

What Factors Influence the Increasing Dependency on Mobile Banking in Bangladesh? A Quantitative Study in Bangladesh

Md. Deluar Hossen¹

Abstract

Mobile Banking has expanded in Bangladesh at a rapid pace for the last two decades in Bangladesh. Mobile service providers have introduced this magical financial innovation. It's significant to understand what factors may motivate individuals to use online banking in Bangladesh. The study aims to identify influential factors of rapid growing M-banking in Bangladesh. A quantitative study based on a survey was adopted with 200 mobile banking users was selected as participants for the study. Participants think a wide variety of m-banking features with easy access and use plays a significant role in surging the system. The covid-19 pandemic has also increased people's dependency on m-banking. Apart from that, m-banking authorities have no direct contact with its customers. Safety, large amount of money transactions, deposit and profit limit features and reduced charges are all factors that would attract more customers in the coming days. Banks can presently provide managing an account administration to the country and unbanked populaces through portable phones. Around 54% of respondents opinioned that this framework is less exorbitant and timesaving and 63% of respondents felt believe in this benefit. 83% of respondents consider it is simpler to get to, but this benefit isn't accessible for interbred transactions, as well as the nonattendance of an administrative system may lead to cash washing exercises.

Keywords: Mobile-Banking, Influential Factors, Customer Satisfaction, Quantitative Study, E-Wallet, Bangladesh.

INTRODUCTION

Mobile Banking is not a relatively new idea in Bangladesh. Technological developments assistance to enhance the performance of banks' distribution channels, and developments in the banking industry that employ electronic conveyance channels are alluded to as electronic keeping money (Akter et al., 2023). E-commerce is currently believed to keep the potential of a modern business revolution by providing a low-cost and direct means of exchanging information and selling or buying goods and services. Changes in distribution channels have fueled the growth of banking technology, as shown by ATMs, phone banking, telebanking, PC banking, and, most recently, internet banking (Bhuiyan, 2017). Before 2000, there was no financing system through mobile phones. At that time, the number of mobile users was significantly limited. Dutch Bangla Bank (DBBL) has introduced the first-ever mobile banking (here in after, m-banking) services in Bangladesh on 31 March 2011. Bangladesh is a thickly populated nation with 160 million people yet very few bank accounts. Most of them used to rely on unreliable and slow money transfer systems to send and receive money, using Middleman (Bhuiyan et al., 2024). Within just one-decade, Mobile banking in Bangladesh has changed the concept of Banking. M-banking services data by Bangladesh Bank, which is the central bank of Bangladesh, suggest that, in 2021, 15 Banks will be providing m-banking services in Bangladesh. "Bkash" is the leading m-banking service. According to BRAC Bank, "BRAC Bank's subsidiary, bKash Limited, takes financial services to 30 million people providing money transfer, transactional and micro-saving services with its presence in every village of the country (Shams, 2016).

M-banking is known as mobile financial services in Bangladesh" (Azad, 2016). M-banking services bring unbanked people under the umbrella of financing services. "M-banking can be defined as a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant (PDA)." (Barnes & Corbitt, 2003). Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smartphone or tablet." (Mobile Banking, 2019). Bangladesh Bank has defined Mobile Financial Services as "Mobile Financial Services (MFS) is an approach to offering financial services that combines banking with

¹ Business School of Sichuan University. Major in International Business Management (IBM), Chengdu City, China, ORCID: <https://orcid.org/0009-0003-8527-8625>, Email: deluar600626@gmail.com

mobile wireless networks that enable users to execute banking transactions." So MFS stands for banking activity without going to the bank branches (Amin et al., 2024). The mobile financial services market is still in its initial stages, with suppliers trying to stabilize their systems, create agent networks, and gain new clients (Saha et al., 2024). This includes recruiting and training agents, marketing, assisting customers with transactions, and gaining customers via the use of know-your-customer (KYC) and account opening processes (Rahman et al., 2024). According to a study done by Bangladesh's central bank, the modern administrations are coming to numerous districts of the nation, and most buyers and specialists are cautiously hopeful approximately the esteem of portable money-related administrations (Akter et al., 2023).

According to Tabassum (2021), M-banking enables the opportunity to make deposits, withdraw, send or receive funds from mobile accounts to agent or one mobile accounts holder to others. Thus, it is possible to make transactions in rural areas without going to the respective bank branches. Krishnan 2014 suggest that "A system like that wouldn't have required lots of infrastructure. A decent mobile network and a handful of mobile phones would have made a big difference in the lives of those poor people". This concept of m-banking has changed the lives of people here, both in the business sector and daily life activities. In Bangladesh, a number of banks have launched mobile banking services (Poli, 2024). Previously, the central bank permitted portable money-related administrations such as inbound worldwide settlements, cash in/out by means of m-wallets, private to private (P2P), trade to private (B2P), government to private (G2P), and numerous more.

In Bangladesh, M-banking Services has started with only money transactions. With time, now this service is not confined the just transaction (Islam et al., 2024). M-banking offers a wide range of services, including online payments, paying utility bills, interest on savings, easy-to-use smartphone applications (both in English and Native Language), transfer money from abroad, etc. are remarkable and popular services. Now 15 banks have been included in giving m-banking administrations. The following table below attempts to show popular m-banking services with their parent organization.

Table 1. Popular m-banking services with their parent organization

SN.	Mobile Banking Name	Parents Organization	Inauguration Date
01	Bkash	BRAC Bank Ltd	July 2011
02	Rocket (DBBL)	Dutch Bangla Bank Ltd	May 2011*
03	Nagad	Bangladesh Post Office, Ministry of Post and Telecommunication (Bangladesh)	26 March 2019
04	Rupali Bank Sure Cash	Rupali Bank	December 2014
05	M-Cash	Islami Bank Bangladesh ltd	August 2012
06	Upay	United Commercial Bank Ltd. Bangladesh	November 2013
07	Ok Mobile	One Bank Limited	October 2013
08	My Cash	Mercantile Bank Limited	February 2012
09	Trust Axiata Banking	Trust Bank Ltd & Axiata Digital	1 April 2018

*= First ever m-banking services in Bangladesh.

Due to the rapid emergence and success of Mobile Financial Services (MFSs), many people in Bangladesh have become aware of their importance. However, the industry is not yet in a stable position (Molla et al., 2023). Despite being a new system in Bangladesh, as shown in the table. The study aims to find out the factors behind the increasing dependency on m-banking (Hasan, 2021). Few findings in this study are similar to past research, but others are different and new in this field of knowledge.

Research Aims, Objectives, Questions

This study explores the factors, relationships, and types of income sources people attached to m-banking. It develops a clear and broad idea of this increasing m-banking sector in Bangladesh.

To identify whether consumers in Bangladesh trust e-banking platforms.

To find out the factors that affect people’s trust.

To seek a logical solution for the trust problem.

Questions

What are the reasons behind the superfluous increase in mobile banking in Bangladesh?

What sort of economic class people is using mobile banking more?

What types of relationships between mobile banking authorities and users are fostering online banking in Bangladesh?

How do they trust e-banking?

What factors affect their trust?

M-banking is widely used in whole over Bangladesh regardless of people with literacy or without literacy. Due to Covid-19, the whole country has faced trouble in every sector, yet m-banking has been surging day by day.

