security, and human security. There are other guidelines for using ICTs unique to a specific technology, social media, cloud computing, virtualization, and mobility. The policies apply to all users of the organization's information resources. It is reviewed regularly to keep up with the rapidly evolving technical landscape. Implementing this rule reduces the likelihood of security breaches by guaranteeing information resources' secure and efficient use (GoB, n.d.; ICB, 2015).

The evolution of Bangladesh's policy and legal regime reflects a clear trajectory towards fostering a digital society where e-governance platforms are central to citizen interaction with the government. The government's strategic focus on ICT, security, and innovation forms the

backbone of this trust, ensuring that citizens feel secure and confident in using digital platforms for their governance needs.

4.1.4. Selected E-Government Initiatives in Bangladesh

The various e-government initiatives in Bangladesh collectively contribute to a central goal of enhancing public service delivery, increasing citizen engagement, and promoting transparency and accountability in governance. These initiatives create a digital ecosystem that fosters trust in e-governance platforms, including e-taxation.

4.1.4.1. Access to Information (a2i) Programme

The Access to Information (a2i) Programme is a worldwide digital transformation catalyst launched by the Bangladeshi government. It was developed at the Prime Minister's Office in 2008 as the flagship programme of the government's well-known Digital Bangladesh 2021 plan (a2i, 2018). It coordinates with the Cabinet Division to oversee the development of a public service innovation ecosystem and delivery infrastructure on behalf of the Prime Minister's Office. The a2i programme has contributed significantly to Bangladesh's digital development. A2i's major initiatives include the establishment of Digital Centres, Expatriate Digital Centres, the National Portal, the National Information Hotline (333), the e-filing System, Digital Land Services, the Digital Service Design Lab, the Service Process Simplification, the Agriculture Portal and Krishok Bondhu Phone Seba (3331), the Judicial Portal, the ekSheba platform, the Grievance Redress System, Mygov, and the SDG Tracker (A2i, n.d.).

4.1.4.2. National Web Portal

The National Web Portal is a focal centre for all e-government activities and directs citizens to relevant links (GoB, 2024). Bangladesh's National Web Portal was launched in 2014. Every administrative unit in Bangladesh, from local to national, is fully connected through this platform. Interestingly, the Bangladesh National Web Portal has become the world's largest public portal, hosting over 25,000 websites. It has included two million documents and an e-directory with information on 700,000 government employees and authorities. (GoB, 2022).

4.1.4.3. Bangladesh Forms Portal

The Bangladesh Forms Portal is important in the country's e-government ambitions. It was founded in 2015 and enables citizens with a single platform to download, fill out, and submit

numerous government forms and applications (GoB, 2024). Currently, the web contains 1,400 forms, 1,200 of which are editable in PDF format. This lets citizens fill out paperwork digitally, making it easier to obtain government services (GoB, 2021).

4.1.4.4. Bangladesh Trade Portal

The official source of all regulatory information for traders wishing to import goods into Bangladesh or export them to other countries is the Bangladesh Trade Portal (BTP). Bangladesh's Ministry of Commerce launched the Portal to increase the predictability and openness of the country's trading rules and processes. The Portal is also a one-stop shop for information on exporting from and importing into Bangladesh. Click on the appropriate links on this page to find the tariffs applicable to each product, any special measures, the procedures for applying for permits, licences, and Customs clearance, and much more. The Guide to Trade, located at the top menu of this page, offers a complete set of instructions and rules in clear English that are neatly organised by topic (Ministry of Commerce, 2024).

4.1.4.5. Union Digital Centres

One major e-government project in Bangladesh is the Union Digital Centres (UDCs). On November 11, 2010 (a2i, 2023), the Prime Minister Sheikh Hasina launched them. The count of UDCs has experienced a substantial surge, rising from 4,501 in 2010 to 6,686 in 2020. Nationwide, the number of UDCs stood at 8,280 as of November 2021. The UDCs boosted their service delivery to 270 in 2020, and by November 2021, they were providing over 300 services. In just ten years, UDCs have produced 13,372 entrepreneurs nationwide. These centres offered about 555 million services over the same period (TBS, 2020).

4.1.4.6. Digital One-Stop Services

Digital One-Stop Services is part of more significant e-government initiatives in Bangladesh. They intend to provide citizens easy access to government services via a unified digital platform. Under the Access to Information Programme, Bangladesh launched a series of digital one-stop services in 2018, including Eksheba, Ekpay, and Ekshop (UNDP, 2021). These systems were created to support e-commerce, ease utility bill payments, and expedite various government activities (UNDP, 2021). By serving as a middleman, Eksheba gives citizens access to government programmes. With aspirations to grow to almost 3,000, it now provides 162 services (CRI, 2023). Citizens can pay energy bills, water bills, fees associated with their school, and other bills via the Ekpay website, which serves as a one-stop shop (The

Asian Age, 2019). Conversely, Ekshop is an online marketplace that links rural business owners with consumers and industry participants, promoting rural goods (Vambell, 2022).

4.1.4.7. Birth Registration Information System

The Birth Registration Information System (BRIS) was implemented in 2010. The government can follow each thanks to this system, making planning and providing the required services possible. There are 5,082 registration offices nationwide, comprising 319 municipalities, 4,571 union councils, 15 cantonment boards, and 124 zonal offices of 11 city corporations. In addition, Bangladeshi missions maintain 53 registrar offices spread across 42 nations (GoB, 2023).

4.1.4.8. e-Tathyakosh

In 2011, Jatiyo e-tathyakosh, the national electronic content repository, was formally founded. With 10,000 categories and over 100,000 items related to health, education, agriculture, law and human rights, non-farm activities, disaster management, employment, science and technology, trade and commerce, and more, Bangladesh's most extensive content compilation. This digital compilation has developed into a primary hub for the straightforward distribution of livelihood knowledge (Ahmad, 2021).

4.1.4.9. e-TIN and Online Tax Payment

The National Board of Revenue (NBR) issues a unique 10-digit e-TIN (Electronic Tax Identification Number) to identify taxpayers in Bangladesh. It is a critical necessity for all Bangladeshi taxpayers. The e-TIN registration provides multiple benefits, including the opportunity to file income tax returns, pay taxes online, and access other government services (Maria, 2023). One can register on the NBR website by going to the e-return system. The e-Payment Portal is a secure and convenient one-stop shop for the online payment of income tax, VAT, and customs duty (Uddin, 2021). As of April 25, 2024, the number of Taxpayer Identification Number (TIN) holders in Bangladesh surpassed 1.02 crore (10.2 million). The government has implemented several programmes to broaden the tax base, so new taxpayers are joining the tax system. The number of TIN holders has gradually increased since it became obligatory to prove receipts for income tax return submission to obtain various services (Bangladesh Sangbad Sangstha, 2024).

4.1.4.10. E-Mutation

The government of Bangladesh has digitised one of its several public services, known as e-mutation. The online platform enables applicants to modify the ownership title of a piece of land, transferring it from the prior owner to the present owner (Talukder, 2019). In the past, changing a piece of land for taxes purposes required many trips to government offices, long wait times, and large payments to a broker in order to complete the process. In seven Bangladeshi upazilas (subdistricts), the government launched the nation's first-ever e-Mutation system on February 1, 2017. In the event that property is being transferred or sold, citizens can digitally alter or transfer ownership records from one person to another in official records using the e-mutation. The e-mutation was executed nationwide on July 1, 2019. Over 6,600 offices, including 20 circle offices and 492 sub-districts throughout Bangladesh, are currently using the system (Uzzaman, 2023).

4.1.4.11. Digital Filing System: E-Filing

The government offices in Bangladesh previously kept records using a manual system that was based on paper. In an effort to create a "paperless government," the government of Bangladesh introduced the E-Nothi (E-Filing) digital filing system in March 2016. Furthermore, the E-Filing system facilitates civil officials' ability to locate their files and documents through its mobile application, hence augmenting government accountability, transparency, and responsiveness. E-filing unifies the management of all official files for 19,000 government offices and 150,000 officials, catering to the country's 160 million citizens. The system has saved approximately BDT 1,895 million between 2016 and 2021 since it drastically reduces the amount of paper that is needed for file storage, letter-writing, and other uses (Uzzaman, 2023).

Overall, several key findings emerge from the extensive review of e-governance in Bangladesh. First, Bangladesh has made substantial strides in e-governance under its Digital Bangladesh agenda, focusing on improving transparency, efficiency, and citizen accessibility to government services. Implementing digital technologies across various sectors has significantly reduced in-person visits, waiting times, and overall service delivery costs, enhancing citizen satisfaction and administrative efficiency (Chowdhury, 2020; World Economic Forum, 2020).

The Digital Bangladesh agenda encompasses several pivotal initiatives, such as the Access to Information (a2i) Programme, National Web Portal, various online platforms, and Union Digital Centres, which have streamlined service delivery and enhanced citizen engagement (a2i, 2018). Bangladesh's e-governance initiatives have many significant strengths. First and foremost, they have greatly improved the accessibility and effectiveness of government services. According to Rahman & Malik (2020), these initiatives underscore Bangladesh's commitment to leveraging ICT to foster inclusive growth, reduce poverty, and improve governance effectiveness. In addition, the government has streamlined administrative procedures and reduced the risk of corruption by implementing digital systems for tasks such as tax payment and property record management. Implementing UDC has expanded the availability of digital services, guaranteeing that even those living in isolated areas can access e-governance. Bangladesh is always trying to improve its e-governance policies, like the National ICT Policy and Digital Security Act. These policies show that the country is working to make laws and cybersecurity measures stronger so that digital transactions and citizen data are safe (ICT Division, 2021). These policy interventions are crucial in building trust and confidence among citizens, ensuring that e-government initiatives remain resilient to cyber threats and technological disruptions (GoB, n.d.; ICT Division, 2021).

The government of Bangladesh has demonstrated a clear commitment to digital transformation by implementing various initiatives. These efforts have significantly advanced the digitalization of public services across all sectors. As a result, every government office now operates online platforms, allowing citizens to access essential services digitally. Bangladesh's digitalization process includes implementing an e-taxation system. This system is essential to the more significant digital transformation agenda to streamline tax-related operations. This transition simplifies tax compliance for people and businesses and helps improve the country's overall public service delivery.

