Electronic public service delivery: progress and challenges in Bangladesh

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Abstract

Purpose – The paper aims to examine the state of electronic service delivery in Bangladesh. It reviews the structure and operation of the "e-service" centers at the district, sub-district (upazila), and union levels by taking an inventory and assessing their contributions.

Design/methodology/approach – The paper is based on a review of the functions and operations of the service delivery agencies with reference to the claims made by the government. It is based on secondary materials obtained from academic studies, government documents, relevant websites, and media reports.

Findings – Electronic delivery of public services in Bangladesh has not been effective as planned. There are issues regarding channels of communication, the competence of public officials, human and financial resources, and political will to support the agencies delivering public services.

Originality/value – The paper examines the arrangements, practices, and problems of delivery of public services in Bangladesh through e-service centers at the local levels to determine the progress and potentials of employing digital technology for addressing problems. It proposes the strategy for public service delivery by using digital technology in the country.

Keywords Electronic service delivery, Communication, Technology, Bangladesh

Paper type Research paper

Introduction

Delivering public services, one of the key tasks of governments, has become increasingly challenging for various reasons. Population growth, the diverse nature of services required, and continued increases in costs add to the problem. Besides, the pandemic of COVID-19 has resulted in a situation marked by uncertainty, anxiety, and stress for both governments and citizens. The challenges of economic and effective public service delivery have forced many governments to turn to the advancements of technology in dealing with them. With the exceptional progress achieved in the field of information technology, governments are expected to deliver quick and efficient public services that can be accessed by citizens. The expectations of citizens need to be matched with the capacity and enthusiasm of governments and the bureaucracies that provide the services. Technology, therefore, can be an effective tool for enhancing the quality of public services, governance and citizen engagement, and debates about its application and outcomes are emerging.

Electronic public service in developing countries is impacted by state capacity, socio-economic conditions, and the relationship between citizens and the government. There are

various angles from which the issue can be examined. Establishing the infrastructure for delivering public services electronically is a significant challenge in these countries. On the other hand, citizens also face challenges in accessing and using the services. A study on transformation of service delivery in Bangladesh reported that e-government in Bangladesh is yet to make a breakthrough in governance and service delivery, although it has set the wheels of change in motion (Siddiquee, 2016). This points to the importance of the capacity of governments and digital skills possessed by citizens. An overview of e-governance in India, Ethiopia and Fiji found that it contributes to closer relationship between citizens and government and helps reduce corruption (Singh *et al.*, 2010). Therefore, it will be meaningful to examine the operation and impact of electronic service delivery in Bangladesh and assess its progress and potentials. Kuk (2003) identified the impact of digital divide on electronic service delivery because it does not provide equal access to the services for all citizens. This paper intends to address some of the gaps in the literature based on case studies.

Governments are mandated to deliver essential services that are critical for citizens. They include maintenance of law and order, healthcare, education, and transportation which are essential to allow citizens to lead dignified lives and contribute to the general well-being of society. The objective of this paper is to provide an overview of the state of public service delivery in Bangladesh and identify challenges confronting the government in this task. The expectations of citizens are heightened by promises to use advanced technology that can enhance efficiency and effectiveness and make it convenient for citizens to access and utilize public services. In the process, the paper explores the role of technology that has the potential to bring about revolutionary changes in governance by using digital platforms for data storage and management. Additionally, the paper investigates the prospects of citizen engagement and participation in decisions on public service delivery.

This paper intends to illustrate the challenges as well as opportunities for public service delivery using digital technology in Bangladesh. It will also formulate recommendations for policymakers and practitioners for improving public service delivery and emphasize the need for stronger collaboration between the national government and the agencies delivering public services, the importance of investing in technology and capacity building, and the need for greater citizen participation in designing and delivering public services. The ultimate objective is to contribute to the ongoing discussion on the improvement of public service delivery in developing countries.

The paper will address three research questions. First, how effective are the existing structures and procedures for electronic service delivery in Bangladesh? Second, what are the institutional and procedural challenges encountered by the government and citizens in delivering and accessing public services through electronic medium? Third, what needs to be done to address and improve public service delivery in the country? The analysis will also cover other issues that help or hinder the delivery of electronic public services in Bangladesh. The research questions will be answered through literature review, and analysis of government documents, relevant websites, and media reports.