Research Framework

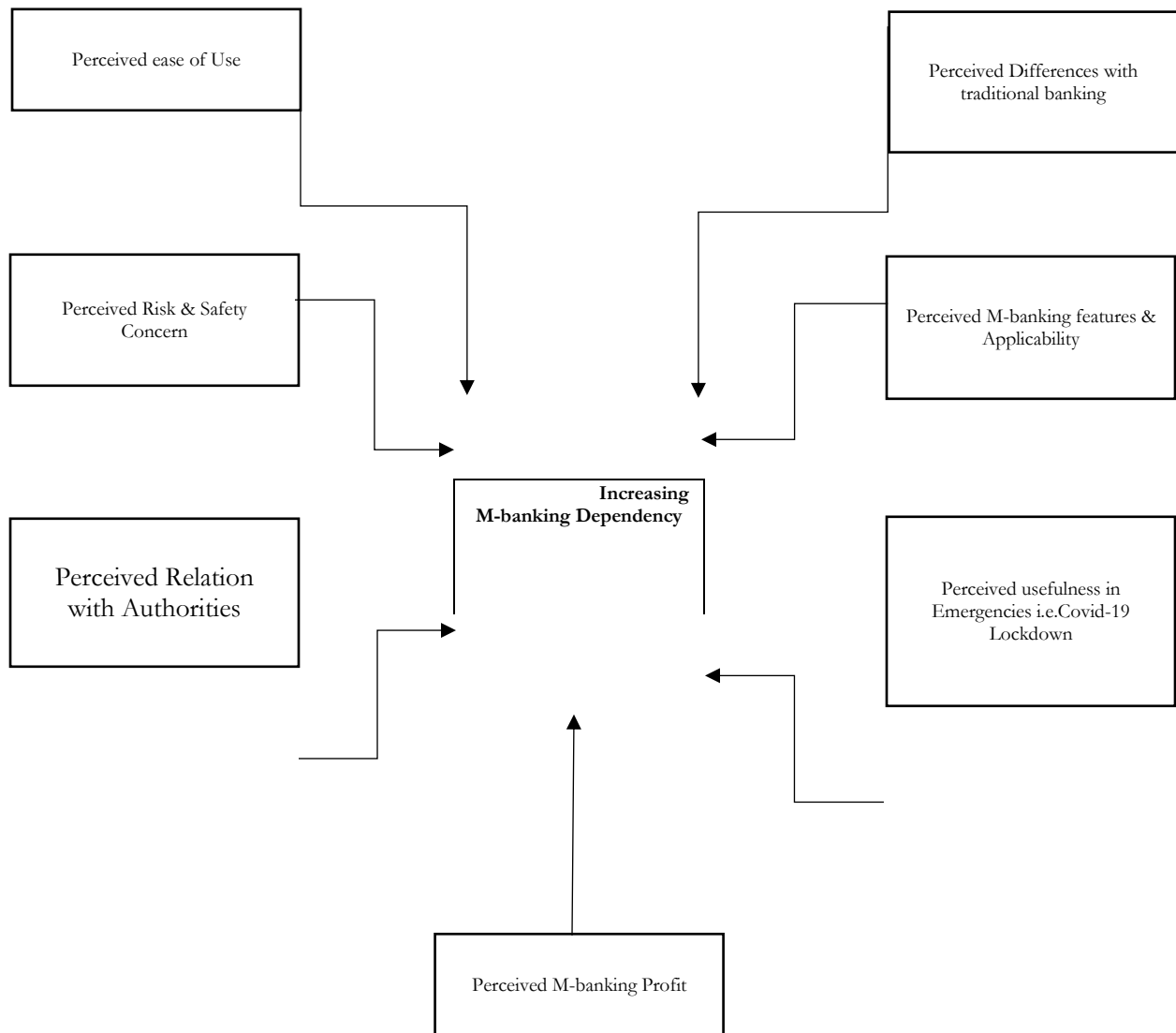


Figure Error! No text of specified style in document.. Research Framework

LITERATURE REVIEW

"Mobile banking is a global behavioral phenomenon, or more accurately, it is the result of significant behavioral changes that have been occurring all over the world since the introduction of the Internet and the World Wide Web." (Krishnan, 2014). Due to the emergence of m-banking, banking users can now conduct transactions anywhere and at any time. MFS has successfully brought around five crores, unbanked Bangladeshi people, under formal financial services in the last few years" (Tabassum, 2021). Traditional banking has a noteworthy part within the money related framework, but it has failed to financial inclusion in Bangladesh. Traditional banking needs physical activity such as physical presence, customer's presence at the bank, banking hour transactions, holidays, and paper works to complete a transaction (Mani, 2019).

On the other hand, m-banking has surpassed all these issues. Krishnan 2014 describes this revolution of banking as "Mobile banking takes the location requirement out of banking. Most m-banking offers 24 hours service. A person can access his account round the clock and do all the procedures with the touch of few simple buttons. One important thing to mention, M-banking had a limited amount transaction limit in Bangladesh. For financial inclusion, M-banking has been playing a vital role. It enables the opportunity to bring everyone under the umbrella of money related framework. With the arrival of technology such as the internet, mobile phones etc m-banking has reduced paper-based activities and makes life easier. Through it, it is possible to take money easily to remote areas. Small transactions are become very easy through mobile banking (Sultana, 2019).

M-banking offers money transactions and other services at a meagre cost. One reason is that m-banking doesn't need any physical branches and human resources, so m-banking services charge less than traditional banking (Islam & Bhuiyan, 2023). Barnes and Corbitt 2003 describe that Some of the first commercial applications of the mobile internet involve wireless or mobile (m-) banking. These developments build on earlier ideas of customer channel extension through telephone banking and online banking. M-banking taps the mobile customer channel in an effort to further reduce costs (Bhuiyan, 2019).

M-banking is a safer and more secure method of conducting banking transactions. It has various security features that make it faster and less prone to fraudulent transactions. Another advantage of m-banking is that poor and underprivileged customers widely use it (Bhuiyan, 2023). Mobile banking is more favorable to rural populations in Bangladesh, such as farmers and local businessmen. The complications of money transactions have been eliminated by enrolling in mobile banking. For rural residents, going to the bank is tough because the nearest one is many miles distant. Nevertheless, mobile banking is convenient for them. They may quickly and effectively and simply receive and send money using a mobile phone or by visiting to the closest agent in the native market. It doesn't matter if the village inhabitants dropped out of school at a young age and were unable to read or write. The agents are a part of the people, deeply embedded of the community members. Money could also be received from outside the country (Bhuiyan, 2024).

"Mobile financial services can be divided into m-banking and mobile payment..." (Ahmed et al., 2011). There is a new addition to m-banking in money-saving. Customer can save their money and based on their amount, can also get interest. Unbanked people can easily save money by using m-banking. M-banking is very popular in Bangladesh as it seems to grow rapidly (Tabassum, 2021)

Mobile Banking in Developed Countries

Most of the MFS services have been bought up through agent banking. "An agent is a third-party owner of an outlet who conducts banking transactions such as cash deposits, withdrawals, small value loan disbursement and recovery of loans, transfer of funds, paying bills under the government's social safety net programs, and account inquiries on behalf of a bank" (Islam, 2018). An agent is a 3rd party owner who conducts banking transactions at their risk. Lack of proper security for agents is a major constraint. Then they called the clients over the phone and told them that their bKash account had been cloned and they would soon get a call from the customer care" (Javed, 2020). As the m-banking authority provides guidelines both for agents and its customers, these fraudulent activities cannot be solved without the awareness and safety concerns of the customers and agents. As a result of the study, Hossain & Haque 2014 emphasizes "Security of financial transactions, being executed from some remote location and transmission of financial information over the air,

is the most complicated challenge that needs to be addressed jointly by mobile application developers, wireless network service providers and the banks IT departments."