Bangladesh's e-governance initiatives, despite their strengths, are not without their shortcomings. The reach and impact of e-governance are still limited in many rural areas due to a lack of digital literacy and inadequate internet connectivity. Furthermore, the current ICT infrastructure, despite its improvements, faces limitations, including insufficient bandwidth and an unstable power supply. Not all individuals in the country were affected by these initiatives. The number of consumers of these institutions is significantly lower than that of the country's citizens. Another area of concern is the reluctance of the public sector to adopt new methods in some sectors, where traditional methods are deeply entrenched. Alam & Ahmed (2008) identified many problems encountered by e-governance initiatives in Bangladesh, including limited access to ICT tools, insufficient understanding among public servants and citizens, and financial constraints for capital-intensive projects. Hossen et al. (2017) identified several key deficiencies in e-governance initiatives in Bangladesh, including government policy, a shortage of competent personnel, inadequate funding, a lack of strategic planning, and the socio-educational context of the country. Additionally, there is a need for more comprehensive cyber security measures to protect sensitive information from cyberattacks and breaches. Finally, the emphasis on quantity over quality in certain initiatives leads to implementation gaps, where services are accessible but not fully functional or user-friendly. Hasan (2014) states that Bangladesh's performance in the global e-government index reveals a discrepancy between initiatives and actual outcomes, necessitating increased oversight and efficient cooperation among authorities.

Looking forward, Bangladesh's Smart Bangladesh Vision 2041 aims to further integrate digital technologies across sectors like education, healthcare, and agriculture, fostering a digitally inclusive society (Khan, 2023). This vision underscores the government's commitment to sustainable development through technological innovation and enhanced public service delivery.

Bangladesh's journey towards digital transformation through e-governance and e-taxation has been marked by significant achievements in enhancing administrative efficiency, citizen engagement, and transparency. The adoption of digital technologies has not only improved service delivery but also laid the groundwork for future governance and economic growth advancements. However, ongoing challenges such as the digital divide, infrastructure limitations, and cybersecurity threats require continuous attention to sustain and expand the benefits of e-governance in Bangladesh (UNDP, 2021; World Economic Forum, 2020).

4.2. Distinguished features of e-taxation compared to paper-based taxation in Bangladesh

4.2.1. Flexibility

Respondents indicated that the flexibility of the e-taxation system is its most appreciated feature. In contrast, the traditional paper-based taxation system requires taxpayers to engage in various bureaucratic procedures, necessitating visits to multiple desks within the tax office, resulting loss of at least one working day due to the lack of flexibility inherent in the traditional system. With the e-taxation system, such office visits are eliminated, allowing taxpayers to submit their tax files without encountering hard and fast rules

> "The primary drawback of submitting paper-based tax returns is the lack of flexibility it offers. As a professional, submitting these returns requires me to take at least one full day off work since it must be done during office hours. In contrast, electronic taxation has significantly simplified the tax filing process. Online, I can complete and submit my returns in just 30 minutes from the comfort of my home in the evening".
> (Respondent 1, 29 years old, a private sector employee)

In addition, filing tax returns using the e-taxation system get taxpayers rid of from being in the que and other related sufferings. Moreover, the tax payment deadline can be extended beyond the stipulated time. For instance, while paper-based filing closes in November, online filing remains available until December and, in some cases, extends into January. Additionally, tax offices are closed on Fridays, Saturdays, and public holidays, whereas e-tax filing can be completed from any location and at any time.

> "I work in Dhaka but as I am registered in the Comilla taxes zone, and I pay my taxes in Comilla, necessitating a trip to submit the necessary documents. Therefore, I found the electronic tax system to be convenient, as it allows me to submit my return from home."
> (Respondent 3, 29 years old, a banker)

Overall, the e-taxation method is highly esteemed for flexibility, which sharply contrasts with the laborious and time-consuming nature of the conventional paper-based approach. The latter requires a personal visit to the tax office and involves bureaucratic procedures, often

consuming an entire workday. Taxpayers can submit their tax files through the e-taxation system from anywhere.

4.2.2. Time saving

According to the respondents, the most significant benefit is the time saved by submitting taxes online. The filing process can take two to three days for individuals who file their tax returns using a paper-based system. On the other hand, e-tax filing takes very little time, provided everything is organized, and the homework has been completed.

> "I can quickly file my return online in a short time, which would have taken two to three days with paper methods. Assuming that I have all the necessary materials and completed my homework, online submissions typically take between 20 to 30 minutes."
>
> (Respondent 1, 29 years old, a private sector employee)

Furthermore, in the context of paper-based taxes, individuals who wish to submit their tax returns are required to authenticate and review their documents, perform manual computations, and maintain records. Consequently, officials are burdened with a substantial amount of labour. However, in e-taxation, officials are not required to do a lot of paper work. As a result, e-taxation has decreased the amount of labour for tax officials.

> "The use of online taxation has partially reduced our workload. It is observed that individuals who come to pay taxes must verify the accuracy of their files or records. However, due to the prevalence of online platforms, all papers, including certificates, are now accessible online. As a result, our burden is decreasing."
>
> (Respondent 8, 40 years old, a tax employee)

In general, the process of preparing and submitting paper-based tax documents takes two to three days. However, if everything is well-organised, the same activity might be completed in less than one hour.

4.2.3. Storage and accessibility

The interviewees emphasized that a major advantage of electronic taxes is the ability to store data for unlimited time, which is not feasible with a paper-based system. Due to limited storage capacity, physical documents related tax information cannot be retained indefinitely and must be thrown away after a certain period of time. However, this is not the case with online storage, where data can be stored for a longer duration.

> ” Due to the fact that space is a question of storage, it is obvious that the documents related to paper-based tax cannot be preserved for an entire lifetime and must be destroyed over a specific period of time. On the other hand, if this information is online, then it is a virtual store that is yours to keep. It is possible to store data for an entire life time.”
>
> (Respondent 7, 35 years old, a tax employee)

In addition, it is possible to access any information of taxpayers in the event of applying changes or producing tax certificate. Under those circumstances, they are able to retrieve all of the information from their online profile or account. The fact that all of the information is stored gives them the impression that it is within their reach, and it is also quite simple for them to access it whenever they want, which is not possible with the traditional paper-based method.

> “One major benefit is that, my tax information is digitally stored in my tax profile. I have the flexibility to access the information at any time or download it as necessary. Additionally, the data is securely stored, allowing me to seek assistance with tax payments at a later date if desired. I successfully downloaded the tax certificate and returns document easily.”
>
> (Respondent 2, 32 years old, a teacher)

In general, e-taxation can retain information indefinitely. As a result, taxpayers can retrieve their information and obtain tax certificates at any moment. Conversely, paper-based taxes necessitate the storage of tangible papers, which must be disposed of after a specific amount of time due to limited capacity of storage.

4.2.4. Automated calculation

E-taxation is appealing since it allows for calculations to be performed automatically. Participants noted that if they choose to submit their taxes using paper-based method, they are required to manually compute their taxes and determine the amount of tax that they are required to pay for each sector. However, when they submit the tax to the online system, they are merely entering the data. At the same time, the amount of tax that they are required to pay in any part is automatically computed with these calculations. They also stated that it is simple to compute the amount of tax that is owed in any sector, and that it is a system that is organised for the payment of taxes. The paper-based technique of filing taxes is an entirely manual process, in which a variety of forms must be filled out by handwriting.

> "I found that with a paper-based system, many calculations have to be done, and the form needs to be filled out in different formats before filing tax. When I enter the tax information for the electronics, it is quite simple to do so, and there is an automated calculation that eliminates the need to fill out or compute something manually."
> (Respondent 3, 29 years old, a banker)

Overall, e-taxation provides automated calculation, while the paper-based method requires taxpayers to manually calculate their assets and liabilities. If the taxpayer inputs information into the e-taxation system, the calculation of assets will be automated.

4.2.5. Less chance for Manipulation

It was claimed by participants, particularly those working in the tax department, that there is no chance for tax manipulation in the electronic taxation system. Paper-based methods, on the other hand, perceive a chance for manipulation because of the nature of the method. In addition, if someone is granted permission to edit the data in the electronic taxation system, then the information regarding which ID has been modified using which device will also be stored after the modification has been made.

> "Paper-based taxation presented an opportunity for manipulation. Additionally, the manipulation is no longer feasible due to the online presence. Once more, if an

individual is permitted to modify the data, the ID associated with the corresponding device will be stored."

(Respondent 7, 35 years old, a tax employee)

At glance, the e-taxation system is less susceptible to manipulation compared to the paper-based method due to its inherent characteristics. If someone is granted permission to alter data on the e-taxation platform, any modifications made will be stored online.

4.3. Trust Factors in e-taxation in Bangladesh

4.3.1. Mass awareness

Respondents underscored the necessity of widespread taxpayer awareness regarding the e-taxation system. They highlighted that fostering awareness about the platform is crucial to establishing trust among taxpayers. With adequate knowledge and understanding of the e-taxation system, taxpayers will likely develop the confidence to engage effectively. Consequently, comprehensive outreach and educational initiatives are essential to ensure taxpayers are well-informed and comfortable using the electronic taxation system. This, in turn, will facilitate a smoother transition to digital tax processes and enhance overall compliance.

"If I approach ten individuals, eight will decline and opt for paper-based tax returns. They perceive the process to be complex and prefer the traditional paper-based method due to insufficient information about online filing."

(Respondent 6, 31 years old, a banker)

In essence, Users underscored the significance of ensuring that taxpayers are adequately informed about the e-taxation system to foster active participation and increase trust. They advised the implementation of vital outreach efforts to facilitate the seamless transition to the digital tax system.

4.3.2. Ease of use

Respondents emphasised the importance of an easy platform in establishing trust among taxpayers. They discovered that e-taxation is easier to use than traditional paper-based taxation. However, they have included additional remarks stating that individuals without technical expertise or familiarity with internet usage may find it challenging. A lack of knowledge or understanding of a particular subject might result in a complex situation.

> "In light of certain challenges, online taxation appears easier. My team members need to be acquainted with e-taxation, comprehend it, lack access to technical support, maintain a website that is not user-friendly, and not file online. They are utilising the assistance of lawyers to complete the form. Consequently, they issue paper-based returns due to their need for more understanding."
>
> (Respondent 1, 29 years old, a private sector employee)
>
> "Initially, taxpayers were afraid of online taxation processes and unsure how to navigate them. However, after engaging with the system, they reported positive experiences. There is often a reluctance to embrace new methods, but users became comfortable and proficient with the procedure with time and practice."
>
> (Respondent 7, 35 years old, a tax employee)

In addition, except for some concerns, respondents asserted that e-taxing is a convenient and more streamlined alternative to the traditional paper-based taxation system.