Electronic public service delivery

Public service delivery is a critical component of public administration because it serves the needs of citizens, particularly those who are unable to access services due to various constraints. Bangladesh has a population of approximately 180 million people, many of whom are not adequately connected to the supply chain for public services, and this makes it an overwhelming task as well as one of the key responsibilities of the government. Ironically, the centralized approach to administration in the country has resulted in a system that is heavily dependent on the national government and bureaucracy for accessing and obtaining public services.

Traditional approach of delivering public services has been criticized as slow, expensive, inflexible, and often failing to meet the needs of citizens. Siddiquee (2016) identified inefficiency, lack of transparency and accountability, rigidity, and corruption as the main problems that affect public service delivery in developing countries. The traditional approach is no longer considered appropriate for the contemporary world, and Zussman (2002) suggested alternative arrangements for service delivery. Unprecedented and impressive progress in technology has opened opportunities for governments to deliver public services by using information technology. Gilbert *et al.* (2004) explored the reasons for selecting electronic self-service delivery and reported that citizens are willing to use online services if the delivery agencies can obtain their trust. They expect assurances that their financial details are secure, the information is relevant and accurate, and it will result in saving of time and money for the users.

The costs of online transactions compared to the use of mail, telephone, or in-person service are "dramatically lower" (Roy, 2017, p. 539). Experiments with alternative service delivery methods evolved with the adoption of new strategies for management in the public sector. Ford and Zussman (1997) alerted that governments can no longer "support rigid, bureaucratic, reactive, rules-driven organizations", and they need to be replaced by "flexible, consultative, outcome-focused and proactive" public services (p. 2). Information technology, particularly the internet, makes it possible for governments to communicate directly with citizens to exchange information and reduce the intermediary functions that were once performed by several government agencies (Pal, 1999, p. 26). In essence, no government can afford to deliver public services through traditional modes anymore, and they must be proactive in making the transition to new methods.

Wilson *et al.* (1998) view e-service as "an activity or series of activities that take place during the interaction between a provider and a customer through an electronic channel". In simple terms, e-service delivery involves the use of technology for enabling citizens to access services without having to visit public agencies in person. The obvious benefits include savings in time and cost for the citizens as well as the advantage of reducing the number of locations of bureaucratic organizations. The arrangement injects the element of flexibility and convenience that has positive consequences for both the providers and recipients of public services.

The literature on electronic service delivery is relatively new, and there is room for contributing insight based on case studies. Based on an extensive review of the existing literature, this paper reviews the structure and operation of "e-service" centers at the three levels of local government. Administratively, Bangladesh is organized through a hierarchy of district, sub-district (upazila), and union levels. This paper focuses on selected service areas through which the government of Bangladesh initiated the process of electronic service delivery. With this objective, the paper examines the cases of the implementation of citizens' charter, the provision of social safety net payments through electronic means, and the grievance redress system to assess the impact and potentials of e-service delivery in Bangladesh.

Benefits of e-service delivery
There are several arguments in support of e-service delivery. First, electronic delivery can increase the efficiency of public services by reducing the time and cost associated with manual processes. For example, online applications for public services can be completed faster using fewer resources compared to manual paper-based processes. Secondly, electronic service delivery can increase accessibility to government-provided services by facilitating access to citizens in remote or underserved areas. This can be particularly beneficial for those citizens who have difficulties with mobility or live in areas with poor transportation infrastructure.

Thirdly, electronic service delivery can improve transparency by providing citizens with quick and real-time information about the status of their applications or requests. This can help to build trust between citizens and governments by increasing transparency and accountability. Gilbert *et al.* (2004) assessed the relative importance of adoption barriers or challenges, such as trust, financial security, and information quality, and benefits in terms of time and money. A study of the Palestinian on-line banking customers, Salem *et al.* (2019) found that their behaviour was influenced by "technological leadership, e-trust, e-loyalty, customers' value for online personalization, customers' concern for privacy and propensity of technology adoption". These studies highlight the importance of trust in establishing and operating electronic service delivery practices.

A fourth benefit of electronic service delivery is cost reduction. It can save expenses associated with traditional paper-based processes, such as printing and mailing. Additionally, it can help to reduce the need for physical office space and personnel, which can result in significant savings. Fifth, electronic service delivery can improve data management by providing a centralized repository of citizen information. This can help to ensure that data about citizens are secure and can be easily accessed and updated by authorized officials. Finally, electronic service delivery can enhance the user experience by providing citizens with user-friendly interfaces and self-service options. This will improve the level of citizen satisfaction and increase the likelihood of repeat use of the online facilities. In this way, electronic service delivery can lead to significant benefits for both citizens and governments. A more effective and responsive public service delivery system can be constructed by improving efficiency, accessibility, and transparency. There will be additional benefits in saving cost, managing data, and enhancing the experience of users.