M-banking services largely depend on the internet. Customers can use the services through USSD and smartphone applications. "USSD (Unstructured Supplementary Service Data) is a Global System for Mobile Communications (GSM) protocol that is used to send text messages. USSD is similar to Short Message Service (SMS)." (Rosencrance, 2020).

The expansion of e-banking is beset with several infrastructural, institutional, and regulatory constraints such as inadequate availability of reliable and secure telecommunication infrastructure, absence of a backbone network connecting the whole country, poor ICT penetration in the banking sector, lack of skilled manpower and training facilities, absence of supportive policies, guidelines, rules and regulations relating to e-transactions and the like". M-banking banking authorities have nothing to do with this aspect as mobile network coverages and internet speeds is regulated by other ministry of Bangladesh (Milon, 2024). Although the success of the service is determined by the business strategy and the bank's ability to execute it, selecting the improper platform might have a diverse effect.

Determinants of Mobile Banking Usage

The Government of Bangladesh has announced fiscal stimulus packages for Small and Medium Enterprises, Garment Sectors, daily workers and Low-income people. Recipients can withdraw the money at SureCash agent points around the country free of charge". To receive stimulus funds, one needs to have SureCash account. SureCash is a m-banking service provided by Rupali Bank. This decision of the Government has led people to use m-banking services as they couldn't roam freely during the lockdown (Sultana & Khan, 2016).

Whereas M-banking has succeeded in this aspect and created an equal opportunity for all. Moreover, numerous difficulties, such as a lack of an acceptable regulatory framework and mobile transaction security, tend to obstruct the continuing development of this advanced mobile banking application. Because of the concerns mentioned in this paragraph and the relevance of mobile banking, it is critical that research be conducted to assess the possibilities and obstacles of mobile banking in a developing economy such as Bangladesh (Bhuiyan et al., 2023).

Mobile phone adoption is one of the vital factors for this aspect. Today now we have more mobile phones than Personal computers in Bangladesh. "The total number of Mobile Phone subscribers has reached 171.854 million at the end of January 2021." (Mobile phone subscribers, 2021). With the betterment of mobile technology, the numbers of internet users and mobile network coverage in the last ten years have both increased significantly. "The total number of Internet Subscribers has reached 112.713 million at the end of January, 2021" (BTRC, 2021). This advancement of technology use has created opportunities for all people to bring financial services under the umbrella. "However, the outstanding growth of mobile sector worldwide has created a unique opportunity to provide social and financial services over the mobile network. With over 4 billion mobile cellular subscriptions worldwide, mobile network has the ability to immediately offer mobile banking to 61% of the world population" (Sultana, 2009)

M-banking offers a wide variety of lucrative options and offers for its customers. Discounts on online payment, contactless payment during lockdown, and discounts on various shops while you have to pay more on physical payment, utility bills, etc are both time and savings (Sultana and Khan, 2016; Khatun et al, 2021).

One important feature of m-banking which has helped rural people is Money transfer from abroad. 10 million citizens of Bangladesh work abroad as a migrant and short-term employee which is very important for Bangladesh economy. Rural people mostly reluctant to go to the formal settings. Now with the help of m-banking money transfers, they can withdraw money nearby agents shop. This service enables these peoples to withdraw money any time and, most importantly, helps them improve their lives (Faraji et al., 2024). A good amount of jobless people has forced to move on freelancing, giving them an opportunity to work at home and get payment from abroad. This process has some limitations due to recognized money transfer platforms. To alleviate this situation, the central bank of Bangladesh has permitted money transfer through m-banking for freelance workers. On February 2021 BB announced that "Bangladesh Bank today allowed mobile financial

service (MFS) providers to bring remittance in order to facilitate freelance workers" (IT freelancers can, 2021). For this, an expansive number of modern versatile keeping money clients have risen amid this widespread circumstance. Presently they are utilizing their portable keeping money stages and feel comfortable doing such sorts of exercises in this existing circumstance. Another vital truth behind rising portable managing an account client that most of the readymade piece of clothing (RMG) proprietors requested their laborers to open claim portable keeping money account for getting their pay rates and other motivations which could be an incredible activity to permit the moo workers into an advanced monetary get to stage in Bangladesh. This too offers assistance to diminish the spread of COVID-19 within the nation.

Since its independence, the traditional bank has been functional in Bangladesh, yet it has failed to financial inclusion due to lack of physical presence everywhere. There are others factors too. However, a substantial part of both urban and rural populations is still hesitant to embrace and use mobile banking services. As a result, there is a need to realize why consumers accept and utilize mobile banking, as well as to identify the variables that might influence their intents to use mobile banking in Bangladesh. There are some remarkable research works about m-banking in Bangladesh. And this field of study is expanding rapidly. Yet online books on m-banking in Bangladesh are hard to find.

METHODOLOGY

The quantitative study is descriptive. The research design chosen for this scientific study is descriptive. "As the name implies, the major purpose of descriptive research is to describe characteristics of objects, people, groups, organizations, or environments. In other words, descriptive research tries to paint a picture of a given situation by addressing who, what, when, where, and how questions" (Zikmund et al., 2013).

As M-banking has been gaining popularity day by day, there is no need to conduct exploratory research (Bhuiyan et al., 2024). A descriptive design would help get insight into this phenomenon—a survey method employed to collect responses from the m-banking users. The purpose of the study is to locate the factors that impression increasing m-banking in Bangladesh (Rahman et al., 2024). A quantitative study will be employed to conduct the study (Bhuiyan et al., 2023). "Survey research designs are procedures in quantitative research in which investigators administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population" (Creswell, 2008).

A survey method will be used, and data will be collected using a structured questionnaire (Ali et al., 2023). The study population is enormous. Therefore, cluster sampling will be used. This study will also explore the stakeholders' current scenario and key roles, which will eventually help identify the relationships among the users and online banking (Bhuiyan & Akter, 2024). A structured questionnaire will be used to collect data from the population and analyzed to gain insight about this topic. The table below attempt to pose a clear visual of the complete plan of the collecting data for the study:

Table 2: Complete Planning of Data Collection

Research Approach	Type of Data	Participant	Sample Size	Data Collection Method	Instrument
Quantitative	Primary	Online Mobile Banking Users.	200	Survey Structured Questionnaire	Opinionative

Table 3: Methodology Planning

1. Research Approach and type of data	2. Participant	3. Sample Size	4. Date Collection Method and Instrument
5. Quantitative & Primary	6. Online Mobile Banking Users from Dhanmondi Area, Dhaka.	200.	7. Survey 8. Structured Questionnaire

Structured questionnaire was prepared and piloted among a group of m-banking users which of them did not include in the final data collection phase. After piloting phase, modifications of the questionnaire have done and confusing and double information was deleted (Kabir et al., 2024).

