Navigating the Landscape of Mobile Banking in Bangladesh: A Critical Examination of Challenges and Opportunities

B. M. Sajedul Karim[1], Md. Rashed Billah[2], Most.Tania Khatun[3], Nurunnahar[4], Md. Afsarul Islam[5], Md. Mostafijur Rahman[6*]

[1,3]Lecturer, Department of Business Administration, First Capital University of Bangladesh, Bangladesh
[2,4]Lecturer, Department of Computer Science and Engineering, First Capital University of Bangladesh, Bangladesh
[5]Assistant Professor, Department of Business Administration, Metropolitan University, Bangladesh
[6]Assistant Professor, Department of Business Administration, First Capital University of Bangladesh, Bangladesh

[*]Corresponding Email: mostafizrumgt@gmail.com

ABSTRACT

Mobile Banking is an emerging alternate channel for providing banking services. The primary purpose of this study is to identify the problems of mobile banking and the benefits of mobile banking users in Bangladesh. For the research, both primary and secondary data were used. The total sample consisted of 158 respondents (male 69% and female 31%), and a semi-structured close-ended questionnaire was used. This study adopts a descriptive. Besides, we used the Likert Scale to range the satisfaction and dissatisfaction levels. A frequency test was done to measure the result, and then a graph was used to represent and show the findings efficiently. Statistical software SPSS version 16.0 was used to analyze data. The most significant result shows that 59.5 % of respondents face security and safety risks, and 46.8 % think mobile banking is a quick customer service and time-saving transaction system. So, to run the mobile banking service effectively and efficiently, proper care has been taken, and necessary steps to improve the quality of services.

Key Words: Mobile Banking, Likert Scale, Frequency Test, Bangladesh

INTRODUCTION

The banking sector is the lifeblood of any economy (Bai, 2009). Electronic banking (E-banking) creates a new era in the banking sector (Shukla & Shukla, 2011). E-banking has continuously grown in Bangladesh over the last decade (Ahmed et al., 2011; Sadekin et al., 2019). The banking industry has recently adopted this trend, and now all banking activities are completed through Internet applications called e-banking (Ahmed et al., 2011). Telecommunications networks, web technology, computers, cellular phones, and other electronic devices are used for electronic-based banking activities (Karim et al., 2023). Although e-banking is new in Bangladesh, it has high potential (Rahman et al., 2022). Mobile banking is one of the parts of e-banking.

Mobile banking is the outcome of recent innovations in telecommunications that have created new opportunities and introduced new methods of banking services (Barnes & Corbitt, 2003; Scornavacca et al., 2006; Rahman et al., 2021; Islam & Salma, 2016; Maddali et al., 2021). Mobile banking, or M-Banking or SMS Banking (Islam & Salma, 2016), is a form of banking transaction via a mobile phone or to conduct financial transactions via a mobile terminal (Petrova, 2002). Mobile commerce or mobile banking is an interface between a consumer and a mobile device (Lal et al., 2022). Mobile phone technology has become the most potential and well-suited channel for financial inclusion (Asfaw, 2015). Mobile phone use for financial inclusion is prevalent, and most people need more banking facilities (Sumanjeet, 2010; Hasan et al., 2020; Hossain & Haque, 2014).

Mobile banking (M-banking) allows customers to conduct their financial services through Short-Message-Services (SMS) (Laukkanen, 2007), wireless application protocol (WAP), and Java enables phone support other banking activities using GPRS (General et al.) such as direct payments confirmation and funds transfer (Yang, 2009). The SMS-based mobile banking approach is very prospective because of the low costs and bandwidth requirements, simplicity, easiness, and straightforwardness (Soong et al., 1987). Various financial transactions are made through mobile banking, such as checking account balances, transferring money, bill and merchant payments, withdrawals, online ticket purchases, and other financial transactions (Rahman & Dekkati, 2022).