It is argued that efficiency is improved through electronic service delivery and increased emphasis on accountability and transparency helps reduce corruption and mismanagement (Bhuiyan, 2011). A survey by the United Nations (2008) found that e-government promotes innovation in delivery of public services, increases flexibility in service use, and fosters citizen's participation and empowerment. Citizens have high expectations from electronic service delivery in developing countries. It is "expected to help eradicate poverty, boost national economic growth, reduce bureaucratic complexity and establish good governance" (Hoque, 2006, p. 34).

With increasing incidents of digital transactions that have become a common feature of modern economies, governments seek to adopt innovative services and new approaches to meet the changing expectations of citizens. Interestingly, the success of the new approach of citizen-centered service delivery is most likely to lead to higher expectations about the speed of delivery, ease of access, and increased concern over the protection of privacy. The expected benefits of electronic service delivery prompted the government of Bangladesh to undertake measures that would facilitate the process.

Electronic public service delivery in Bangladesh

Bangladesh has established several electronic platforms for improving connectivity with citizens and delivering public services. G2G (government-to-government) is used to facilitate intergovernmental operations and the provision of e-government services. G2C (government-to-citizens) and G2B (government-to-business) are used by citizens and businesses to obtain government services of various categories. The processes were initiated in the 1990s for improving service delivery with the aid of information technology. Siddiquee (2016) believes the arrangements were intended to yield several benefits and can also be considered as a tool for combating poverty (p. 8).

Bangladesh went through several changes of government since independence, and each faced stronger pressures for responding to citizens' demands for public services. Over the

years, every regime sought to initiate programs aimed at improvements in the socio-political, administrative, and economic systems. However, these efforts were mostly unsuccessful and did not contribute to good governance and development (Tahrima and Jaegal, 2012).

A scan of media reports and discussions with citizens helped identify the most used services obtained by citizens from government agencies. They included legal and regulatory requirements, land litigation, judiciary, education, communication, and taxation. For accessing these services or even to obtain basic information, citizens had to visit the urban centers where government offices were located. The first step was to reduce the investments in time and cost to citizens by making the information and services accessible from their homes or centers in the localities with internet facilities. With this purpose in mind, the government developed a program for Access to Information or A2I. The platform was designed and implemented with financial assistance from the United Nations Development Program (UNDP) (Karim, 2015).

After the implementation of A2I, the Cabinet Division reviewed the operations and performance of 53 departments and branches and 394 agencies for 2,726 public services as part of their Digital Service Accelerator Program. Two thousand one hundred twenty-nine of these services include manual operation and there are 597 digital services. That means that about 22 percent of public services seem to be available on the internet, and 78 percent of services are offered offline. Most e-services are devoted simply to the collection and dissemination of information (GoB, 2019).

At present, there are 587 e-services and 71 mobile services available through the Bangladesh national portal. Shared services are used by multiple organizations and e-government attainment (e-GP), e-file management (e-filing system, Nothi), Personnel Data Sheet, PMIS, eForms, and iVAS. Forty-two services provide simple PDF and radio channel information or links. The Citizen/Business Services and Administration include 307 and 50 e-Services respectively. Multiple organizations share eight e-services (GoB, 2019). Electronic services are arranged under headings such as Admission, Agriculture, Questions, Digital Center Channels, Education, Results of Examinations, Finance and Trade, Fisheries and Livestock, Forms, Health Services, Input Tax, etc. (GoB, 2019).

E-service centers in Bangladesh
Traditionally, district and sub-district government offices offered a broad range of public services that consumed considerable time and effort for both providers and recipients. The result was delay in accessing and using the services with adverse effects on the livelihood of the poor. The services were not available when required, and the slow speed in delivering them forced citizens to make repeated visits by missing work and incurring expenses for travel and accommodation in the urban centers where the government offices were located. With no access to information on procedures and schedules, citizens were often found to run around helplessly without any understanding of the required protocol (A2i, 2018).