The structured questionnaire has two parts. The first part intends to gather response about the participant's basic information, i.e., age, monthly income, m-bank service user, duration of usage of m-banking etc (Uddin et al., 2024). The second part of the questionnaire included 35 questions. These questions try to find out the answer of this study's research question. Actually, these questions were selected to measure the defender's opinion about the use of mobile banking. Later, data was detached using SPSS software (Hossain, 2024). The descriptive analysis method was used. To illustrate the respondent's response, frequencies, charts, percentages were used.

Credibility and Rigor

A structured questionnaire assured data credibility. On the other information, credibility was done by the participants and researcher. To ensure the credibility of the research various kinds of things have been kept in mind. Such as:

Research Type: Quantitative study.

Data Collection Credibility: Data has been collected through a structured questionnaire.

Information Credibility: 200 participants have given information.

Analyst Credibility: To clarify the blur spots in the analysis process, seniors and peer researchers review the findings.

Population and Sample

Dhanmondi area was selected for this study. Due to the global pandemic, a strict nationwide lockdown was imposed. As a result, it was not possible to collect data face to face or in person. Data was collected through mail or google form. Especially data was closely-knit from the mobile banking users because of the convenience.

On the contrary, Clusters sampling was used to get valid information from the participants. It is also called geographical sampling (Poli et al., 2024). So, it is hoped that the same sorts of responses would be collected from other locations with slight variation (Mia et al., 2024). The study aims to learn about influential factors of mobile banking users, precisely what they think about it.

In this quantitative study, the purpose is to unearth the influential factors of mobile banking. For this, the participants of this study are usually MFS users (Hossain et al., 2024). Cluster sampling, also known as geographical sampling, is taken into consideration for the study. Assuming MFSs users' response may vary slightly in another area as everywhere the services of MFS are the same. A Structured questionnaire has filled up by 200 active MFSs users from the different occupations in the Dhanmondi area.

Research Participants

Inhabitants (Student, Businessman and Job holder) of Dhanmondi Area, Dhaka, Bangladesh. Two hundred participants were chosen from the inhabitants of the Dhanmondi area, especially students and job holders, who relied on mobile banking.

Analysis and Discussion

This study has followed the survey method. A structured questionnaire has been developed to get desired responses. Structured Questionnaire for quantitative data collection, only one tool was used to avail the data (Meah & Hossain, 2024). Though it is quantitative research, it is a mainly descriptive one. That is why analysis is based on description (Masum et al., 2024). After taking data from the participants, coding and recoding were used, and data were converted into coding. Unnecessary data was removed. Incredibly obscure and non-

readable data is deleted through coding (Bhuiyan, 2024). On the other hand, the descriptive analysis function of SPSS was formulated to conduct the analysis, which will be described entirely in the later part.

Demographic Analysis

The age of the respondents ranges from 17 to 70 years. Most of the respondents 74.8% are from 21-30 years. They are followed by those between 31-40 years (7.9%), 41-50 years 2.6%, 51-60 years (1.3%), under 20 years 12.6% and 61 and older (.7%). See table 4.1 for details.

Table 4. Age Groups of the respondents Source: Field Survey

Age Groups of the respondents					
	Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 20	19	12.6	12.6	12.6
	21-30	113	74.8	74.8	87.4
	31-40	12	7.9	7.9	95.4
	41-50	4	2.6	2.6	98.0
	51-60	2	1.3	1.3	99.3
	61 and older	1	.7	.7	100.0
	Total	151	100.0	100.0	

Approximately one-third of the respondents are from 21-30 years age group. This age group is generally well-educated, mobile banking users and needs to go places for their job responsibilities. Most importantly, this group is economically sound and has mobile devices. For this reason, this group is perfect for this study as they are good with mobile device use and technology.

Table 4.2 shows that most of the respondents came from the student group (74.8%). The rest are Job holders (21.2%), businessmen (4%). For more details, please see table 2. (On next page)

Table 5 Occupation of the respondents Source: Field Survey

Occupation of the respondents					
	Occupations	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Businessman	6	4.0	4.0	4.0
	Job Holder	32	21.2	21.2	25.2
	Student	113	74.8	74.8	100.0
	Total	151	100.0	100.0	

This table implies a trend that students are most familiar and excessive users of mobile technology and m-banking. So, m-banking finance transactions are most popular among the student group, then Job Holder and the rest.

Table 4.3 shows that most respondents' monthly income range is 1000-10000 BDT [Bangladeshi Taka] (47.7%). Rest two big groups are 10001-20000 BDT (11.9%) and Under 1000 BDT (11.9%). For more details, please see table 3.

Table 6 Monthly Income of the respondents Source: Field Survey

Monthly Income of the respondents					
Monthly Income		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 1000	18	11.9	11.9	11.9
	1001-10000	72	47.7	47.7	59.6
	10001-20000	18	11.9	11.9	71.5
	20001-30000	9	6.0	6.0	77.5
	30001-40000	14	9.3	9.3	86.8
	40001-50000	10	6.6	6.6	93.4
	50001-60000	4	2.6	2.6	96.0
	60001 and older	6	4.0	4.0	100.0
	Total	151	100.0	100.0	

As most participants are from student groups, this table 3 implies that low-income group people use m-banking more.

When asked which mobile services they use, most of the response favors Bkash (44.4%) then following are Nagad (33%), Rocket (33%) and rest are shown in table 4.4

Table 7 Mobile Banking Services User Source: Field Survey

Mobile Banking Services User					
Mobile banks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bkash	67	44.4	44.4	44.4
	Nagad	33	21.9	21.9	66.2
	Others	1	.7	.7	66.9
	Rocket	33	21.9	21.9	88.7
	T Cash	5	3.3	3.3	92.1
	Telecash	3	2.0	2.0	94.0
	U Pay	9	6.0	6.0	100.0
	Total	151	100.0	100.0	

As discussed earlier, Bkash is one of the MFS that revolutionized the m-banking sector in Bangladesh. After 17 months of operation, Bkash currently has 30,000 agents, nearly one in every two villages in rural Bangladesh, "ensuring access to agents in the country's most distant areas." On July 21, 2011, the service became live. It presently has 2.2 million subscribers enrolled. Furthermore, Bkash is available to 98 percent of mobile subscribers in Bangladesh. Partnerships with the country's four main GSM providers enable this level of penetration. This table also suggests that among MFSs users, Bkash is the most used m-banking service.

Table 8 Respondents opinion about M-banking Use Easiness Source: Field Survey

Respondents' opinion about M-banking Use Easiness						
Questions	N	Range	Minimum	Maximum	Mean	Std. Deviation
Mobile banking services are much easier to use on bar phones.	151	5	0	5	3.34	1.624
Mobile banking services are much easier to use on smartphones.	151	5	0	5	4.23	.927
Mobile banking services-related applications are much easier to use.	151	5	0	5	3.99	1.017

What Factors Influence the Increasing Dependency on Mobile Banking in Bangladesh? A Quantitative Study in Bangladesh

Can you easily use mobile banking application?	151	5	0	5	3.63	1.258
Do you need the help of others to use mobile banking services?	151	5	0	5	1.94	1.775
Valid N (list wise)	151					

Note: 5 strongly agree, 4 Agree, 3 Somewhat Agree, 2 Somewhat Disagree, 1 Disagree, 0 Strongly Disagree.