Mobile banking mainly depends on the availability of an internet or data connection to the mobile device. Besides this, mobile banking activities also feature mobile phones. Mobile banking is usually available on a 24-hour basis (Ahmed et al., 2011; Rahman et al., 2020). Mobile banking does not handle cash transactions, and a customer must not visit an ATM (Agbada, 2008; Sadekin et al., 2009; Rahman et al., 2019) or bank branch for cash withdrawals or deposits.

Mobile banking first came to Bangladesh in October 2009. City Bank Ltd. was the first bank to give the idea through their mobile banking software called 'city wallet.' However, Dutch Bangla Bank Limited started mobile banking (The name of the banking service is Rocket) in full swing and widely in Bangladesh on March 31, 2011. There are 16 Mobile Financial Service providers in Bangladesh. Among those, bkash for BRAC Bank Limited, Rocket for Dutch Bangla Bank Limited, and Nagad for Bangladesh Post Office are mainly dominated in Bangladesh. Hence, the study will explore the significant problems facing M-banking and identify the benefits of M-banking users in Bangladesh.

LITERATURE REVIEW

With the advance of technology, there have been many changes in the banking business; technology has transformed the delivery channels by banks in retail banking, and technology-based services have impacted the markets of banks (Avasth & Sharma, 2001). Technology has brought a revolutionary change in the functioning of banks (Husain, 1988; Rao, 2000; Shastri, 2001; Pathrose, 2001). Employee productivity, employee efficiency, and customer service are affected by technology, particularly in the banking sector (Janki, 2002). Consumers are attracted to these technologies for convenience, time-saving, increasing ease of use, and cost savings (Ahmed et al., 2011). Banks can take full advantage of this new platform because of the availability of realistic mobile applications (Eckhardt et al., 2009; Agwu & Carter, 2014; Kaluvakuri, 2021).

Mobile banking means carrying out a banking system with the help of mobile telecommunication devices such as mobile phones or personal digital assistants (PDA)

(Georgi & Pinkl, 2005). The services offered may include facilities to conduct bank transactions, administer accounts, and access customized information (Tiwari & Buse, 2007; Rahman et al., 2017; Chandran, 2014; Maddali et al., 2019). On the other hand, mobile banking offers the probability of using electronic banking services via a mobile phone (Bećirović, 2011; Islam & Salma, 2016; Kaluvakuri et al., 2020a; Roy et al., 2021a). Mobile banking (M-banking) is an application of mobile commerce that enables customers to conduct banking services virtually anywhere and anytime (Akpan, 2009; Tashima & Khumbula, 2011; Saini, 2014). Privacy, convenience, content website layout, speed of delivery, and accessibility are the critical factors influencing mobile banking practices (Dekkati, 2022).

For financial inclusion, new technologies have adopted mobile banking, enabling legislation, developing communications infrastructure, and creating business opportunities (Cheston et al., 2016). The Central Bank of Bangladesh (Bangladesh Bank) has taken steps to promote financial inclusion, and mobile financial services (mobile banking) have become a critical tool for financial inclusion (Chowdhury, 2014). Many banks have taken advantage of m-banking because of customer satisfaction, managing costs, increasing profits, and positively transforming the economy's payment system (Medhi et al., 2009).

Mobile banking comprises three interrelated concepts: Mobile Accounting, Mobile Brokerage, and Mobile Financial Information Services (Chandran, 2014; Asfaw, 2015). Mobile accounting and mobile brokerage are transaction-based, while mobile financial information services refer to non-transaction-based banking and financial services of an informational nature (Chandran, 2014; Asfaw, 2015). Mobile Accounting is a transaction-based banking service that revolves around a standard bank account and is conducted and availed by mobile devices (Georgi & Pinkl, 2005; Hossain & Haque, 2014; Roy et al., 2019; Roy et al., 2020). The information may be customized based on preferences given by the customer and sent with a frequency decided by him (Tiwari & Buse, 2007).