District e-Service Centres (DESCs)
The administrative center within the district is the office of the Deputy Commissioner (DC). Its main task is to coordinate the activities of the regional offices that represent the central government across the country through the district, sub-district, and union-level establishments. DC offices offer a wide range of services such as issuing licenses, certificates, documents for land ownership, revenue collection, inquiries, education, social welfare, and several others. The services were time-consuming, labor-intensive, and resulted in delays with a detrimental effect on the livelihood of the poor. There were additional costs in the form of fees charged by the government that led to a considerable increase in the actual cost of accessing the services.

The Availability of Information (a2i), a program implemented with technical assistance from UNDP, USAID, and the Prime Minister's Office (PMO) of Bangladesh, primarily addresses both the supply and the demand side of the program by facilitating the availability of information through communications technologies (ICTs). The District E-Service Centers (DESCs) operate in all 64 districts of the country. To facilitate the process, the background governance processes for information on services and delivery have been simplified (Aziz, 2018). Citizens do not have to interact with government officials in person and can avoid the process that could intimidate them, as the weaker party involved in the transactions. The presence of UDCs across Bangladesh allow citizens to track their applications without visiting the district headquarters.

Upazila Community e-Center

Upazila Community e-Centers (CeC) were installed in 147 locations, and they seek to raise awareness of ICT among the poor and disadvantaged groups. Their primary goals include the reduction of intermediary power centers and the improvement of commercial and entrepreneurial programs for the poor. Like the UDC, the e-Centers provide critical livelihood information on agriculture, nutrition, education, human rights, village industries, and the latest developments in these areas. The Upazila administration is headed by an officer of the rank of Deputy Secretary who oversees the CeC's operations (Hasan, 2016).

Union Digital Centres (UDCs)

The UDCs represent a new approach to strengthening local government institutions through a citizen-centered strategy. In this way, sensitivity to the market and demands of citizens were integrated into the model. Instead of making it available only to the government, the arrangements intended to decentralize public service delivery. The Prime Minister's Office has established A2I, a program of 4,554 one-stop information and delivery services recognized as Union Digital Centres (UDCs) in union councils, the lowest level of the government in Bangladesh. This facility was introduced with technical assistance from the United Nations Development Program and the United States Agency for International Development. These one-stop-service centers are run primarily by citizen entrepreneurs – one male and one female - in tandem with elected representatives of local governments. They use advanced technology to provide citizens with access to public services, both free of charge and on an extra-cost basis. The services may include issuance of birth certificates and passports, telemedicine advice, and job application for government services, depending on the nature of services (A2i, 2018). This innovative public-private entrepreneurial activity model was developed to combine the public sector's mandate and infrastructure with entrepreneurship and private sector efficiency, based on support from local authorities.

Selected e-Services in Bangladesh

Citizen's Charter

The Public Administration Reform Commission (PARC) advocated the implementation of a citizens' charter in 2000, and the Ministries of the Government of Bangladesh were advised to draw up charters for citizens in 2007. Following the advice, all ministries and most government authorities have prepared citizen charters (Khan, 2008). Although several years have passed since the introduction of this process, most service recipients remain unaware of the charter (Kundo, 2018).

Citizens' charter refers to the arrangements for informing citizens and providers about the expectations of the quantity as well as the quality of services. They can know about the availability of public services with information on the commitment of the agency, standard

time frame for delivering services, the scope for choice and consultation of service delivery, the requirement for non-discrimination, methods of grievance redress, and demonstrated value for money (Huque and Ahsan, 2016). Citizens are encouraged to engage in discussions about service and methods for contacting providers and learn about the intended outcome and procedures for seeking redress if they encounter problems.

Social safety net payments

Social protection, or social security net programs, is a set of principles and programs designed to reduce the economic and social risk of the poor, and enhance their ability to protect themselves against risks and income losses. All vulnerable population groups, including the underemployed, disabled, sick, elderly, and orphans are covered by a comprehensive social safety net (Ahmed, 2019). Social security net payments are a critical intervention by governments to help citizens who live in extreme poverty. Electronic payment with conditional cash transfer, or other social service payment, involves payment of social benefits to millions of the most vulnerable and financially distressed populations. As the government can determine how it pays beneficiaries, digitizing these payment streams helps to make the disbursements easier to offer and accept. To ensure clarity, speed, and security, the government disburses social security net support through mobile financial service providers, such as Nagad and Bkash (Tasreen, 2021).

Grievance Redress System (GRS)

The Grievance Redress System operates through an online system for submission and redress of both public and official grievances. It is useful for citizens to register grievances relating to design, implementation, or evaluation of policies. They can submit grievances anonymously and track them to follow the process of resolution. The objective of GRS is to improve transparency and accountability in delivering public services and offer an option for systematically resolving complaints, disputes, or conflicts related to any area of delivery. It is beneficial because it can mitigate problems with public service delivery, address the concerns of the people, and promote better relationships between citizens and government agencies.