Mean is very important on a six-point Likert scale. From 0.01 to 1.00 it means strongly disagree, from 1.01 to 2.00 it means disagree. From 2.01 to 3.00, it means somewhat agree, from 3.01 to 4.00 it means somewhat agree. From 4.01 to 5.00, it means agree, from 5.01 to 6.00 it means strongly agree.

When asked about mobile banking on bar phones, most participants slightly agree with the statements, whereas, on smartphones, the mean is 4.23. M-banking services are much easier on smartphone rather than bar phones. When it comes to the use of mobile banking applications, respondents gave their opinion affirmative. And for application use respondents can do that easily on their own. This result implies that respondents can operate m-banking smoothly through their mobile devices.

Table 9 Users opinion towards m-banking contrast with physical banking Source: Field Survey

Users' opinion towards m-banking contrast with physical banking					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
Mobile banking services have made my life easier.	151	0	5	4.05	1.076
I can use money transactions feature very easily through mobile banking services.	151	0	5	4.06	1.173
Mobile banking services allows me to transact money from anywhere.	151	0	5	3.85	1.315
The money transactions cost in mobile banking is cheaper.	150	0	5	2.95	1.496
For money transactions, I don't need to go to the bank.	151	0	5	3.54	1.295
I do large financial transactions in mobile banking services.	151	0	5	2.56	1.499
I do business transactions through mobile banking services.	151	0	5	2.93	1.429
Valid N (list wise)	150				

One of the basic differences between m-banking and the regular bank is the presence everywhere. When asked the respondents about this difference, m-banking gets a much higher opinion. Respondents in this study expressed that M-banking made their life easy (mean 4.05) and available money transaction facilities anytime (4.06 & 3.85). Respondents also said that they do not need to go to the physical bank (mean 3.54). But for large and financial transactions, they imply that respondents mainly rely on the physical banking system.

Table 10 Respondents opinion about Safety Concern in M-banking Source: Field Survey

Respondents' opinion about Safety Concern in M-banking					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
Mobile banking services are much safer.	149	0	5	3.19	1.250
I never had been deceived by using mobile banking services.	151	0	5	3.42	1.323
In Mobile banking services, there is a risk of fraud.	149	0	5	3.59	1.380
Valid N (list wise)	147				

When asked about the fraudulent activities that happened in m-banking, respondents expressed that there's a good chance of being deceived in this concern (mean 3.59). When asked about the safety feature of m-banking

respondents implies that this system is secure (mean 3, 19), but this safety should be upgraded more. Customers are unwilling to utilize mobile banking because they are concerned about data breaches over telecommunication networks. Apart from it there have still issues about technological difficulty, conceptual gap, preference, knowledge gap, and unwillingness, habit, and security threat and confidentiality concern.

Table 11 Respondents opinion about M-banking Features Source: Field Survey

Respondents' opinion about M-banking Features					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
I shop online through mobile banking services.	151	0	5	3.59	1.261
I pay electricity bills through mobile banking services.	151	0	5	3.18	1.545
I pay gas bills through mobile banking services.	151	0	5	2.99	1.629
I pay water bills through mobile banking services.	151	0	5	3.01	1.596
I recharge my mobile through mobile banking services.	150	0	5	3.87	1.249
Relatives send me money from abroad through mobile banking services.	151	0	5	3.13	1.459
Money can be sent abroad through mobile banking services.	151	0	5	3.05	1.382
The mobile banking application has attractive offers on financial transactions.	151	0	5	3.05	1.408
Valid N (list wise)	150				

When respondents asked about the multifaceted features of m-banking, respondents expressed their opinion positively. Bill payments, mobile top-up, and sending money abroad are extraordinary features that attract more people to m-banking, saving time and money. For transactions, m-bank provides extra discounts, so people are encouraged to buy things through m-banking and draw online shopping (mean 3.05).

Table 12 Respondents opinion about the relation between users and M-banking authority Source: Field Survey

Respondents' opinion about the relation between users and M-banking authority					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
First time I learn about mobile banking services from bank.	151	0	5	2.74	1.610
First time I learn about mobile banking services from neighbors.	151	0	5	3.42	1.303
Bank convinces me to use mobile banking services.	150	0	5	3.15	1.432
The mobile banking services authority always keeps in touch with me	151	0	5	2.44	1.586
I often go to mobile banking service office.	151	0	5	2.15	1.534
Valid N (list wise)	150				

This study tries to draw the relation between users and concerned m-banking authority. When asked where they first knew about M-banking, respondents expressed that they heard about it from their neighbor (mean 3.42) rather than from the concerned bank authority (mean 2.74). Bank has little connection with m-banking users (mean 2.44). Respondents also expressed that they barely go to the m-banking physical offices (mean 2.15). M-banking is an agent-based service, or in some cases, users go to the atm booth for money withdrawal. For

technical support, users contact customer calls support except for any serious issue; they go to the physical customer center.

Table 13 Respondents opinion about the use of M-banking during Covid-19 Pandemic Source: Field Survey

Respondents' opinion about the use of M-banking during Covid-19 Pandemic					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
Covid-19 pandemic have increased the dependency on mobile banking services.	151	0	5	3.56	1.340
Do you use mobile banking services before the outbreak of Covid-19 pandemic?	151	0	5	3.45	1.473
Do you start to use mobile banking services due to the outbreak of Covid-19?	151	0	5	2.18	1.693
Do you use mobile banking services due to Covid-19 incentive packages?	151	0	5	1.86	1.669
Valid N (list wise)	151				

The covid-19 pandemic has indeed affected every aspect of our life, including economic abilities. From the first statement, respondents expressed increased dependency on M-banking for financial issues (Mean 3.56). But when asked the respondents do they use M-banking before or after the outbreak, respondents gave more emphasis on before the pandemic (mean 3.45) than for the lockdown period (mean 2.18) and for other facilities like incentive package (mean 1.86).

Table 14 Respondents opinion about M-banking Profit Source: Field Survey

Respondents' opinion about M-banking Profit					
Questions	N	Minimum	Maximum	Mean	Std. Deviation
Do you use mobile banking services in the hope of making more profit?	150	0	5	1.84	1.529
Money deposit in mobile banking services is more profitable.	150	0	5	2.17	1.586
Valid N (list wise)	149				

This one particular feature is relatively new in M-banking services. When asked the respondents about this issue, they relied on a physical banking system (mean 1.84 and 2.17). This also implies that M-banking still lacks behind traditional banking from this aspect. For significant transactions, safe deposit users still rely on traditional banking. To ensure that E-banking continues to expand, security and privacy must be addressed.

Findings and Implications

FINDINGS

The study result shows the influential factors of users' acceptance towards M-banking. Total 35 variables are divided into seven categories based on the conceptual framework. Among them, M-banking is highly influenced by six categories. M-banking services have been operational in Bangladesh for less than ten years. Even everyday MFS services have adopted new features; thus, not all customers are familiar with them.

The use of banking is much easier on smartphones than bar phones. M-banking application use is also easy, so thus it's all feature.

Ubiquity has more influence on the use of M-banking. Customers find it time-saving and easy for financial withdrawal.