> "Online tax return submission is far more convenient than paper-based. If I had to rate the paper-based tax return system on a scale of ten, I would give it a score of 2. In contrast, I would give the online-based electronic tax filing system a score of 8."
>
> (Respondent 6, 31 years old, a banker)

In essence, the key determinant for placing trust in e-taxation is the level of ease of use. In general, e-tax filing is a convenient and efficient alternative to the traditional paper-based taxation system. However, individuals without familiarity with the internet or lacking basic skills may find it difficult to utilise e-taxation.

4.3.3. Security of information

Respondents expressed concerns regarding the safety of their personal and financial information. They are still determining whether their data is encrypted, unclear where their data is stored or managed, and uncertain about the measures to secure it. Additionally, the authorities have not provided any information or announcements about how clients' data is being managed and protected, which has heightened their worries about information security.

> "I am uncertain about the location and nature of the storage for this information, and I have significant concerns regarding the security and confidentiality of my data. There are doubts about whether the data is securely and appropriately stored, preventing unauthorised access. Authorities must clearly explain the measures taken to protect our information and ensure its security."
>
> (Respondent 5, 34 years old, a teacher)

Due to recent security incidents involving the Bangladesh Bank and the National Identification (NID) server, there are growing concerns about the integrity of the e-taxation system. Respondents worry that if personal information falls into the wrong hands, individuals could face significant trouble, including identity theft and privacy breaches. Additionally, there is a fear that compromised information could be exploited for unsolicited promotional activities, leading to further disturbance and inconvenience for the affected individuals.

> “When entrusting all my information to NBR, I am concerned about the security of my data. This apprehension arises from the need to disclose sensitive details such as my financial assets and liabilities. If this information were to be accessed by any financial institution, it could potentially be used to target me with promotional offers or credit card solicitations.”
> (Respondent 4, 30 years old, a private sector employee)

> “Certainly, an online-based taxation system should complement paper-based tax systems. In the event of a complete online system failure, similar to the Bangladesh Bank reserve theft incident, the consequences could be severe. Our taxation websites are comparatively weak and can crash anytime, potentially resulting in data loss.”

(Respondent 8, 40 years old, a tax employee)

In contrast, some respondents express a lack of concern regarding the security of their personal and financial information, believing it to be secure on national servers. They find the national system trustworthy and perceive a minimal risk of data leakage.

The security of personal and financial information is an essential factor that influences citizens' trust in e-taxation. Users' concerns regarding the confidentiality and security of their personal information. They lack knowledge of the management of their data. Citizens desire a sense of safety and security when engaging in e-taxation.

4.3.4. Accuracy

Respondents indicate a high level of reliability in the accuracy of online tax return systems, attributing this to the automation and pre-configured functions inherent in these systems, which significantly reduce the likelihood of computational errors. The manual calculations required for paper-based returns are prone to errors, whereas the automated calculations in e-taxation ensure accuracy due to their standardised and universal nature. Consequently, respondents trust the accuracy of online tax return systems, as the system's functionality is uniform from one user to another.

> "The accuracy of electronic taxation appears to be quite standard. The format is well-designed, and the system performs automatic calculations based on the information provided. While some manual input is still required, the overall accuracy is enhanced because percentage-related calculations are automated. By entering specific information on the website, the calculations are performed effortlessly, minimising the risk of errors."
>
> (Respondent 5, 34 years old, a teacher)
>
> "Online taxation is more accurate than paper-based taxation, as it eliminates the possibility of errors. Mistakes may occur during data entry, but beyond that, there is minimal risk of inaccuracies."
>
> (Respondent 7, 35 years old, a tax employee)

On the other hand, there is an alternative perspective. The complexity of the taxation system raises concerns about its accuracy. Online taxation software cannot detect tax evasion or fraud.

> "Online-based taxation is not entirely free from errors. Currently, no software or supporting tool can automatically scrutinise tax returns. For instance, while a taxpayer may be paying taxes, no software is available to detect whether they are evading taxes or engaging in any other fraudulent activities. The development of such software is necessary."
> (Respondent 8, 40 years old, a tax employee)

In essence, the platform's accuracy is essential for establishing trust in e-taxation. The automatic calculation and uniform functionality of online tax return systems, which reduce the possibility of errors compared to paper-based methods, are the primary reasons users generally trust their accuracy. Nevertheless, some have raised concerns about the complexity of the tax system and the software's ability to detect fraud or tax evasion, pointing to areas that could be improved.

4.3.5. Transparency

Interviewees highlighted the importance of transparency, noting that it is a crucial aspect of the tax filing process. They appreciate the system's clarity and openness, particularly the ability to receive a PDF version of their tax return after submission. This feature allows them to review their filed return thoroughly and make necessary corrections. However, interviewees have concerns about the security measures and data storage procedures, which they feel need to be communicated. Despite these concerns, they find the tax filing process transparent and satisfactory.

> "The level of openness is exceptionally high, allowing me to view my inputs. After final submission, the resulting PDF document enables me to identify any errors and provides an opportunity for corrections."
> (Respondent 1, 29 years old, a private sector employee)

Overall, the users' appreciated the transparency in the tax filing process, including the option to review pdf files of their returns to identify any mistakes. Nevertheless, they voiced concern

regarding the communication of security protocols and the techniques employed for data preservation.

4.3.6. Support system

Some taxpayers urge that a quick support system is essential to create a convenient system for taxpayers as it is a technical matter. They also mentioned that the current support system has some limitations. In the paper-based method, it is possible to rectify easily any errors; however, in the e-taxation system, the process of correction is time-consuming.

> "There is not enough customer support to address the technical issues, though e-taxation appears to be simple for me. For some reason, the customer service number is unavailable on the website, and it is impossible to contact customer service directly. Once more, there is an opportunity to rectify errors in paper-based taxation. However, if any incorrect input is provided in this taxation, a correction issue would arise, necessitating a significant amount of time to resolve."
>
> (Respondent 5, 34 years old, a teacher)

Furthermore, Respondents indicated that the current support system requires significant improvement. When a large number of individuals attempt to pay their taxes online, various issues arise. Unfortunately, immediate online support is often unavailable, leading to complications. As a result, taxpayers become frustrated and lose interest in using the online tax payment system. This underscores the necessity of enhancing the support infrastructure to ensure timely assistance and maintain taxpayer engagement.

> "In numerous instances, technical support is inaccessible directly or promptly, leading to complications. For instance, a helpline offering 24/7 services ensures that individuals can immediately seek and receive solutions to their queries anytime."
>
> (Respondent 1, 29 years old, A private sector employee)

Overall, Taxpayers emphasise the importance of a comprehensive support system for the e-taxation process, citing its current deficiencies, including the time-consuming error correction process and the absence of direct customer service contact.

4.3.7. System quality

Taxpayers and tax employees have expressed concerns about occasional server slowdowns, particularly during high simultaneous logins. The resulting server downtime causes anxiety among taxpayers. They have articulated a robust need for an enhanced server infrastructure that ensures reliability, thereby mitigating instances of downtime and the resulting inconveniences. This improvement is crucial to meet taxpayer expectations and improve overall operational efficiency in the system.

> "The server has never experienced a crash; however, it tends to slow down under heavy load, particularly during peak periods such as tax deadlines, due to increased taxpayer activity."
>
> (Respondent 8, 40 years old, a tax employee)

To enhance security and protect users' privacy, they advocate for an improved login procedure, incorporating facial recognition technology to simplify and secure access to the platform.

> "If an incorrect password is entered thrice during login, the account will be locked, and office staff cannot resolve the issue. Implementing facial recognition technology will enhance the security of personal financial information."
>
> (Respondent 2, 32 years old, a teacher)

Finally, taxpayers and tax officials are expressing concern about server slowdowns during peak periods and are advocating for improved server infrastructure to guarantee a strong system quality. Furthermore, taxpayers support the integration of facial recognition technology to protect their personal and financial information and improve sign-in procedures.

4.3.8. User-friendly features

Respondents highlighted the need for user-friendly features in the e-taxation system, especially in the context of Bangladesh, emphasising that the current technical complexities should be simplified. They pointed out that many aspects of the system should be considered for making trust a trustworthy platform. They suggested adding Bengali language as a native

language of citizens of Bangladesh, option in the forms and linking tax numbers with bank accounts to make more convenience of using the platform. Furthermore, the payment system needs to be easier. The tax authorities should offer the convenience of making tax payments through any bank or mobile banking platform. By integrating multiple banking options and mobile banking services, individuals and businesses will have greater flexibility and ease in making their tax payments. It is also mentionable that, by integrating with the banks, it will receive financial data and automatically calculate the amount of tax. These changes would make the process of filing taxes much more accessible.

> "The system requires enhancements to improve user-friendliness. It should incorporate a feature that allows for linking tax numbers with bank accounts. Currently, payments are inconvenient as they can only be processed through Sonali Bank, with no options available for using other banks. Enabling payments via bank cards would be beneficial for all users."
> (Respondent 3, 29 years old, a banker)

> “To enhance the service, I propose the integration of bank accounts with the tax server. By linking bank accounts, tax calculations can be simplified using the individual's National ID number. This integration would streamline our processes, eliminating the need for covert operations to identify tax evasion. The server automatically receives financial data as the bank accounts are connected, facilitating accurate tax calculations.”

> (Respondent 7, 35 years old, a tax employee)

Additionally, respondents have indicated that the amendment process within the e-taxation system is complex and time-consuming, leading to user frustration. If correct information is entered into the system, making corrections becomes easier.

> “There are numerous complaints from users about frequently entering incorrect information. In such cases, correcting the information is highly complicated, creating significant issues. For instance, if someone is granted permission to modify a file or information, the process requires approval sequentially from a second person, then a

third person, with the final approval given by the third person. When this process becomes time-consuming, there are suggestions from users to simplify it.**”**

(Respondent 7, 35 years old, a tax employee)

To mitigate user dissatisfaction and complexity, the tax system must be simplified by incorporating user-friendly features, such as native language option, the integration of tax identification numbers with bank accounts, the ability to pay through a variety of banks and mobile banking platforms, and the simplicity of the correction process, as emphasised by users.