There are several issues and threats in the mobile banking system, and the central problem of mobile banking is the influence of demographic variables on the adoption of mobile banking services by customers (Bai, 2019). Mobile banking faces challenges like mobile handset compatibility, standardizing, software downloading, privacy, and security (Saini, 2014). On the other hand, mobile banking can face five significant challenges: regulatory, legal, operational, reputational, and personal (Dekkati, 2020). For mobile banking technology skills, capability, privacy, security, and safety usage are crucial subject matter (Shuhidan et al., 2016). Financial and other security are essential for mobile banking transactions (Enck et al., 2009). Performance risk, security/privacy risk, time risk, social risk, and financial risk are found to be negatively related to the usage of Mobile Banking (Kabir, 2013). Mobile banking users are concerned about security issues like financial fraud, account misuse, and user-friendliness (Sharma & Singh, 2009). Most customers fear themselves because mistakes in their banking processes are created by a mobile phone or a computer (Laukkanen & Lauronen, 2005).

In mobile banking services, security is clarified by protecting user data from criminal use or fraud, and any unauthorized party cannot be seen using private information (Sanayei et al., 2011). Trust, social beliefs, norms, culture, ease of use, and innovation of banking services greatly influence individuals to take and use mobile banking (Nagan & Khoi, 2020). Mobile banking users can get different types of benefits such as portability, labor-free, low cost, convenience, wider customer reach, accessibility, and availability (Laukkanen, 2007., Ahmed et al., 2015; Eckhardt et al., 2009; Kaluvakuri et al., 2020), quick customer services and time-saving. In a mobile banking system, trust depends on the user's faith and trust in the serviceability of the organization, service integrity, security, and reputation of the

organization's actual services, products, and commitment level (Gefen et al., 2003; Wang & Shan, 2013; Roy et al., 2021; Maddali et al., 2018). The impacts of social and cultural factors on mobile payments and comparisons between mobile and traditional payment services are entirely uninvestigated issues (Dahlberg, 2008). Consumers are willing to transact electronically if mobile banking is convenient and secure (Hosen et al., 2019).

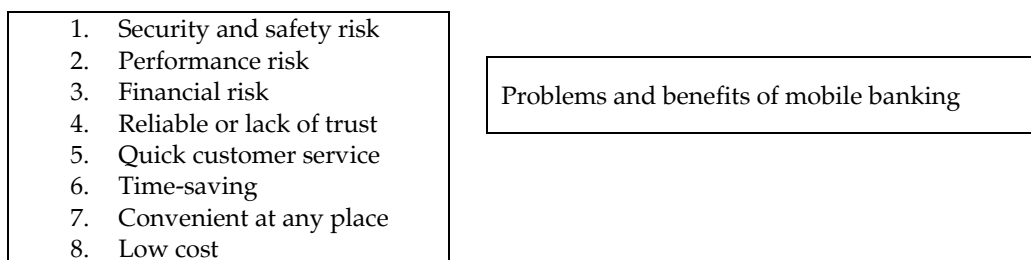The main objective of this study is given below:

- To find out the problems of mobile banking in Bangladesh and
- To identify the benefits of mobile banking users in Bangladesh

RESEARCH METHODOLOGY

Conceptual Framework

To build up the conceptual framework, various factors have been taken into consideration as potential variables. Problems and benefits are the dependent variables of mobile banking, where security and safety risk, performance risk, financial risk, reliability or lack of trust, quick customer service, time saving, convenience at any place, and low cost are the independent variables of mobile banking. This study has developed a conceptual framework to show how independent variables are associated with dependent variables.

Figure: Conceptual Framework to show the relation between independent and dependent variables.

1. Security and safety risk 2. Performance risk 3. Financial risk 4. Reliable or lack of trust 5. Quick customer service 6. Time-saving 7. Convenient at any place 8. Low cost	Problems and benefits of mobile banking

Sources: Authors

Data Collection

This study is based on primary and secondary sources of data. Necessary data were collected from different ages of people and analyzed in terms of the objectives set for the study. Preliminary data were collected from February 08 to March 02, 2023. Data were collected from rural and urban areas. Primary data were collected from the Chuadanga district by forming a semi-structural closed-ended questionnaire. A Likert five scale ranging from agree to disagree strongly is used for quick responses from respondents. Secondary data were collected from research articles, journals, books, seminar papers, internet, etc. There are 158 sample sizes used for this study.