M-banking has provided opportunities for its customer to get banking anywhere. It has lessened the suffering of the customers. Now they do not need to go to the bank for the transaction. As discussed in the analysis for (table 5), significant transaction and money deposit customers largely depend on traditional banking. However, ubiquity and banking facilities for all, green services (paperless) are some remarkable facilities of M-banking which attract customers more and more.

Fraudulent activities are still persistent in mobile banking. In addition, MFSs authorities ensure safety for its customers.

M-banking multifaceted features allure customers. It is one of the most influential factors, which attracts users to m-banking. Bill payment, Top-up, online shopping, discount on financial transaction through the application, money transaction from home and abroad etc are some special offers where customers feel very effective and time-savings.

M-banking authorities have slight contact with customers as this system is an agent-based, third-party option where customers can transact money at any time. However, authorities ensure to solve any user problem through customer care services (Online call center and Physical center).

Mobile banking features are more popular among young age people.

The results also indicate that respondents like accustomed to using more features rather than just money withdrawal.

Covid-19 pandemic boosted the use of m-banking. When asked whether the covid-19 pandemic has increased the dependency on mobile banking, they expressed it positively.

Covid-19 incentive package or other economic initiatives of the Government of Bangladesh have nothing to do with the student, jobholder and businessperson.

M-banking deposit and profit, unlike a bank, customers are not happy with it.

Practical Implication

The study's findings have implications for the deployment of mobile banking systems. It is critical that bank clients adopt mobile banking as a new type of managing an account. In arrange to realize this objective, the taking after proposals may render ways to pull in bank clients to utilize versatile managing an account more efficiently.

M-banking authority should give more emphasis on the security concern of customer's transaction, agent bankers. Agent banking is a third-party media. BB, MFS, Law enforcement agencies should work collaboratively in this matter to ensure safety.

Bangladesh Bank, mobile banking service providers, and law enforcement agencies need to stop fraudulent mobile banking activities. If necessary, the rules should be made stricter.

The customer's transaction limit should be removed/made more feasible for the users in mobile banking. They need to find ways to increase the option for significant financial transactions in mobile banking.

MFSs providers need to reduce the charges on financial transactions. At the same time, MFS has to increase the deposit amount facility such as interest rate and deposit amount limit.

Bangladesh has entered the digital age. For this, more opportunities and fields of digital transactions need to be addressed.

Mobile banking should be subject to the same regulatory framework as banks.

All transactions that effect an account (those that result in an account being debited or credited, including scheduling of such activity) should be permitted only after the mobile number and the PIN linked with it have been authenticated.

In spite of the fact that computerized innovation such as mobile banking account can quicken people's monetary get to essentially in creating nations like Bangladesh but did not get appropriate consideration recently COVID-19 widespread. Despite mobile banking begun its travel in 2011 within the nation, its acknowledgment by the customer is picking up prevailing within the later COVID-19 widespread time, for getting financial services effectively, expeditiously, and securely. Individuals are presently more cleanly concerned than some time recently. In arrange to halt the spread of the COVID-19 widespread; individuals are constrained to open m-banking money account on their self-portable gadgets. This brought about in a sharp increment within the number of enrolled m-managing account client amid the widespread circumstance.

CONCLUSION

Diverse m-banking money exchanges such as cash in, cash out, and P2P exchange have strongly expanded amid COVID-19 widespread due to people's changing propensities towards advanced exchanges and diverse government activities (Islam et al., 2024). The significance of m-banking has too increased for mobile recharge, settlement exchanges, gift conveyance, security net reserves conveyance, and so on. The government should provide all assistance in establishing a cashless society by providing an easy financial access platform for combating the ongoing pandemic and creating a digital Bangladesh (Saha et al., 2024). Even after the COVID-19 epidemic, steps should be done to increase the usage of digital payment systems for social security payments and government employee remuneration. These measures are intended to assist expedite mobile financial services in Bangladesh during and after the COVID-19 epidemic, eventually increasing people's financial access to a greater level in the following days.

Ethical Issues

Research ethics is significant for a scientific study. Finishing a study with appropriate research guidelines, research ethics is essential. As it is a scientific study, the whole research is conducted and maintained strictly with all courtesy. Participants were spontaneous to share their views, and any kind of influence was not imposed on them. The data was collected with their consent. Privacy and secrecy of their identity will be maintained properly.

In this study, respondents have enough time to give their true views on the research questions. Before collecting data, proper consent and permission was taken from the respondents. Most importantly, secondary source data from any sources are included with proper reference. Moreover, all the step of research guideline was maintained.

Limitation

Because of the pandemic situation in person data was not possible to collect. The main abridgement of this study is physical data collection. The whole time for data collection hindered by the Covid-19 pandemic lockdown in Bangladesh. Another limitation is an inability to remove biases from the responses. As MFS study is expanding rapidly in Bangladesh, academic books in Bangladesh are very limited.

Acknowledgement

First, I would like to thank Almighty for finishing this research work with perseverance and without any hazard. I want to express my appreciation to my supervisor “Yukuan xu”, Teacher, for her wisdom, advice, and giving me a chance for this lifetime experience of doing my first research work and providing me essential feedback, kind attention, and massive support for preparing this thesis. Except for her sincere direction and instruction, it would not be possible to complete this piece of research work at all. As a student of Sichuan University, there is always a high expectation of completing thesis work and contributing to the university knowledge level. I am delighted to be a small part of the whole process. I want to express my special thanks and gratitude to the participants for their valuable time to respond on such short notice and send the response electrically.

REFERENCES

- Ahmed, S. M. S., Rayhan, S. J., & Mahjabin, S. (2011). Problems and prospects of mobile banking in Bangladesh. 1(6). <http://www.iiste.org/Journals/index.php/JIEA/article/viewFile/1200/1121>