5. Discussion and Conclusion

5.1. Discussion

This study investigates the factors influencing citizens' trust in Bangladesh's e-taxation system compared to traditional paper-based taxation. It seeks to delineate the distinguished features of e-taxation versus paper-based method and identify the key factors shaping citizen trust in the e-taxation system.

5.1.1. Distinguish features of e-taxation compared to paper-based taxation in Bangladesh

Based on detailed research on e-taxation versus paper-based tax systems in Bangladesh, several findings that emphasise electronic systems' transformative impact on tax administration and citizen engagement emerge.

First, the flexibility offered by e-taxation has significantly made the tax system popular with citizens. Unlike traditional paper-based systems, which require physical visits to tax offices and filing taxes during office hours, e-taxation taxpayers can conveniently file their income tax returns anywhere and anytime. According to Umenweke and Ifediora (2016), electronic taxation allows individuals to pay their taxes remotely, whether at home, in the office, at their place of business, or travelling. Nurhayati et al. (2023) assert that digital taxation benefits taxpayers by enhancing tax compliance, decreasing tax evasion, and offering round-the-clock access to electronic tax services. This flexibility also reduces bureaucratic hurdles, significant working hours savings and other advantages in filing taxes electronically compared to traditional methods.

Secondly, time saving are essential advantages of e-taxation. Respondents consistently highlighted that the online tax filing process takes much less time than required for paper-based filing. Rahman et al. (2020) highlights that electronic taxation reduces costs, decreases human errors, and accelerates the processing time for income tax returns. Where the latter has to consume several days due to manual processes and bureaucratic delays, e-taxation streamlines the process in mere minutes, assuming all the necessary documents are prepared. This skill is crucial in a country like Bangladesh, where time is a precious resource for individuals and businesses.

Thirdly, the storage and accessibility play a key role in applying e-taxation. Unlike paper-based records, which are susceptible to physical damage and have limited storage capacity,

electronic documents can be stored indefinitely and conveniently accessed from digital profiles. This aspect not only enhances data security but also facilitates easy retrieval of tax information if needed for future reference or review, as emphasised by respondents like respondent 2, who appreciated the simplicity of accessing his tax documents online.

Moreover, automating calculations in e-taxation makes the tax filing process significantly user-friendly. Electronic systems that automate tax calculations based on entered data eliminate manual calculation errors and the monotony of filling multiple forms by hand every day in paper-based systems. Motwani et al. (2015) state that the goal of e-taxation is to substitute the burdensome manual service systems with online delivery that is collaborative, efficient, process-driven, and secure. This feature reduces human error and ensures accuracy and compliance with tax regulations.

Finally, e-taxation strengthens the integrity of the tax system, reducing the scope for manipulation compared to paper-based systems. The digital trail left by electronic filing ensures accountability and traceability, thereby increasing citizens' confidence in the tax system and reducing potential fraud or mismanagement, emphasises respondent 7.

Bangladesh's transition from paper-based to e-taxation represents significant progress in administrative efficiency, taxpayer convenience, system capacity, and accessibility. The results indicate that e-taxation not only speeds up the tax filing process and reduces bureaucratic procedures but also increases information storage capacity, the accuracy of tax calculations and new dimensions in the tax system. These facilities are essential for building a trustworthy taxation system and improving compliance rates, contributing to the country's broader economic development goals.

5.1.2. Trust Factors in e-taxation in Bangladesh

Based on the comprehensive exploration of factors influencing citizens' trust in Bangladesh's e-taxation system compared to paper-based taxation, several vital findings emerge across different dimensions: ease of usage, security of information, accuracy and reliability, transparency, user-friendly, support system, system quality, and mass awareness. These factors are crucial for building trust in e-taxation in Bangladesh.

Firstly, ease of usage plays a crucial role in shaping taxpayers' perceptions. Respondents generally find e-taxation more convenient and easier to use than traditional paper-based tax

systems. According to Shanab and Hammouri (2017), employee satisfaction with electronic tax systems is affected by factors such as ease of usage, IT expertise, incentives provided, and the influence of social factors. However, concerns arise among individuals lacking technical expertise or facing difficulties with the platform's accessibility. The adoption of e-filing can be hindered by a lack of understanding and technological proficiency among some taxpayers (Kumraswamy & B, 2022). Issues such as inadequate user support and technical complexities discourage some users, who alternative to traditional methods despite recognising the advantages of e-taxation in terms of ease of use.

Secondly, security of personal and financial information emerges as a significant factor for trusting e-governance platforms, especially, e-taxation. Respondents expressed fears regarding information privacy, storage locations, and overall security measures. Preserving data security and upholding taxpayer confidence are essential for the extensive use of e-filing (Simorangkir & Fakhrorazi, 2023). Recent incidents like Bangladesh bank reserve hacking and the National Identification (NID) server issue have heightened these worries, emphasising the need for clear statements from authorities regarding data protection protocols. According to Jafari et al. (2022), ensuring the security of citizens' digital interactions with government agencies is essential due to the inherent vulnerabilities associated with the openness of technological systems such as the Internet. While some respondents trust the national system's security, others remain sceptical, fearing potential breaches and misuse of sensitive data.

Thirdly, Transparency also plays a crucial role, with taxpayers appreciating the ability to review and correct their returns post-submission, although concerns about unclear data storage procedures remain. Noked (2018) argues that there needs to be more comprehensive tax transparency to ensure the effectiveness of anti-tax evasion measures. Lisi (2014) found that tax authorities can increase tax compliance and prevent tax evasion by using trust-building measures, such as treating taxpayers with respect and following transparent and fair procedures.

Additionally, several critical factors influence the trust of Bangladeshi citizens in the e-taxation system. These include the platform's user-friendliness, such as offering a native language option, providing diversified payment methods, and integrating bank accounts with tax identification numbers within the tax server. As per Karamov et al. (2011), the initial trust in e-governance platforms is substantially increased by effective website design, which

encompasses visual, social cue, and content design. Generally, people are reluctant to adopt new changes due to a lack of familiarisation. Therefore, a rapid support system and widespread awareness initiatives significantly incorporate taxpayers into the e-taxation system. Trust can be enhanced and resistance to change can be mitigated through the implementation of effective awareness campaigns and enhanced website design that prioritise security and privacy (Lallmahomed et al., 2017). The study by Hossain and Azam (2019) underscores the significant influence of facilitating conditions on individuals' intentions to utilize online tax filing services. Taxpayers are inclined to use the online tax filing system, provided they are assured of the availability of a helpline to assist with any disruptions or interruptions encountered during the filing and payment process. The accuracy and reliability of the e-taxation system are perceived positively by most respondents. Automation reduces computational errors compared to manual calculations in paper-based filing. Despite this, users' concerns about the system's complexity persist, impacting their trust in the accuracy of online filings. E-filing offers taxpayers net benefits by providing pertinent, useful, and accurate information for tax reporting, as well as security guarantees and ease of use (Millenia et al., 2022). A high-quality platform also minimises server slowdowns and ensures user privacy protection. Research conducted in Nigeria demonstrates that quality elements such as information, system, and service quality have a substantial influence on taxpayers' desire to use and continued utilisation of the e-tax system (Haruna et al., 2023). Respondents have expressed concerns about their personal and financial information security, server breaches, and login procedures. To enhance the trustworthiness of the platform, it is essential to maintain a robust system quality. These factors impact taxpayers' trust and their intention to use the e-taxation system compared to traditional paper-based taxation. Kanaan et al. (2023) found that quality, security, and privacy aspects have a favourable influence on individuals' faith in e-government services and their willingness to use them.

Although Bangladesh's e-taxation system provides benefits such as convenience, accessibility, and automated calculations compared to traditional paper-based methods, its broader adoption is hindered by challenges, including server slowdowns, inadequate technical support, security concerns, and perceived complexity. Enhancing user-friendliness, increasing awareness, improving support infrastructure, and implementing stringent security measures could significantly enhance citizens' trust and participation in e-taxation, facilitating a smoother transition to digital governance in taxation.

5.2. Limitations of the Study

Despite its comprehensive approach, this study on citizens' trust in the e-taxation system in Bangladesh faces several limitations. Firstly, the sample size is relatively small, with only eight participants, which may only partially represent the diverse perspectives of all taxpayers in Bangladesh. This limited sample could influence the generalizability of the findings, as the views expressed may not reflect the broader population. Additionally, the study relies on snowball and convenience sampling methods, which, while helpful in accessing specific groups, can introduce biases and limit the diversity of the sample.

Another area for improvement is the reliance on qualitative data through semi-structured and unstructured interviews. While these methods provide in-depth insights and a nuanced understanding of the participants' perspectives, they are also subjective and prone to interviewer and respondent biases. Translating interviews from Bengali to English could also lead to potential misinterpretations or loss of nuanced meanings, impacting the accuracy of the data interpretation. Furthermore, the study's focus on digital natives and university graduates may overlook the experiences and trust levels of older or less educated citizens, who might interact differently with and perceive the e-taxation system. This demographic skew limits the comprehensiveness of the findings and their applicability to the entire population of taxpayers in Bangladesh.

5.3. Implications and Future Research

Despite these limitations, the study provides valuable insights into the factors influencing citizens' trust in the electronic taxation system in Bangladesh. The findings highlight the importance of user-friendly interfaces with native language options, a robust quality system to reduce the slowdown of the server and to protect the privacy of information, installing face detection for securing login to the site, automated software within the system for detecting fraud and gaps in tax returns to avoid tax evasion, and adequate digital literacy for fostering trust in e-governance platforms. Policymakers can use these insights to improve the design and implementation of e-taxation systems, ensuring they cater to a broader audience and address the specific needs of diverse user groups.

For future research to investigate trust in e-governance platforms, this study focused on the taxation system in Bangladesh. However, more is needed to draw definitive conclusions. Examining additional platforms would provide further insights. Expanding the sample size

and including a more diverse demographic range would enhance the generalisability and robustness of the findings. Quantitative methods, such as surveys or statistical analysis, could complement the qualitative data and provide a more comprehensive understanding of the factors affecting trust in e-taxation systems. Comparative studies between regions or countries could offer valuable insights into how various socio-economic and cultural contexts influence trust in e-governance platforms.

Moreover, longitudinal studies tracking changes in trust levels over time as e-taxation systems evolve and citizens become more familiar with them would provide a dynamic view of trust development. Future research could also explore the impact of specific features or interventions, such as targeted training programs or enhanced security measures, on increasing citizens' trust in e-governance platforms. By addressing these aspects, future studies can build on the current research and contribute to the effective implementation and acceptance of e-governance systems globally.