Statistical Analysis

Statistical Package for the Social Sciences (SSPS) version 16.0 was used to implement data analyses. SPSS is a computer program for estimating the unknown coefficients within a system of structural equations. It has been used to test the statistical significance of the parameters at a 5% significance level.

RESULTS

There are 158 data used in this research. Among them, 109 are male, and 49 are female. This research was descriptive. Qualitative data are analyzed critically using judgment. A frequency distribution table and pie chart were used to analyze data to identify the problems of mobile banking and the benefits of mobile banking users in Bangladesh.

Security and Safety Risks

Table 1: Security and Safety Risks

	Frequency	Percent
Strongly Agree	14	8.9
Agree	94	59.5
Neutral	25	15.8
Disagree	16	10.1
Strongly Disagree	9	5.7
Total	158	100.0

We observed from the data that out of 158 respondents, 59.5 percent agreed about security and safety risks in mobile banking, 8.9 percent strongly agreed, 15.8 percent were neutral, 10.1 percent disagreed, and 5.7 percent strongly disagreed.
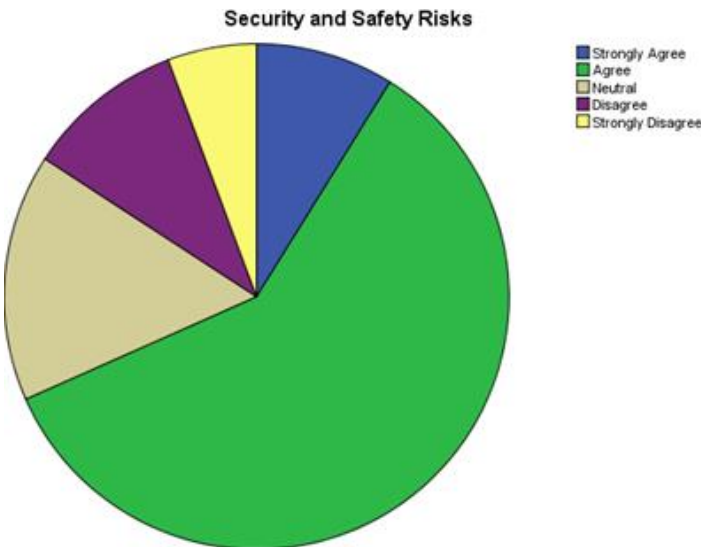
The result is shown in the following Pie chart:

Figure 1: Security and Safety Risks

Performance Risk

Table 2: Performance Risk

	Frequency	Percent
Strongly Agree	17	10.8
Agree	57	36.1
Neutral	60	38.0
Disagree	20	12.7
Strongly Disagree	4	2.5
Total	158	100.0

We have observed from the performance risks that out of 158 respondents, 38 percent think there are no performance risks in mobile banking. However, 10.8 percent strongly agreed, 36.1 percent agreed, 12.7 percent disagreed, and 2.5 percent strongly disagreed that there were performance risks in mobile banking.
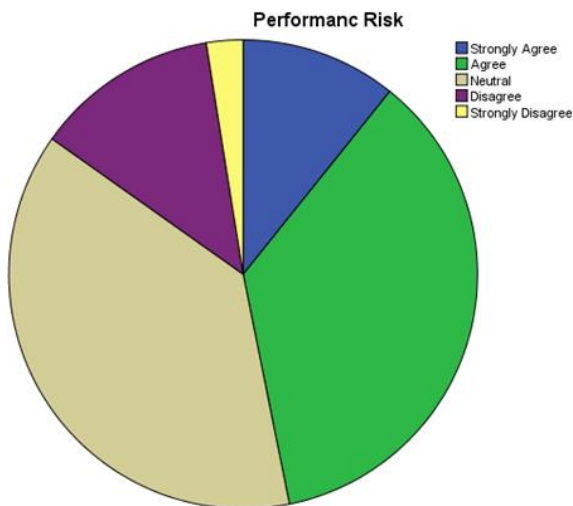
The result is shown in the following Pie chart:

Figure 2: Performance Risk

Financial Risk

Table 3: Financial Risk

	Frequency	Percent
Strongly Agree	13	8.2
Agree	65	41.1
Neutral	43	27.2
Disagree	33	20.9
Strongly Disagree	4	2.5
Total	158	100.0

We observe from the above table that out of the total respondents, 41.1 percent agreed that they face financial risk in mobile banking, where 8.2 percent strongly agreed, 27.2 percent were neutral, 20.9 percent disagreed, and 2.5 percent strongly agreed.

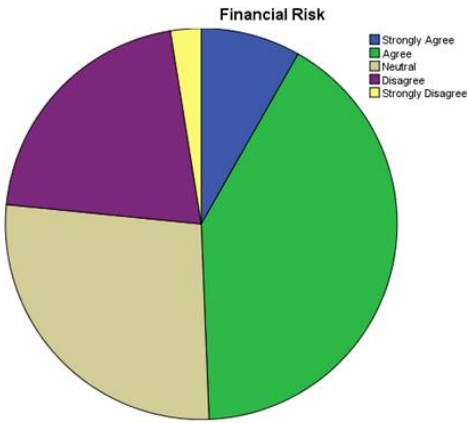The result is shown in the following Pie chart:

Figure 3: Financial Risk

Reliable or lack of trust

Table 4: Reliable or lack of trust

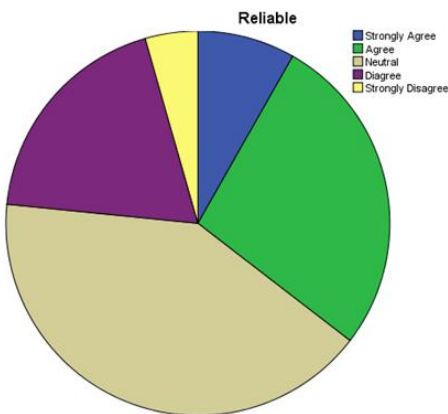|	Frequency	Percent
Strongly Agree	13	8.2
Agree	43	27.2
Neutral	65	41.1
Disagree	30	19.0
Strongly Disagree	7	4.4
Total	158	100.0

The result is shown in the following Pie chart:

Figure 4: Reliable or lack of trust

We observe from the above table that out of the total respondents, 41.1 percent were neutral, where 8.2 percent strongly agreed, 27.2 percent agreed, 19 percent disagreed, and 4.4 percent strongly agreed that mobile banking lacked reliability.

Quick's Customer Services

Table 5: Quick's Customer Services

	Frequency	Percent
Strongly Agree	45	28.5
Agree	74	46.8
Neutral	26	16.5
Disagree	6	3.8
Strongly Disagree	7	4.4
Total	158	100.0

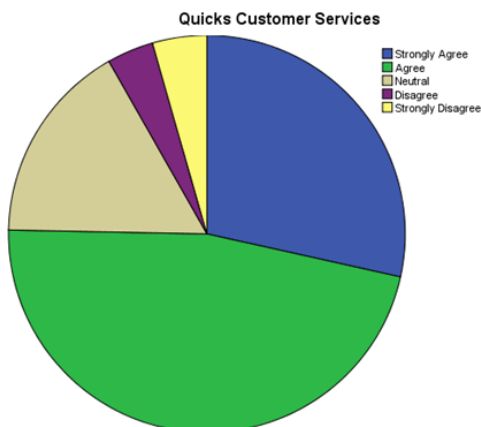The result is shown in the following Pie chart:

Figure 5: Quick customer service

We observe from the above table that out of the total respondents, 46.8 percent agreed to the quick customer service of online shopping, but 28.5 percent strongly agreed, 16.5 were neutral, 3.8 percent disagreed, and 4.4 percent strongly disagreed.