- Akter, M. S., Bhuiyan, M. R. I., Poli, T. A., & Hossain, R. (2023). Web-based Banking Services on E-Customer Satisfaction in Private Banking Sectors: A Cross-Sectional Study in Developing Economy. *Migration Letters*, 20(S3), 894-911. <https://doi.org/10.59670/ml.v20iS3.3976>
- Akter, M. S., Bhuiyan, M. R. I., Tabassum, S., Alam, S. A., Milon, M. N. U., & Hoque, M. R. (2023). Factors Affecting Continuance Intention to Use E-wallet among University Students in Bangladesh. <https://doi.org/10.14445/22315381/IJETT-V71I6P228>
- Ali, M. H., Hossain, R., Mazumder, R., & Hasan, M. (2023). Does the extent of ownership by different shareholders enhance firm financial performance? Empirical evidence from an emerging economy. *Journal of Business Economics and Finance*, 12(4), 163-174. <http://doi.org/10.17261/Pressacademia.2023.1843>
- Amin, A., Bhuiyan, M. R. I., Hossain, R., Molla, C., Poli, T. A., & Milon, M. N. U. (2024). The adoption of Industry 4.0 technologies by using the technology organizational environment framework: The mediating role to manufacturing performance in a developing country. *Business Strategy & Development*, 7(2), e363. <https://doi.org/10.1002/bsd.2.363>
- Anwarul Islam, K. M., & Salma, U. (2016). Mobile Banking Operations and Banking Facilities to Rural People in Bangladesh. *International Journal of Finance and Banking Research*, 2(4), 147. <https://doi.org/10.11648/j.ijfbr.20160204.14>
- Azad, M. A. K. (2016). Predicting mobile banking adoption in Bangladesh: a neural network approach. *Transnational Corporations Review*, 8(3), 207–214. <https://doi.org/10.1080/19186444.2016.1233726>
- Bangladesh ranked 135th out of 137 countries in mobile internet speed. (2021, 28 July). *Dhaka Tribune*. <https://www.dhakatribune.com/bangladesh/2021/07/28/bangladesh-ranked-135th-out-of-137-countries-in-mobile-internet-speed>
- Barnes, S. J., & Corbitt, B. (2003). Mobile banking: concept and potential. *International Journal of Mobile Communications*, 1(3), 273. <https://doi.org/10.1504/ijmc.2003.003494>
- BB raises mobile banking transaction limit , (2021, 21 April). <https://www.thedailystar.net/business/news/bb-raises-mobile-banking-transaction-limit-2072077>
- Bhuiyan, M. R. I. (2017). UNDP-a2i: Citizens' Awareness Survey on E-Service and Service Simplification through the Digital Innovation Fair. Available at SSRN 4341799. <https://dx.doi.org/10.2139/ssrn.4341799>
- Bhuiyan, M. R. I. (2019). An Analysis of Non-Performing Loan of Janata Bank from the Perspective of Bangladesh. Available at SSRN 4341827. <https://dx.doi.org/10.2139/ssrn.4341827>
- Bhuiyan, M. R. I. (2023). The Challenges and Opportunities of Post-COVID Situation for Small and Medium Enterprises (SMEs) in Bangladesh. *PMIS Review*, 2(1), 141-159.
- Bhuiyan, M. R. I. (2024). Examining the Digital Transformation and Digital Entrepreneurship: A PRISMA Based Systematic Review.
- Bhuiyan, M. R. I. Examining the Digital Transformation and Digital Entrepreneurship: A PRISMA Based Systematic Review.
- Bhuiyan, M. R. I., Akter, M. S., & Islam, S. (2024). How does digital payment transform society as a cashless society? An empirical study in the developing economy. *Journal of Science and Technology Policy Management*. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JSTPM-10-2023-0170>
- Bhuiyan, M. R. I., Uddin, K. S., & Milon, M. N. U. (2023). Prospective Areas of Digital Economy: An Empirical Study in Bangladesh. doi: 10.20944/preprints202307.1652.v1
- Bhuiyan, M. R. I., Uddin, K. S., & Milon, M. N. U. (2023). Prospective Areas of Digital Economy in the Context of ICT Usages: An Empirical Study in Bangladesh. *FinTech*, 2(3), 641-656. <https://doi.org/10.3390/fintech2030035>
- Bhuiyan, M. R. I., Ullah, M. W., Ahmed, S., Bhuyan, M. K., & Sultana, T. (2024). Information Security for An Information Society for Accessing Secured Information: A PRISMA Based Systematic Review. *International Journal of Religion*, 5(11), 932-946. <https://doi.org/10.61707/frfnr583>
- Bhuiyan, M. R., & Akter, M. (2024). Assessing the Potential Usages of Blockchain to Transform Smart Bangladesh: A PRISMA Based Systematic Review. *Journal of Information Systems and Informatics*, 6(1), 245-269. <https://doi.org/10.51519/journalisi.v6i1.659>
- Brac Bank. (n.d). www.bracbank.com. <https://www.bracbank.com/en/sme/>
- Creswell, J. W. (2008). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.
- DDIN, K. S., BHUIYAN, M. R. I., & HAMID, M. (2024). Perception towards the Acceptance of Digital Health Services among the People of Bangladesh.
- Faraji, M. R., Shikder, F., Hasan M. H., Islam, M. M. I., & Akter, U. K. (2024). Examining the Role of Artificial Intelligence in Cyber Security (CS): A Systematic Review for Preventing Prospective Solutions in Financial Transactions. *Intl. J. Rel. [Internet]*. 2024 Jul. 26 [cited 2024 Jul. 29];5(10):4766 – 4782. Available from: <https://ijor.co.uk/ijor/article/view/6884>
- Govt cash gift for Corona-affected family disbursed through Rupali Bank SureCash, (2020, 18 May), *[The Financial Express*. Retrieved 13 September, 2021, from <https://thefinancialexpress.com.bd/economy/bangladesh/govt-cash-gift-for-corona-affected-family-disbursed-through-rupali-bank-surecash-1589741050>
- Hossain, R. (2024). Adopting Industry 4.0: A Strategic Solution for Transforming Smart Bangladesh: Prospective Connections, Opportunities, and Challenges. *Pakistan Journal of Life and Social Sciences*

What Factors Influence the Increasing Dependency on Mobile Banking in Bangladesh? A Quantitative Study in Bangladesh