5.4. Conclusion

The current state of e-governance in Bangladesh demonstrates significant progress and commitment toward digital transformation. The government's 'Digital Bangladesh' strategy has led to the substantial digitalisation of public services, resulting in increased efficiency, transparency, and customer satisfaction. This transformation has notably reduced in-person visits, shortened waiting times, and retrained thousands of public employees in digital service delivery. Despite challenges such as inadequate infrastructure, insufficient governmental backing, and the digital divide, Bangladesh has made commendable strides, as reflected in its improved rankings in the UN E-Government Development Index and the E-Participation Index. E-taxation, a crucial component of e-governance, has shown several advantages over traditional paper-based systems, including increased flexibility, time saving, automated calculations, better storage, and reduced chances of manipulation. However, trust factors like awareness, ease of use, information security, accuracy, transparency, and system quality must be addressed to make trustworthy platform and enhance user adoption.

Integrating features such as Bengali language, tax number and bank account connection, and payment choices through multiple banking channels, including mobile banking services, will greatly enhance the user experience of the e-taxation platform. Implement a strong and

efficient support system, such as a round-the-clock helpline, to promptly address technical problems and ensure continued taxpayer involvement. Strengthen the security of personal and financial information by implementing robust safeguards such as two-factor authentication and facial recognition technologies. Authorities must issue explicit statements on data privacy safeguards and enhance server architecture to mitigate downtime. Develop and execute extensive outreach and instructional programs to enhance taxpayer knowledge and confidence in the e-taxation system. Disseminating information to the public regarding the advantages and simplicity of utilising the online system can expedite a more seamless shift from conventional techniques. Conduct periodic evaluations of the e-governance and e-taxation systems to pinpoint areas that can be enhanced. It is important to build feedback systems to collect user thoughts and make any necessary improvements to the platform. By following these suggestions, Bangladesh has the potential to enhance its e-governance system and provide public services more efficiently, transparently, and inclusively.

6. References

A2i. (2020, September 29). *Bangladesh moved 8 steps in UN EGDI 2022*. https://a2i.gov.bd/press-release/bangladesh-moved-8-steps-in-un-egdi-2022/

A2i. (2022). *E-government is the present and the future*. https://a2i.gov.bd/e-government-is-the-present-and-the-future/

A2i. (2022, December 15). *E-Governance leads the way: E-Gov Development Index (EGDI) 2022*. Retrieved April 30, 2024, from https://a2i.gov.bd/nl/e-governance-leads-the-way-e-gov-development-index-egdi-2022/

a2i. (2023, December 3). *Union Digital Centers: Digitizing Bangladesh's grassroots*. A2i. Retrieved May 1, 2024, from https://a2i.gov.bd/union-digital-centers-digitizing-bangladeshs-grassroots/

A2i. (n.d.). *Access to Information (A2I-II) Programme Final Project Review Report*. https://info.undp.org/docs/pdc/Documents/BGD/UNDP%20a2i-II%20closing%20report_Final.pdf

Abbas H. S. M., Qaisar Z. H., Ali G., Alturise F., Alkhalifah T. (2022). Impact of cybersecurity measures on improving institutional governance and digitalization for sustainable healthcare. *Crossref*, 17(11), Article e0274550. Crossref

About myGov. (n.d.). Mygov. Retrieved June 29, 2024, from https://www.mygov.bd/about

Adeniyi, S. I., & Adesunloro, B. R. (2017). Electronic taxation and tax evasion in Nigeria: A study of Lagos State. *Journal of academic research in economics*, *9*(1), 122-129.

Ahmad, T. (2021). E-Government in Bangladesh: development and present state. *International Journal of Social Science and Human Research*, *04*(01). https://doi.org/10.47191/ijsshr/v4-i1-15

Ahsan, S. K., Hasan, S., & Imran, N. N. (2020). Bangladesh. In *World Bank, Washington, DC eBooks*. https://doi.org/10.1596/33733

Alam, M., & Ahmed, K. (2008). *e-governance initiatives in Bangladesh*. https://doi.org/10.1145/1509096.1509157

AlAwadhi, S., Alansari, H., & Alsaber, A. R. (2023). Explicating Trust-building Factors Impacting the Use of e-government Services. *Social Science Computer Review*. https://doi.org/10.1177/08944393231220757

Alharbi, N., Papadaki, M., & Dowland, P. (2016). The impact of security and its antecedents in behaviour intention of using e-government services. *Behaviour & Information Technology*, *36*(6), 620–636. https://doi.org/10.1080/0144929x.2016.1269198

Al-Rzoky, H. M., Mahdi, S. K. a. R. A., & Al-Samariy, P. H. H. (2019). E-governance applications and usage patterns in developing countries. *Periodicals of Engineering and Natural Sciences*, *7*(3), 1308. https://doi.org/10.21533/pen.v7i3.719

Alzahrani, L., Al-Karaghouli, W., & Weerakkody, V. (2017). Analysing the critical factors influencing trust in e-government adoption from citizens' perspective: A systematic review and a conceptual framework. *International Business Review*, *26*(1), 164–175. https://doi.org/10.1016/j.ibusrev.2016.06.004

Alsaghier, H., Ford, M., Nguyen, A., & Hexel, R. (2009). Conceptualising citizen's trust in e-government: Application of Q methodology. *Electronic Journal of E-government*, *7*(4), pp295-310.

Ayyash, M. M., Ahmad, K., & Singh, D. (2013). Investigating the Effect of Information Systems Factors on Trust in E-Government Initiative Adoption in Palestinian Public Sector. *Research Journal of Applied Sciences, Engineering and Technology*, *5*(15), 3865–3875. https://doi.org/10.19026/rjaset.5.4447

Bangladesh Sangbad Sangstha. (2024, April 25). *Number of TIN holders crosses 1.02cr*. Retrieved May 1, 2024, from https://www.newagebd.net/post/economy/233557/number-of-tin-holders-crosses-1.02cr

Bélanger, F., & Carter, L. (2008). Trust and risk in e-government adoption. *The journal of strategic information systems*, *17*(2), 165-176.

Berdykhanova, D., Dehghantanha, A., & Hariraj, K. (2010). *Trust challenges and issues of e-government: E-tax prospective*. https://doi.org/10.1109/itsim.2010.5561596

Bertot, J. C. & Jaeger, P. T. (2006). User-centered e-government: Challenges and benefits for government Web sites, *Government Information Quarterly*, 23(2), 163-168.

Bhattacherjee, A. (2001, September). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS Quarterly*, *25*(3), 351.

Carter, L., Weerakkody, V., Phillips, B., & Dwivedi, Y. K. (2016). Citizen Adoption of E-Government Services: Exploring Citizen Perceptions of Online Services in the United States and United Kingdom. *Information Systems Management*, *33*(2), 124–140. https://doi.org/10.1080/10580530.2016.1155948

Carter, L., & Bélanger, F. (2005). The utilization of e-government services: citizen trust, innovation and acceptance factors. *Information systems journal*, *15*(1), 5-25.

Centre for Policy Dialogue (CPD). (2018, May 20). *Bangladesh Vision 2021*. *CPD*. https://cpd.org.bd/national-election-2007-civil-society-initiative-for-accountable-development/bangladesh-vision-2021/

Chatfield, A. T. (2009). Public service reform through e-government: a case study of 'e-tax in Japan. Asymptotic and Computational Methods in Spatial Statistics, 209.

Chen, C. W. (2010). Impact of quality antecedents on taxpayer satisfaction with online tax-filing systems—An empirical study. *Information and Management, 47*(5-6), 308-315.

Chen, C. W., and Huang, E. (2006). Predicting taxpayers' acceptance on online taxation use. In *Proceedings of the 5th WSEAS International Conference on EACTIVITIES, Venice, Italy*.

Chen, C. W., and Huang, E. (2009). A study on taxpayers' willingness to use self-service technology-based online government services. Journal of Electronic Commerce in Organizations, 7(2), 44-66.

Cheskin Research and Studio Archetype/Sapient, (1999). Ecommerce trust study.

Chowdhury, A. (2020, November 20). How Bangladesh is seizing the opportunities of e-governance – a2i. Retrieved April 30, 2024, from https://a2i.gov.bd/how-bangladesh-is-seizing-the-opportunities-of-e-governance/

Corritore, C. L., Kracher, B., & Wiedenbeck, S. (2003). On-line trust: concepts, evolving themes, a model. *International Journal of Human-computer Studies*, *58*(6), 737–758. https://doi.org/10.1016/s1071-5819(03)00041-7

Creswell, J.W., (2009). Research Design: Qualitative, Quantitative and Mixed Method Approaches, 3rd Edition. SAGE.

CRI. (2023, December 19). *Ten services driving Bangladesh's e-Governance agenda*. Centre for Research and Information. https://cri.org.bd/2023/12/19/ten-services-driving-bangladeshs-e-governance-agenda/

Das, J., DiRienzo, C., & Burbridge, J. (2009). Global E-Government and the Role of Trust. *International Journal of Electronic Government Research*, *5*(1), 1–18. https://doi.org/10.4018/jegr.2009010101

Dasgupta, S. S. (2013). Cyber capability framework: A tool to evaluate ICT for development projects. In *Handbook of Research on ICTs for Human-Centered Healthcare and Social Care Services* (pp. 399-406). IGI Global.

Dawes, S. S. (2009). Governance in the digital age: A research and action framework for an uncertain future, *Government Information Quarterly*, 26(2), 257-264.

Dawes, S. S. (2008). The evolution and continuing challenges of e-governance, *Public Administration Review*, 68(s1), S86-S102.