Time-saving

Table 6: Time saving

	Frequency	Percent
Strongly Agree	49	31.0
Agree	74	46.8
Neutral	21	13.3
Disagree	10	6.3
Strongly Disagree	4	2.5
Total	158	100.0

We observe from the above table that of respondents, 46.8 percent agreed with mobile banking for time-saving, where 31 percent strongly agreed, 13.3 percent were neutral, 6.3 percent disagreed, and 2.5 percent strongly disagreed.

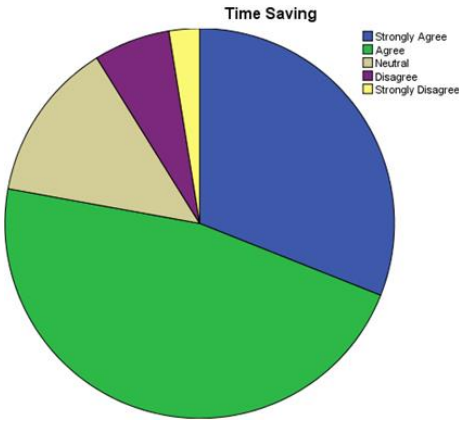The result is shown in the following Pie chart:

Figure 6: Time saving

Convenient at any place

Table 7: Convenient at any place

	Frequency	Percent
Strongly agree	22	13.9
Agree	74	46.8
Neutral	44	27.8
Disagree	13	8.2
Strongly Disagree	5	3.2
Total	158	100.0

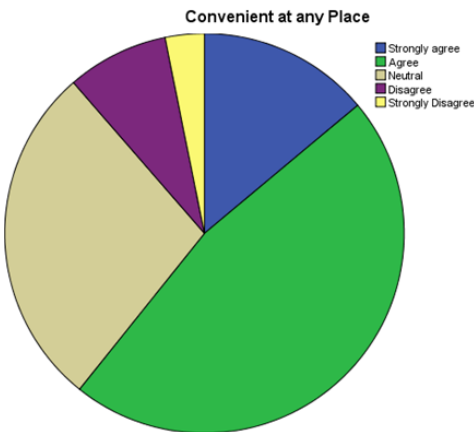The result is shown in the following Pie chart:

Figure 7: Convenient at any place

We observe from the above table that of the respondents, 46.8 percent agreed on inconvenience at any place of mobile banking. However, 13.9 percent strongly agreed, 27.8 percent were neutral, 8.2 percent disagreed, and 3.2 percent strongly disagreed.

Cheaper or Low cost

Table 8: Cheaper or low cost

	Frequency	Percent
Strongly Agree	13	8.2
Agree	42	26.6
Neutral	36	22.8
Disagree	37	23.4
Strongly Disagree	30	19.0
Total	158	100.0

We observe from the above table that of respondents, 26.6 percent agreed on lower cost or cheaper mobile banking, but 8.2 percent strongly agreed, 22.8 percent were neutral, 23.4 percent disagreed, and 19 percent strongly disagreed.
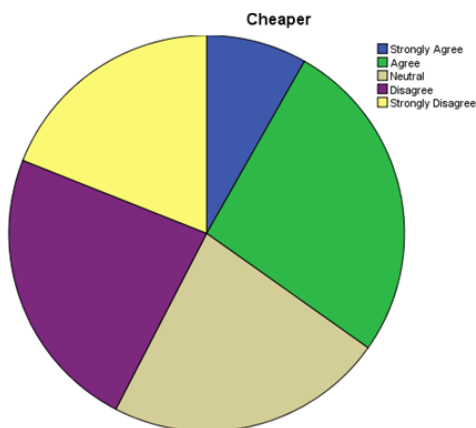
The result is shown in the following Pie chart:

Figure 8: Cheaper or low-cost

DISCUSSION

The main focus of this study was to show the problems and benefits of mobile banking users in Bangladesh. In general, the findings reveal that security and safety risks, performance risks, financial risks, trust, quick customer service, availability at any time, convenience at any place, and affordability are salient in determining consumers' mobile banking adoption. Increasing awareness of mobile banking services must lead to raising acceptance and usage levels of mobile banking services. Mobile banking users face security and safety risks, an important variable affecting negative intention to use mobile banking services (Dekkati, 2021). This result is consistent with the prior studies of Hossain and Haque, 2014. Most Mobile banking users think there is no performance risk in a mobile banking application. This result contradicted the previous studies of Kumur 2011 and the findings that mobile banking systems have a

performance risk. Mobile banking users think that financial risks (such as fraud, theft, etc.) are involved in mobile banking applications. This finding is related to the previous study by Rahman et al., 2017. Mobile banking users think they are less reliable and not in mobile banking. This result contradicted the prior studies of Islam, 2013. Islam, 2013 found that consumers must have confidential personal information (such as contact information or identity card numbers) to open a mobile bank account, which can be misused further.

Mobile banking is a quick customer service system. One benefit of mobile banking is a very speedy process. This study's finding is the same as that of previous studies by Rahman et al., 2017. Mobile banking is available at any time throughout the country, and this can save one's time. People do not have to wait in long lines, so it takes less time than traditional banking. The study of Saini, 2014 supports this finding. Mobile banking is convenient at any place and anywhere. Mobile banking service is easy to use in any location in our country. This finding is similar to the previous study of Khan, 2017. Many people think that the mobile banking system is cheaper than traditional banking. The mobile banking system is reaching not only urban and remote rural areas for advanced payment transactions at affordable cost. These findings also confirm the findings of the previous study by Ahmed et al., 2011.

Mobile banking users face security and safety risks. This result is consistent with the prior studies of Hossain and Haque, 2014. Most Mobile banking users think there is no performance risk in mobile banking applications. The previous studies of Kumur, 2011 contradict this result. Mobile banking users believe financial risks (such as fraud, theft, etc.) are involved in mobile banking applications. This finding is related to the previous study by Rahman et al., 2017. Mobile banking users think they are less reliable and not in mobile banking. This result contradicted the prior studies of Islam, 2013. Mobile banking is a quick customer service system. This study's findings are the same as those of previous studies by Rahman et al., 2017. Mobile banking is available anytime throughout the country, and this can save one's time. The survey of Saini, 2014 supports this finding. Mobile banking is convenient at any place and anywhere. This finding is similar to the previous study of Khan, 2017. The mobile banking system is cheaper than traditional banking. These findings also confirm the findings of prior research by Ahmed et al., 2011.

CONCLUSION

Mobile banking technology is the latest generation of electronic banking transaction systems that has become one of the most familiar banking features, opening up new windows of opportunity to existing banks and financial institutions. However, mobile banking still needs to be a mature product in Bangladesh. The successful acceptance and use of mobile banking services depends on existing banking channels, market situation, and customer conceptions. The quality of mobile banking services in Bangladesh could be better. Mobile banking transactions in Bangladesh have high security and safety risks, as well as high financial risks. Mobile banking is real-time online banking, available anytime, anywhere throughout the country; it is convenient, affordable, and much faster for transactions than traditional banking. So, Bangladeshi banks should take advantage of mobile banking nationwide and consider the factors that can make the mobile banking service more attractive and user-friendly.

Every study has some limitations, too. The limitation of the study is the small number of participants. We need more money and time to collect enough data. Most Bangladeshi people still need to learn more about mobile banking. Mobile banking has fewer deposit schemes than conventional banking and has no interbank fund transfer facility. The study represented a clear picture of the problems of mobile banking and the benefits of mobile banking users in Bangladesh.

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