- HOSSAIN, R., AL-AMIN, L. I. S. A., ISLAM, M. M., POLI, T. A., & MILON, M. N. U. (2024). Exploring the Effectiveness of Social Media on Tourism Destination Marketing: An Empirical Study in a Developing Country. *WSEAS TRANSACTIONS on BUSINESS and ECONOMICS*, 21, 1392-1408. <http://dx.doi.org/10.37394/23207.2024.21.114>
- HOSSAIN, R., AL-AMIN, L. I. S. A., ISLAM, M. M., POLI, T. A., & MILON, M. N. U. Exploring the Effectiveness of Social Media on Tourism Destination Marketing: An Empirical Study in a Developing Country. Information on Mobile Banking. (n.d.). *Rtn.bcc.net.bd*. <http://rtn.bcc.net.bd/index.php/information-on-mobile-banking>
- Internet Subscribers in Bangladesh January, 2021. | BTRC. (2021). *Btrc.gov.bd*. <http://www.btrc.gov.bd/content/internet-subscribers-bangladesh-january-2021>
- Islam, J., Saha, S., Hasan, M., Mahmud, A., & Jannat, M. (2024, April). Cognitive Modelling of Bankruptcy Risk: A Comparative Analysis of Machine Learning Models to Predict the Bankruptcy. In *2024 12th International Symposium on Digital Forensics and Security (ISDFS)* (pp. 1-6). IEEE.
- Islam, M. A., & Bhuiyan, M. R. I. (2022). Digital Transformation and Society. Available at SSRN: <https://ssrn.com/abstract=4604376> or <http://dx.doi.org/10.2139/ssrn.4604376>
- Islam, S. (2013). Mobile Banking: An Emerging Issue in Bangladesh.
- Islam, S. (2015). Impact of ICT on women empowerment in South Asia. *Journal of Economic & Financial Studies*, 3(03), 80. <https://doi.org/10.18533/jefs.v3i03.166>
- Islam, S. (2018, 3 June). The rapid growth of agent banking in Bangladesh [Review of The rapid growth of agent banking in Bangladesh]. *Dhakatribune*. <https://www.dhakatribune.com/business/2018/06/03/the-rapid-growth-of-agent-banking-in-bangladesh>
- Islam, Z., Bhuiyan, M. R. I., Poli, T. A., Hossain, R., & Mani, L. (2024). Gravitating towards Internet of Things: Prospective Applications, Challenges, and Solutions of Using IoT. *International Journal of Religion*, 5(2), 436-451. <https://doi.org/10.61707/awg31130>
- IT freelancers can now bring in remittance through mobile financial service. *The Daily Star*. (2021, 10 February). <https://www.thedailystar.net/mobile-financial-service-providers-allowed-bring-remittance-2042525>
- Javed, H.A. (2020, 17 October). 9 arrested for defrauding money via bKash [Review of 9 arrested for defrauding money via bKash]. *Dhakatribune*. <https://www.dhakatribune.com/bangladesh/2020/10/17/9-arrested-for-defrauding-money-via-bkash>
- Kabir, M. R., Hossain, R., Rahman, M. M., Sawon, M. M. H., & Mani, L. (2024). Impact of E-Marketing on Book Purchase Tendencies: An Empirical Study on University Undergraduate Students. *Journal of Ecohumanism*. <https://ecohumanism.co.uk/joe/ecohumanism/article/view/3388>
- Khatun, M. N., Mitra, S., & Sarker, M. N. I. (2021). Mobile banking during COVID-19 pandemic in Bangladesh: A novel mechanism to change and accelerate people's financial access. *Green Finance*, 3(3), 253–267. <https://doi.org/10.3934/gf.2021013>
- Krishnan, Sankar. (2014). *The Power of Mobile Banking How to Profit from the Revolution in Retail Financial Services*. Hoboken, Nj, Usa John Wiley & Sons, Inc.
- Mani, L. (2019). An Analysis of loan portfolio of Janata Bank Limited. Available at SSRN 4644687. or <http://dx.doi.org/10.2139/ssrn.4644687>
- Mani, L. (2024). Gravitating towards the Digital Economy: Opportunities and Challenges for Transforming Smart Bangladesh. *Pakistan Journal of Life and Social Sciences*
- Masum, M. Y., Mia, M. N., Islam, M. S., Ahmed, G. S., Milon, M. N. U., & Hossain, R. (2024). Poverty Alleviation Through Tourism Development In Bangladesh: Theoretical Perspectives And Empirical Evidence. *Educational Administration: Theory and Practice*, 30(5), 10050-10064. <https://doi.org/10.53555/kuey.v30i5.4045>
- Meah, M. R., & Hossain, R. (2023). Ownership structure and auditor choice in emerging economy: An empirical study. *Indonesian Journal of Business, Technology and Sustainability*, 1(1), 12-22.
- Mia, M. N., Mani, L., Rahman, M. M., Milon, M. N. U., & Hossain, R. (2024). Gravitating towards Community Based Tourism (CBT): Community Empowerment and Reducing Poverty in Tourism Sector Development in Bangladesh. *International Journal of Religion*, 5(6), 848-864. <https://doi.org/10.61707/e1zchv24>
- Milon, M. N. U. (2024). Gravitating towards Artificial Intelligence on Anti-Money Laundering A PRISMA Based Systematic Review. *International Journal of Religion*, 5(7), 303-315. <https://doi.org/10.61707/py0fe669>
- Mobile financial services data. (2019). *Bb.org.bd*. <https://www.bb.org.bd/fnansys/paymentsys/mfsdata.php>
- Mobile Phone Subscribers in Bangladesh January, 2021 | BTRC. (n.d.). *Www.btrc.gov.bd*. <http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-january-2021>
- Mobile users aggrieved by poor network coverage, internet speed. (n.d.). *New Age | the Most Popular Outspoken English Daily in Bangladesh*. Retrieved 14 September, 2021, from <https://www.newagebd.net/article/147008/mobile-users-aggrieved-by-poor-network-coverage-internet-speed>
- Molla, C., Mani, L., Bhuiyan, M. R. I., & Hossain, R. (2023). Examining the Potential Usages, Features, and Challenges of Using ChatGPT Technology: A PRISMA-Based Systematic Review. *Migration Letters*, 20(S9), 927-945. <https://doi.org/10.59670/ml.v20iS9.4918>

- Poli, T. A. (2024). Mediating Role of Entrepreneurship Capability in Sustainable Performance and Women Entrepreneurship: An Evidence from a Developing Country. *Journal of Ecohumanism*. Retrieved from <https://ecohumanism.co.uk/joe/ecohumanism/article/view/3553>
- Poli, T. A., Sawon, M. M. H., Mia, M. N., Ali, W., Rahman, M., Hossain, R., & Mani, L. (2024). Tourism And Climate Change: Mitigation And Adaptation Strategies In A Hospitality Industry In Bangladesh. *Educational Administration: Theory and Practice*, 30(5), 7316-7330. <https://doi.org/10.53555/kuey.v30i5.3798>
- Rahman, M. M., Bhuiyan, M. R., & Alam, S. M. (2024). The Empirical Study on the Impact of the COVID-19 on Small and Medium Enterprises (SMEs) in Bangladesh. *Journal of Information Systems and Informatics*, 6(1), 527-547. <https://doi.org/10.51519/journalisi.v6i1.686>
- Rahman, M. M., Faraji, M. R., Islam, M. M., Khatun, M., Uddin, S., & Hasan, M. H. (2024). Gravitating towards Information Society for Information Security in Information Systems: A Systematic PRISMA Based Review. *Pakistan Journal of Life and Social Sciences (PJLSS)*, 22(1). <https://doi.org/10.57239/PJLSS-2024-22.1.0089>
- Rosencrance, L. (2020, March). USSD (Unstructured Supplementary Service Data) Techtarget. <https://www.techtarget.com/searchnetworking/definition/USSD>
- Saha, S., Hasan, A. R., Islam, K. R., & Priom, M. A. I. (2024). Sustainable Development Goals (SDGs) practices and firms' financial performance: Moderating role of country governance. *Green Finance*, 6(1), 162-198.
- Saha, S., Hasan, A. R., Mahmud, A., Ahmed, N., Parvin, N., & Karmakar, H. (2024). Cryptocurrency and financial crimes: A bibliometric analysis and future research agenda. *Multidisciplinary Reviews*, 7(8), 2024168-2024168.
- Shams, S. A. (2016, 24 January). bKash revolutionizing banking for poor: Bill Gates. *The Daily Star*. <https://www.thedailystar.net/business/banking/bkash-revolutionising-banking-poor-bill-gates-206557>
- Sultana, R. (2009). Mobile Banking: Overview of Regulatory Framework in Emerging Markets. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1554160>
- Sultana, S. (2019). Initiation and Recent Status of Mobile Banking in Bangladesh [Review of Initiation and Recent Status of Mobile Banking in Bangladesh]. *International Journal of Science and Research (IJSR)*, 8(ISSN: 2319-7064), 667–673. <https://www.ijsr.net/archive/v8i2/ART20195065.pdf>
- Tabassum, R. (2021). Fintech MFS: Best Mobile Financial Services in Bangladesh [Review of Fintech MFS: Best Mobile Financial Services in Bangladesh]. *United News of Bangladesh*. <https://unb.com.bd/category/Business/fintech-mfs-best-mobile-financial-services-in-bangladesh/43453>
- UDDIN, K. S., BHUIYAN, M. R. I., & HAMID, M. Perception towards the Acceptance of Digital Health Services among the People of Bangladesh.
- Web source: Dutch Bangla Bank Ltd. <https://www.cgap.org/blog/growth-mobile-financial-services-bangladesh> Mobile banking during COVID-19 pandemic in Bangladesh: A novel mechanism to change and accelerate people's financial access
- Zikmund, W. G., Babin, B. J., C, J., & Griffin, M. (2013). *Business research methods*. South-Western.