De Vasconcellos, M. V., & Rua, M. D. G. (2005, July 1). *Impacts of Internet use on Public Administration: A Case Study of the Brazilian Tax Administration*. https://academic-publishing.org/index.php/ejeg/article/view/426

Desa, D. (2017). Engaging people through e-participation. In *United Nations e-government survey* (pp. 49–78). https://doi.org/10.18356/139e3f05-en

Dirks, K. T., & Ferrin, D. L. (2001). The Role of Trust in Organizational Settings. *Organization Science*, *12*(4), 450–467. https://doi.org/10.1287/orsc.12.4.450.10640

Digital Bangladesh - Vision 2021: The Secret of Bangladesh's Transformation. (2021, February 2). *Bangladesh Awami League*. Retrieved July 27, 2024, from https://www.albd.org/articles/news/35867/Digital-Bangladesh---Vision-2021:%0D%0AThe-Secret-of-Bangladesh%E2%80%99s-Transformation

Dhaka Tribune (2022, September 29). Bangladesh jumps 20 notches in e-participation, 8 in UN EGD indexes. *Dhaka Tribune*. Retrieved April 30, 2024, from https://www.dhakatribune.com/bangladesh/295008/bangladesh-jumps-20-notches-in-e-participation-8

Dombrowski, L., Hayes, G. R., Mazmanian, M., & Voida, A. (2014, February). E-government intermediaries and the challenges of access and trust. *ACM Transactions on Computer-Human Interaction*, *21*(2), 1–22.

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, *14*(4), 532.

Ete, S.N. (2023). An Overview of the Reforms of Personal Income Tax (PIT) in Bangladesh. *International Journal of Science and Business*. https://doi.org/10.58970/ijsb.2075.

Fjord, L. B., & Schmidt, P. K. (2023). The Digital Transformation of Tax Systems Progress, Pitfalls, and Protection in a Danish Context. *Ind. J. Global Legal Stud.*, *30*, 227.

Flick, U. (2022). The Sage handbook of qualitative research design. *Sage.* Crossref.

Forman, J., & Damschroder, L. (2007). Qualitative content analysis. In *Empirical methods for bioethics: A primer* (pp. 39-62). Emerald Group Publishing Limited.

Gefen, D. (2000). E-commerce: the role of familiarity and trust. *The international Journal of Management Science*, 28, 725-737.

Gercek, A., Demirbas, T., Giray, F., Oguzlar, A., & Yuce, M. (2015). The Factors Influencing Taxpayers' Acceptance of E-Taxation System. In *Advances in finance, accounting, and economics book series* (pp. 105–121). https://doi.org/10.4018/978-1-4666-7288-8.ch008

GoB [Government of Bangladesh]. (2022, July 4). *National Portal* |. Bangladesh National Portal. https://bangladesh.gov.bd/site/page/51ae2125-d2f7-430e-8558-53bf94990d0d/National%20Portal

GoB [Government of Bangladesh]. (2024, May 1). *Bangladesh forms*. Bangladesh Forms Portal. https://forms.portal.gov.bd/?lang=en

GoB [Government of Bangladesh]. (2024, May 1). *Bangladesh National Portal*. Bangladesh National Portal. https://bangladesh.gov.bd/index.php

GoB. (2023). *Office of the Registrar General, Birth and Death Registration-Local Government Division*. Bangladesh National Portal. Retrieved May 1, 2024, from https://orgbdr.portal.gov.bd/

GoB. (n.d.). *GOVERNMENT OF BANGLADESH INFORMATION SECURITY MANUAL*. ANGLADESH COMPUTER COUNCIL MINISTRY OF INFORMATION & COMMUNICATION TECHNOLOGY. https://bcc.portal.gov.bd/sites/default/files/files/bcc.portal.gov.bd/notices/d31501cd_0036_4020_9ad5_e8c47076e83c/BCC%20CIRT%20-%20GOBISM%20report%20Final%20%28Recovered%29.pdf

GoB. (n.d.). *GOVERNMENT OF BANGLADESH INFORMATION SECURITY MANUAL*. ANGLADESH COMPUTER COUNCIL MINISTRY OF INFORMATION & COMMUNICATION TECHNOLOGY. https://bcc.portal.gov.bd/sites/default/files/files/bcc.portal.gov.bd/notices/d31501cd_0036_4020_9ad5_e8c47076e83c/BCC%20CIRT%20-%20GOBISM%20report%20Final%20%28Recovered%29.pdf

Gritzalis, A., Lambrinoudakis, K., & Tsohou, A. (2019). Transparency-Enabling Information Systems: Trust Relations and Privacy Concerns in Open Governance. *International Journal of Electronic Governance,11*(3), 1. https://doi.org/10.1504/ijeg.2019.10017949

Guarino, L. (1995). Secondary sources on cultures and indigenous knowledge systems. *Guarino, L.; Ramanatha Rao, V. & Reid, R. Collecting plant genetic diversity: technical guidelines. CAB International, Wallingford*, 198-205.

Habib, S. (2018). A Step towards Paperless National Board of Revenue, Bangladesh: An Empirical Study. Thesis, Master in Public Policy and Governance. Dhaka: South Asian Institute of Policy and Governance (SIPG), North South University.

Habib, A., & Baizid, A. R. (2010). *Achievements and expectations of digital Bangladesh*. https://doi.org/10.1145/1930321.1930412

Hartanto, D., Dalle, J., Akrim, A., & Anisah, H. U. (2021). Perceived effectiveness of e-governance as an underlying mechanism between good governance and public trust: a case of Indonesia. *Digital Policy, Regulation and Governance*, *23*(6), 598–616. https://doi.org/10.1108/dprg-03-2021-0046

Haruna, N. I. U., Nadzir, N. M. M., & Awang, N. H. (2023). The Impact of Quality Factors on Continuous Usage of E-Taxation Filing Reporting System. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, *30*(2), 141–153. https://doi.org/10.37934/araset.30.2.141153

Haruna, I. U., Nadzir, M. M., Awang, H., & Mohamed, L. (2021, August). A Conceptual model of E-Taxation satisfaction: How can taxpayers be tickled pink with the smart Web-Based taxation application? In *Journal of Physics: Conference Series* (Vol. 1997, No. 1, p. 012041). IOP Publishing.

Hasan, S. (2014). ICT Policies and their Role in Governance: The Case of Bangladesh. *Science Technology and Society*, *19*(3), 363–381. https://doi.org/10.1177/0971721814548818

Hitlin, P., & Shutava, N. (2022). Trust in government. *Partnership for Public Service and Freedman Consulting*.

Hochstetter, J., Vásquez, F., Diéguez, M., Bustamante, A., & Arango-López, J. (2023). Transparency and E-Government in Electronic Public Procurement as Sustainable Development. *Sustainability*, *15*(5), 4672. https://doi.org/10.3390/su15054672

Hossain, M. I., & Azam, M. S. (2019). Towards e-Governance: An Exploratory Analysis of e-Tax Filing Adoption in Bangladesh. *Journal of Business Studies*, *12*(1), 1-17.

Hossen, M. M., Begum, M., & Mahmud, G. (2017). *Difficulties and Possibilities of Implementing E-governance in Bangladesh: A Critical Assessment for Justifiable Progress*. Hossen | Public Policy and Administration Research. https://iiste.org/Journals/index.php/PPAR/article/view/37602

Hung, S. Y., Chang, C. M., & Yu, T. J. (2006). Determinants of user acceptance of the e-Government services: The case of online tax filing and payment system. *Government information quarterly*, *23*(1), 97-122.

Hwang, Y., & Kim, D. J. (2007). Customer self-service systems: The effects of perceived Web quality with service contents on enjoyment, anxiety, and e-trust. *Decision Support Systems*, *43*(3), 746–760. https://doi.org/10.1016/j.dss.2006.12.008

ICB. (2015). *ICT Security Policy and Guideline*. Investment Corporation of Bangladesh. https://icb.portal.gov.bd/sites/default/files/files/icb.portal.gov.bd/page/8fa353ca_a1c0_4969_99bf_4c01ea3c4a7b/2020-09-01-12-04-7f1f91e7add467e1e078218d74be9f21.pdf

ICT Division (2019). *Digital Bangladesh & Vision 2021 Invest in Digital Bangladesh*. Invest in Digital Bangladesh. Retrieved April 30, 2024, from https://investindigitalbd.gov.bd/page/digital-bangladesh-vision-2021

ICT Division. (2021). *Post-COVID-19 National ICT Roadmap FY2021-2025*. https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/2.Synthesis%208_pager_English.pdf

Iqbal, M., Nisha, N., & Rifat, A. (2018). E-Government Service Adoption and the Impact of Privacy and Trust. *Encyclopedia of Information Science and Technology, Fourth Edition*, 3579–3590.

Isaac, W. C. (2007). Performance measurement for the e-Government initiatives: A comparative study, PhD, *Nova Southeastern University*, Fort Lauderdale, FL.

Islam, M. M., & Ehsan, M. (2013). Understanding E-Governance. In *IGI Global eBooks* (pp. 38–49). https://doi.org/10.4018/978-1-4666-1909-8.ch003

Islam, M. M. (Ed.). (2012). *From government to E-governance: Public administration in the digital age: Public administration in the digital age*. IGI Global.

Islam M.T. (2023). Fostering Transformation Through Digital Centre. *UNDP*. https://www.undp.org/bangladesh/publications/fostering-transformation-through-digital-centre

Jafari, S. M., Nikbakhsh, S., Komijani, P., & Karimi, F. (2022, September 16). Identifying The Antecedents of Public Trust in The Citizen-Centric E-Governance. *The Eurasia Proceedings of Science Technology Engineering and Mathematics*, *17*, 129–135.

Jamil, I., & Askvik, S. (2015). Citizens' Trust in Public and Political Institutions in Bangladesh and Nepal. In *Springer eBooks* (pp. 157–173). https://doi.org/10.1007/978-3-319-15218-9_10

Jamil, S. M. Aminuzzaman, S. Tawfique, & M. Haque (Eds.), Governance in South, Southeast, and East Asia: Trends, issues and challenges (pp. 157–174). New York, NY: Springer

Kalikakis, M., Gouscos, D., & Georgiadis, P. (2008). A participatory architecture for taxation and budgeting. *International Journal of Electronic Business*, *6*(6), 611. https://doi.org/10.1504/ijeb.2008.021877

Kanaan, A., Al-Hawamleh, A., Abulfaraj, A., Al-Kaseasbeh, H. M., & Alorfi, A. (2023). The effect of quality, security and privacy factors on trust and intention to use e-government services. *International Journal of Data and Network Science*, *7*(1), 185–198. https://doi.org/10.5267/j.ijdns.2022.11.004

Karimov, F., Brengman, M., & Hove, L. (2011). The Effect of Website Design Dimensions on Initial Trust: A Synthesis of the Empirical Literature. *Journal of Electronic Commerce Research*, 12, 272.