There is a three-tier redress mechanism in the GRS. The key objective is to resolve grievances by mutual consent. If the parties fail to resolve the issue in this way, the grievances are forwarded to one or more relevant organizations, and a third-party organization may deal with the complaint. When multiple agencies need to cooperate to resolve the grievance, all will be involved in developing a solution. If collaboration with other ministries is required or when the grievance must be transferred to another jurisdiction, it will be forwarded to the appropriate Ministries or agencies by the Cabinet Division (GoB, 2019).

Challenges to e-service delivery

There are several requirements for successful e-service delivery. The internet infrastructure is the most important component, as is the competence of officials and service recipients. Connoly and Bannister (2008) found that the use of information and communication technology has not been an unqualified success anywhere, although it has helped transform the public sector from being "inward-looking and administration-focused" to becoming outward looking with a focus on service delivery. Substantial investments need to be made for creating the necessary infrastructure, hiring, and training personnel, and considerable amounts of time must be devoted to building up the process. At the other end, it needs to be ensured that citizens can access public services electronically, navigate the system to connect with offices and agencies, and possess updated information on services, regulations, procedures, and forms required to complete transactions (Buckley, 2003). Governments must

consistently encourage citizens to use electronic services instead of crowding agencies with demands for services that could be provided in a timely and cost-effective manner.

There are many benefits of electronic service delivery, but governments also encounter lots of challenges during the implementation. The most common challenge is the digital divide. The process requires access for citizens to digital infrastructure, devices, and internet connectivity, and this must be supported by digital literacy. Most citizens in Bangladesh may not have access to these resources. These circumstances result in a digital divide that can exclude certain groups from accessing public services.

There are concerns about data security and privacy in digital delivery. Electronic service delivery requires the collection and processing of personal data, and these must be adequately protected. Citizens expect governments to install data protection measures to protect them from breaches and cyber threats. Electronic service delivery may also be affected by resistance from public officials and citizens who are accustomed to the traditional methods of accessing public services.

Electronic service delivery requires a strong and reliable infrastructure that may be expensive to maintain. It is important for governments to ensure that digital platforms are secure and reliable to meet the needs of citizens. Finally, electronic service delivery should be accessible and user-friendly for citizens from diverse age groups with varied levels of digital literacy. In other words, service delivery platforms must be designed with user experience in mind and provide citizens with support and guidance when they need it.

State of e-service delivery in Bangladesh

There are several challenges to e-service delivery in Bangladesh, and some of these have been highlighted in the previous section of this paper. However, the most prominent issues are related to the areas of technological infrastructure and human capital.

a) Technological infrastructure

The lack of infrastructure in Bangladesh is one of the key factors that restrict innovation and economic growth. Technology is critical for development and innovation, and Bangladesh lags far behind in this area. The field of technology is changing rapidly, and dealing with it requires robust research and innovative approaches. Research and development (R&D) initiatives in developing countries are often funded and conducted by experts from the developed world and/or international agencies. Bangladesh has achieved considerable progress in the development of telecommunication facilities, but internet service remains weak and limited. Local technical and management skills are inadequate, and maintenance of platforms and equipment involves high costs. Besides, the country is frequently hit with power shortages that make it impossible for citizens to access services when needed. In short, the communication system is time-consuming, inefficient, and complex. The state of technology and expertise creates economic pressure and impedes innovative initiatives in the country (Tahrima and Jaegal, 2012).

b) Human capital

Innovation involves the development of new products, procedures, and processes. Bangladesh is yet to succeed in identifying and adopting new and more productive ways for public sector organizations to implement their programs. Most of these organizations cannot perform due to the absence of a structured and well-planned research management system. The lack of qualified and trained human resources is another significant factor affecting electronic service delivery in Bangladesh. Weaknesses in the local education system are further exacerbated by a high incidence of brain drain that pushes trained human resources to relocate to other countries. Bangladesh needs a competent workforce along with

government assistance and incentives to transform into a knowledge-based society. However, there are no effective arrangements for developing technologically skilled, experienced, and structured government officials within ministries and other governing bodies (Tahrima and Jaegal, 2012). The lack of skilled human resources and ICT ability among government officials contribute to the slow growth of e-government and service delivery.