Kemp, S. (2022, February 15). *Digital 2022: Bangladesh — Data Reportal – Global Digital Insights*. Data Reportal – Global Digital Insights. https://datareportal.com/reports/digital-2022-bangladesh

Khan, K. (2023, September 25). Smart Bangladesh is based on PM's 10 initiatives - Public Reaction. *Public Reaction*. https://publicreaction.net/smart-bangladesh-is-based-on-pms-10-initiatives/

Khan, K. (2023, September 25). Smart Bangladesh is based on PM's 10 initiatives –

Kim, S. (2005). The role of trust in the modern administrative state: An integrative model. *Administration & Society*, 37, 611–635.

Kim, S., & Lee, J. (2012). E-Participation, Transparency, and Trust in Local Government. *PAR. Public Administration Review/Public Administration Review*, *72*(6), 819–828. https://doi.org/10.1111/j.1540-6210.2012.02593.x

Kim, S. (2010). Public trust in government in Japan and South Korea: Does the rise of critical citizens matter? *Public Administration Review*, 70, 800–810.

Kumar, V., Mukerji, B., & Butt, I. (2007). Factors for Successful E-Government Adoption: A Conceptual Framework. *Electronic Journal of E-government*, *5*(1), pp63-76.

Kumraswamy, M., & B, S. (2022). E-FILING OF INCOME TAX RETURNS IN INDIA- AN OVERVIEW. *YMER Digital*, *21*(07), 1014–1021. https://doi.org/10.37896/ymer21.07/82

Lallmahomed, M. Z., Lallmahomed, N., & Lallmahomed, G. M. (2017). Factors influencing the adoption of e-Government services in Mauritius. *Telematics and Informatics*, *34*(4), 57–72. https://doi.org/10.1016/j.tele.2017.01.003

Lee, K.C., Kirlog, M., Lee, S., Lim, G. G. (2008). "User evaluations of tax filing web sites: A comparative study of South Korea and Turkey", *Online Information Review*, Volume 32 No. 6, pp. 842-859.

Liao, C., Palvia, P., & Chen, J. L. (2009, August). Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT). *International Journal of Information Management*, *29*(4), 309–320.

Lisi, G. (2014). The interaction between trust and power: Effects on tax compliance and macroeconomic implications. *Journal of Behavioral and Experimental Economics*, *53*, 24–33. https://doi.org/10.1016/j.socec.2014.07.004

Lo, O., Buchanan, W. J., Sayeed, S., Papadopoulos, P., Pitropakis, N., & Chrysoulas, C. (2022). GLASS: A Citizen-Centric Distributed Data-Sharing Model within an e-Governance Architecture. *Sensors*, *22*(6), 2291. https://doi.org/10.3390/s22062291

Luhmann, N. (1988). Familiarity, Confidence, Trust: Problems and Alternatives. In D. Gambetta (Ed.), Trust: Making and Breaking Cooperative Relations: *Basil Blackwell Ltd*.

Luhmann, N. (1979). Trust and Power. Great Britain: *John Wiley & Sons Ltd*.

Manly, T. S., Thomas, D. W., & Ritsema, C. M. (2005). Attracting Nonfilers through Amnesty Programs: Internal versus External Motivation. *the Journal of the American Taxation Association*, *27*(s-1), 75–95. https://doi.org/10.2308/jata.2005.27.s-1.75

Mannan, D. K. A., Farhana, K. M., & Chowdhury, G. M. (2021). Factors influencing income tax e-filing: A combined theoretical model approach in bangladesh. *The Cost and Management*, *49*.

Manoharan, A., Melitski, J., & Holzer, M. (2022). Digital Governance: an assessment of performance and best practices. *Public Organization Review*, *23*(1), 265–283.

Maria, J. (2023, November 20). *How to file your income tax online in Bangladesh : Step by step guide - News Dhaka*. News Dhaka. https://newsdhaka.com/income-tax-online-in-bangladesh/

McEvily, B., & Tortoriello, M. (2011). Measuring trust in organizational research: Review and recommendations. *Journal of Trust Research*, 1, 23–63.

Mensah, I. K. (2018). E-Government Services Adoption. *International Journal of Electronic Government Research*, *14*(3), 12–31. https://doi.org/10.4018/ijegr.2018070102

Millenia, S., Kristianti, T., & Prawati, L. D. (2022). *The Success Factors of e-Filing Tax Reporting in Indonesia: An Empirical Analysis Using the DeLone & McLean IS Success Model*. https://doi.org/10.1145/3512676.3512691

Ministry of Commerce (2024). *The Bangladesh Trade Portal*. Bangladesh Trade Portal. https://www.bangladeshtradeportal.gov.bd/

Ministry of Science and Information & Communication Technology. (2002). *National Information and Communication Technology (ICT) Policy*. https://btrc.gov.bd/sites/default/files/files/btrc.portal.gov.bd/policies/40c40dac_975b_48f0_b9a7_ad243520019e/ict_policy_2002_0.pdf

Motwani, B., Haryani, S., & Matharu, S. (2015). Profession as the Determinant on the Adoption of e-Taxation. *Review of Professional Management*, *13*(2), 15. https://doi.org/10.20968/rpm/2015/v13/i2/88683

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, *22*. https://doi.org/10.1177/16094069231205789

National Board of Revenue (NBR). (2020). *Annual Report 2017-2018.* Published on 16th February, 2020.

Nilashi, M., Jannach, D., Ibrahim, O. B., Esfahani, M. D., & Ahmadi, H. (2016). Recommendation quality, transparency, and website quality for trust-building in recommendation agents. *Electronic Commerce Research and Applications*, *19*, 70–84. https://doi.org/10.1016/j.elerap.2016.09.003

Nisha, N., Iqbal, M., Rifat, A., & Idrish, S. (2016). Adoption of e-Government Services. *International Journal of E-services & Mobile Applications/International Journal of E-services and Mobile Applications*, *8*(3), 53–70. https://doi.org/10.4018/ijesma.2016070104

Noked, N. (2018). Tax Evasion and Incomplete Tax Transparency. *Laws*, *7*(3), 31. https://doi.org/10.3390/laws7030031

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis. *International Journal of Qualitative Methods*, *16*(1), 160940691773384. https://doi.org/10.1177/1609406917733847

Nulhusna, R., Sandhyaduhita, P. I., Hidayanto, A. N., & Phusavat, K. (2017). The relation of e-government quality on public trust and its impact on public participation. *Transforming Government*, *11*(3), 393–418. https://doi.org/10.1108/tg-01-2017-0004

Nurhayati, N., Muda, I., & Kusuma, S. A. (2023). Building Block in Digital Tax Administration: Literature Review. *International Journal of Social Service and Research*, *3*(2), 566–576. https://doi.org/10.46799/ijssr.v3i2.282

Ntulo, G., & Otike, J. (2013). E–government: Its role, importance and challenges. School of Information Sciences. *MoiUniversity,* 1, 16.

Pant, V., Stiner, M. S., and Wagner, W. P. (2004). E-Taxation-An Introduction to the Use of TaxXML for Corporate Tax Reporting. Journal of Electronic Commerce in Organizations (JECO), 2(1), 29-41.

Parent, M., Vandebeek, C. A., & Gemino, A. C. (2005). Building citizen trust through e-government. *Government Information Quarterly*, *22*(4), 720-736.

Paskaleva-Shapira, K. (2006). Transitioning from e-Government to e-Governance in the knowledge society: the role of the legal framework for enabling the process in the European union's countries, Proceedings from the Proceedings of the 2006 *international conference on Digital government research*, San Diego, California.

Pearson, S., & Balacheff, B. (2003). *Trusted Computing Platforms*. Prentice Hall Professional. http://books.google.ie/books?id=EWk2pLY7atgC&printsec=frontcover&dq=Siani+Pearson.+2002.+Trusted+Computing+Platforms:+TCPA+Technology+in+Context.+Prentice+Hall+PTR,+USA.&hl=&cd=5&source=gbs_api

Perry, C. (1998). Processes of a case study methodology for postgraduate research in marketing. *European Journal of Marketing*, *32*(9/10), 785–802.

Petersen, J. F., and Washington, K. A. (1993). Why electronic tax filing is hot. Journal of Accountancy, 176(4), 68.

Pinem, A., Immanuella, I., Hidayanto, A., Phusavat, K., & Meyliana, M. (2018). Trust and its impact towards continuance of use in government-to-business online service. *Transforming Government: People, Process and Policy*. https://doi.org/10.1108/TG-02-2018-0008.

Porumbescu, G. (2015). Linking Transparency to Trust in Government and Voice. *American Review of Public Administration*, *47*(5), 520–537. https://doi.org/10.1177/0275074015607301

Public Reaction. *Public Reaction*. https://publicreaction.net/smart-bangladesh-is-based-on-pms-10-initiatives/

Puranam, P., & Vanneste, B. S. (2009). Trust and Governance: Untangling A Tangled Web. *the Academy of Management Review*, *34*(1), 11–31. https://doi.org/10.5465/amr.2009.35713271

Putnam, R. D. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.

Rabaa'i, A. A. (2017). The use of UTAUT to investigate the adoption of e-government in Jordan: a cultural perspective. *International Journal of Business Information Systems*, *24*(3), 285.

Rahman, A. & Malik, A. R. (2020). Electronic Governance in Bangladesh: Challenges and Prospects. *International Journal of Natural and Social Sciences*, 7(4) (December), 56–65.

Rahman, F., Talukder, M. S., Lanrong, Y., & Khayer, A. (2020). Why do citizens use e-tax system? *International Journal of Research in Business and Social Science, 9*(7), 177–189. https://doi.org/10.20525/ijrbs.v9i7.946

Ramesh, R. (2017). Does Trust Matter? An Inquiry on Citizens' Trust in Public Institutions of Sri Lanka. *Millennial Asia*, *8*(2), 123–145. https://doi.org/10.1177/0976399617715820

Rana, M., & Rahman, A. (2022, June). Attitude of Citizens Towards e-Government Services in Digital Bangladesh. *Dhaka University Journal of Management*.

Rinaudo, M. (2019). Methodology To Measure the Value Added Tax Gap in Bangladesh. Bangladesh Technical Assistance Report: The World Bank, Bangladesh National Board of Revenue or the Government of Bangladesh.

Rothstein, B. (2011). *The quality of government: Corruption, social trust, and inequality in international perspective*. University of Chicago Press.

Sarker, T., & Ahmed, M. S. (2022). The Role of Government Reform in Improving Voluntary Tax Compliance in the Digital Economy: The Bangladesh Experience. In *Taxation in the Digital Economy* (pp. 240-259). Routledge.

Saha, P. (2008). "Government e-Service Delivery: Identification of Success Factors from Citizens' Perspective", Doctoral Thesis, *Lulea University of Technology*.

Schaupp, L. C., & Carter, L. (2008). The impact of trust, risk and optimism bias on E-file adoption. *Information Systems Frontiers*, *12*(3), 299–309. https://doi.org/10.1007/s10796-008-9138-8

Schaupp, L. C., Carter, L., & McBride, M. E. (2010). E-file adoption: A study of U.S. taxpayers' intentions. *Computers in Human Behavior*, *26*(4), 636–644. https://doi.org/10.1016/j.chb.2009.12.017

Shanab, E. A., & Hammouri, Q. (2017). Exploring the factors influencing employees' satisfaction toward e-tax systems. *International Journal of Public Sector Performance Management*, *3*(2), 169. https://doi.org/10.1504/ijpspm.2017.10005371

Shareef, M. A., Kumar, V., Kumar, U., Chowdhury, A. H. & Misra, S. C. (2010). E-Government Implementation Perspective: Setting Objective and Strategy, *International Journal of Electronic Government Research*, 6(1), 59-77.

Shirish, C., & Thompson, T. (2005). Citizen trust development for e-government adoption: Case of Singapore. In *Pacific Asia Conference on Information Systems*.

Shukla, S., & Kumar, R. (2019). Role of Trust in Adoption of Online Good Service Tax Filing in India. *Vikalpa*, *44*(3), 99–114. https://doi.org/10.1177/0256090919877333

Siddiquee, N. A. (2017). E-Government in Bangladesh: the dawn of Citizen-Centric Public Administration? In Routledge eBooks (pp. 317–335). https://doi.org/10.4324/9781315089294-16

Simorangkir, E. N., & Fakhrorazi, A. (2023). The Effect of Attributes of Innovation on Adoption of E-Filing with Taxpayers' Trust as Moderating Variable. *Oblìk Ì Fìnansi*, *3(101)*, 151–157. https://doi.org/10.33146/2307-9878-2023-3(101)-151-157

Smith, M. L. (2010). Building institutional trust through e-government trustworthiness cues. *Information Technology & People*, *23*(3), 222–246. https://doi.org/10.1108/09593841011069149

Srivastava, S. C., & Teo, T. (2005). Citizen trust development for e-government adoption: Case of Singapore. *PACIS 2005 Proceedings*, 59.

Tassabehji, R., & Elliman, T. (2006). "Generating Citizen Trust in the egoverment using a Trust Verification Agent", *European and Mediterranean Conference on Information Systems (EMCIS)*, Costa Blanca, Alicante, Spain.

Talukder, S. K. (2019). Effectiveness and Challenges of Scaling Up e-Mutation in Bangladesh. *Brac Institute of Governance and Development.* Retrieved July 27, 2024, from https://bigd.bracu.ac.bd/study/effectiveness-and-challenges-of-scaling-up-e-mutation-in-

bangladesh/#:~:text=One%20of%20the%20many%20public,owner%20using%20an%20online%20platform.

TBS. (2020, November 11). Union Digital Centres create 13,372 entrepreneurs in 10 years. *The Business Standard*. Retrieved May 1, 2024, from https://www.tbsnews.net/economy/union-digital-centres-create-13372-entrepreneurs-10-years-156769

Teodora, V. (2008). *The role of e-government in the rise of administrative efficiency*. University Library of Munich, Germany.

Teo, T. S. H., Srivastava, S. C., & Jiang, L. (2008). Trust and Electronic Government Success: An Empirical Study. *Journal of Management Information Systems, 25*(3), 99–132. https://doi.org/10.2753/mis0742-1222250303

The Asian Age. (2019, June 2). *"EKPay" to simplify digital utility bill payments*. Retrieved May 1, 2024, from https://dailyasianage.com/news/180341/ekpay-to-simplify-digital-utility-bill-payments

The Daily Star. (2022, September 29). Bangladesh moves up 8 spots in e-governance. *The Daily Star*. Retrieved September 30, 2024, from https://www.thedailystar.net/news/bangladesh/news/bangladesh-moves-8-spots-un-e-government-development-index-2022-3131566

Tran-Nam, B., & Evans, C. (2014). Towards the development of a tax system complexity index. *Fiscal Studies, 35*(3), 341-370.

Uddin, J. (2021, January 6). *Tax returns filing rate falling with rise in TIN holders*. Retrieved May 1, 2024, from https://www.newagebd.net/article/126461/tax-returns-filing-rate-falling-with-rise-in-tin-holders

Umenweke, M., & Ifediora, E. (2016). The law and practice of electronic taxation in Nigeria: The gains and challenges. *Nnamdi Azikiwe University Journal of International Law and Jurisprudence, 7*, 101–112. https://africaneditors.org/journal/NAUJILJ/abstract/91507-93912

UN (2022). *United Nations Bangladesh*. UN E- Government Knowedge. Retrieved April 30, 2024, from https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/14-Bangladesh

UNDP (2021, November 25). *Digital Bangladesh to Innovative Bangladesh: The Road to 2041*. Retrieved April 30, 2024, from https://www.undp.org/bangladesh/blog/digital-bangladesh-innovative-bangladesh-road-2041

UNDP. (2021, November 25). *Digital Bangladesh to Innovative Bangladesh: The Road to 2041*. Retrieved April 30, 2024, from https://www.undp.org/bangladesh/blog/digital-bangladesh-innovative-bangladesh-road-2041

United Nations [UN]. (2022). *E-Government Development Index*. Division for Public Institutions and Digital Government. Retrieved April 30, 2024, from https://publicadministration.un.org/egovkb/en-us/About/Overview/-E-Government-Development-Index

United Nations [UN]. (2022). *UN E-Government Survey 2022*. https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2022

United Nations. (2020, January 28). *E-participation: a quick overview of recent qualitative trends | United Nations*. Retrieved April 30, 2024, from https://www.un.org/en/desa/e-participation-quick-overview-recent-qualitative-trends

Uzzaman, S. A. (2023, December 26). Bangladesh's E-Governance rollout. The Confluence. https://theconfluence.blog/bangladeshs-e-governance-rollout/

Vanneste, B., & Yoo, O. S. (2015). Fragility and Interorganizational Trust. *Social Science Research Network*. https://doi.org/10.2139/ssrn.2603624

Venkatesh, V., Thong, J. Y., Chan, F. K. Y., & Hu, P. J. H. (2016). Managing Citizens' Uncertainty in E-Government Services: The Mediating and Moderating Roles of Transparency and Trust. *Information Systems Research*, *27*(1), 87–111. https://doi.org/10.1287/isre.2015.0612

Vinod, K., Mukmji B., & Butt, I. (2007). "Factors for Successful eGovernment Adoption: A Conceptual Framework", *Electronic Journal of e-Government*, Vol. 5, Issue 1, pp. 63 – 76.

Wang, X. (2012). Factors influence citizen adoption for government e-tax service. Retrieved from: https://www.diva-portal.org/smash/get/diva2:528165/FULLTEXT02

Warkentin, M., Gefen, D., Pavlou, P., Rose, G., (2002). Encouraging citizen adoption of e-government by building trust. *Electronic Markets* 12 (3), 157–162.

Welch, E. W., Hinnant, C. C., & Moon, M. J. (2005). Linking citizen satisfaction with e-government and trust in government. *Journal of public administration research and theory*, *15*(3), 371-391.

Welch, E. W. (2004). Linking Citizen Satisfaction with E-Government and Trust in Government. *Journal of Public Administration Research and Theory*, *15*(3), 371–391. https://doi.org/10.1093/jopart/mui021

Wong, K., Fearon, C. & Philip, G. (2007). Understanding e-government and e-governance: stakeholders, partnerships and CSR, *International Journal of Quality and Reliability Management*, 24(9), 92.

Wong, K. F., Tam, M. K. W., and Cheng, C. H. (2006). e-Government-A Web Services Framework. *Journal of Information Privacy and Security*, 2(2), 30-50.

World Economic Fourm. (2020, November 26). *How Bangladesh is seizing the opportunities of e-governance*. World Economic Forum. Retrieved April 30, 2024, from https://www.weforum.org/agenda/2020/11/bangladesh-and-digital/

Wu, L., and Chen, J. L. (2005). An extension of trust and TAM model with TPB in the initial adoption of on-line tax: an empirical study. *International Journal of* Human-*Computer Studies*, *62*(6), 784-808.

Yang, K. C., & Shih, P. H. (2020). Cognitive age in technology acceptance: At what age are people ready to adopt and continuously use fashionable products? *Telematics and Informatics*, *51*, 101400. https://doi.org/10.1016/j.tele.2020.101400

Yu, H., & Qing-liang, T. (2012). Public Service, Government Transparency and Public Trust in Government: Mechanism and Evidence. *East China Economic Management*.

7. Appendix

7.1. Questions for semi-structured interviews and unstructured interviews

Questions for Semi-structured Interviews (Tax Payers)

Distinguished Features of E-Taxation

1. Have you ever considered switching to the e-taxation system? Why or why not?

Trust Factors in E-Taxation

1. How easy or difficult do you think it would be to use the e-taxation system compared to the paper-based system?
2. How concerned are you about the security of your personal and financial information when it comes to e-taxation?
3. Do you have any confusions about the reliability and accuracy of the e-taxation system?
4. Have you discussed the e-taxation system with your peers or colleagues? What have they shared about their experiences?
5. Based on your current taxation experience, what improvements do you suggest for the e-taxation system?

Questions for Unstructured Interviews (Tax Employee)

Distinguishing Features of E-Taxation

1. What advantages does e-taxation offer over the paper-based system?
2. Are there any aspects of the paper-based system that you think work better or are more reliable?
3. How has this transition impacted the reduction of errors in tax operations?

Trust Factors in E-Taxation

1. What kind of feedback have you received from taxpayers regarding the ease of use of the e-taxation system?
2. Are there any specific features or functions that are frequently mentioned as difficult or problematic?
3. Have there been any security incidents, and how were they handled?
4. How transparent is the e-taxation system in terms of its processes and operations?
5. What are the biggest challenges you see affecting citizens' trust in the e-taxation system?
6. What improvements do you think are necessary to build greater trust among taxpayers?