Although digital public service delivery was initiated over a decade ago in Bangladesh, little progress has been achieved for many reasons. The dearth of infrastructure and capable human resources were identified as the principal causes. The absence of awareness of these facilities is also largely responsible. Moreover, the lack of willingness to try out the new and technologically based electronic service contributed to the problem. For these reasons, the new initiative has not been in practice long enough for analysts to determine the success or failure of the service delivery programs. Since citizens residing in the urban districts are more proficient in using technology and the population is larger, the volume of usage is relatively higher in the District e-Service Centers. However, there is not enough information for assessing the success or failure of the e-Service Centers at this stage.

Prospects of electronic service delivery in Bangladesh

With increasing integration into the world economy and rising demands from the local population, Bangladesh needs to prioritize the delivery of public services and the use of electronic means. This will require careful planning and effective implementation with attention to several areas. At the basic level, the system should be designed with the users in mind. It must be simple to use and trustworthy, with full technical support to deal with problems faced by the citizens. It will be ideal to undertake research to understand their needs and resolve the problems the government wants to address. A good strategy would be to conduct ongoing tests with users to guide design and development. The services should be agile and user-centered and regular update and improvements are critical.

The government of Bangladesh needs to share evidence, research, and decisions, and make available all non-sensitive data, information, and new code developed in the delivery of services to be shared and reused. It is necessary to use open standards and embrace practices, including the use of open-source software. At the same time, the security and privacy risks must be identified and addressed. However, the government must ensure that the security measures do not place additional burdens on the users.

Bangladesh is a small country in size, yet the issue of accessibility remains a formidable challenge. Services must be set up to meet or exceed accessibility standards. Users with distinct needs should be engaged from the outset to ensure that the system works for them. At the same time, public officials must be empowered to deliver improved services. They should have access to equipment, training, and technology, and empowerment is essential to allow officials to make decisions to suit the local conditions.

Governments engaging in electronic service delivery must be competent in data handling. To ensure the reliability of services, data from users should be collected efficiently and held in secure sites to be reused by agencies across the government. The services should be ethical to ensure that all citizens are treated fairly and equitably. This must be accomplished with great care, particularly in view of the emergence and increasing use of artificial intelligence. Finally, collaboration will remain a critical feature of electronic service delivery. It could entail the creation of multidisciplinary teams that will possess a range of skills for delivering common services. Collaboration and partnerships across the government will contribute to the success of electronic service delivery to the citizens.

Conclusion

It is obvious that the government of Bangladesh is interested in taking advantage of technological advancements to improve the delivery of public services. Several projects have been initiated, and some of these are helping citizens connect with service providers in the localities. They help citizens obtain information and gain access to services online. With these arrangements, it is becoming easier to follow the actions and performance of local institutions. Citizens' charters serve as useful sources of information on the plans and expectations of the work of government agencies. The social safety net appears to have strengthened support to the poor and vulnerable groups. Finally, the Grievance Redress System has the potentials to improve transparency and accountability in the operation of government agencies that deliver public services.

There are two conspicuous weaknesses that impose barriers on electronic public service delivery in Bangladesh. The country has made progress toward establishing an adequate technological infrastructure. Going forward, these will require significant investments and technical expertise to expand the services for covering the entire country. The supply of trained and capable human capital will require time proactive policies that could contribute to the development of human capital in Bangladesh.

With reference to the research questions of this paper, some observations are in order. The existing structures and procedures for electronic service delivery in Bangladesh are hardly adequate. Information on the services and procedures for obtaining them are compounded by the lack of connectivity and access across the society. Citizens are confronted with many institutional and procedural obstacles as they seek to comply with the requirements. They are affected by the paucity of infrastructure and equipment that are critical for delivering and accessing electronic public services. The digital divide remains a major challenge and needs to be addressed for all citizens to participate in the process. Finally, the government needs to initiate systematic research to collect data and ensure gradual introduction for communication and training to ensure that citizens at the grassroots level will be prepared to play their role in making electronic service delivery successful.

To sum up, there are many benefits for governments and citizens in electronic service delivery. However, it requires substantial investments in technology, training, and implementation facilities. Careful planning and management are critical for ensuring that citizens can access public services and take advantage of those offered by the government. In the process, it should be remembered that electronic delivery of public services requires strengthening communication channels, the competence of public officials, human and financial resources, and, more importantly, the political will of the government to take Bangladesh forward by harnessing the potentials of information technology.

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