Exploring the factors that affecting adoption of mobile banking in Bangladesh

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Abstract
This paper seeks to unearth the factors affecting the adoption of mobile banking in Bangladesh. Primary data from 630 respondents are collected from January 2021 to June 2021 using a structured questionnaire to accomplish this objective. The questionnaire contains 20 statements regarding the adoption of mobile banking. Gathered data are tabulated, categorized, and arranged to fulfill the purpose. The convenience sampling method is used to choose respondents from the Pabna district in Bangladesh. The collected data are examined using exploratory factor analysis, KMO and Bartlett testing, and reliability testing. Findings confirm that risk, the convenience of use, ease of access, cost, and comparative advantage are important factors influencing mobile banking usage in Bangladesh. Risk is the most prominent factor for mobile banking's presence in Bangladesh. Regulatory authorities and banks should emphasize the above-mentioned factors to reach the target market to fulfill their objectives. This research should help managers and the central bank develop more precise policies to expand services for mobile banking based on these factors to achieve the goal of financial inclusion. The study is conducted based on primary data from only one district under a time constraint.

Exploring the Factors That Affecting Adoption of Mobile Banking in Bangladesh

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Abstract

This paper seeks to unearth the factors affecting the adoption of mobile banking in Bangladesh. Primary data from 630 respondents are collected from January 2021 to June 2021 using a structured questionnaire to accomplish this objective. The questionnaire contains 20 statements regarding the adoption of mobile banking. Gathered data are tabulated, categorized, and arranged to fulfill the purpose. The convenience sampling method is used to choose respondents from the Pabna district in Bangladesh. The collected data are examined using exploratory factor analysis, KMO and Bartlett testing, and reliability testing. Findings confirm that risk, the convenience of use, ease of access, cost, and comparative advantage are important factors influencing mobile banking usage in Bangladesh. Risk is the most prominent factor for mobile banking's presence in Bangladesh. Regulatory authorities and banks should emphasize the above-mentioned factors to reach the target market to fulfill their objectives. This research should help managers and the central bank develop more precise policies to expand services for mobile banking based on these factors to achieve the goal of financial inclusion. The study is conducted based on primary data from only one district under a time constraint.

Keywords: risk, cost, trust, financial inclusion

Introduction

The financial sector has continued to be revolutionized by technological breakthroughs in the fields of telecommunications and information technology. Banks have made a significant shift from conventional banking practices to branchless banking. The most recent use of technology has assisted banks in growing their client base. Over the last several years, the delivery of monetary services has evolved significantly. Electronic banking is one of the most successful business-to-consumer applications in electronic commerce (Al-Jabri et al., 2012). Financial inclusion, also referred to as inclusive finance, aims to remove barriers that prevent people from engaging in the financial industry and the use of those services to enhance their lives (Grant, 2020). Financial inclusion boosts savings and investments, allowing previously disadvantaged individuals to invest

in needs such as medical care, learning, food, economic activity, and risk management (Sagib & Zapan, 2014). Mobile banking is one method of reaching the underserved population (Mujeri, 2019). Mobile banking is described as the act of conducting financial transactions through the internet or via a mobile phone device or the use of a mobile device, such as a smartphone, to conduct financial transactions without physically visiting a bank (Zhou, 2012). As a banking channel, it allows customers to conduct a variety of financial operations through the internet using their mobile devices, such as checking balances, moving money, and paying bills at any time and from any place (Audi, 2016). Based on the most recently available data, mobile services are already available to 67% of the world's population or 5.1 billion people. By 2025, 710 million new consumers are predicted to sign up for telecom services, half of whom live in Asia (Stryjak & Sivakumaran, 2019). In Europe and Asia, where mobile banking services are used by more than 80% of families, Bangladesh is a developing country named after the emerging tiger of South Asia –with a population of 164.69 million. Many living in Bangladesh are willing to enroll in formal banking services but cannot due to location, distance, time required to reach the bank, and costs. Thus, a large portion of the population remains unbanked. Researchers have conducted several studies on various areas of mobile banking, the findings of which provide insight into mobile banking in Bangladesh. Results highlight that the quality of services, ease of access, cost, and risk perception all affect the adoption of mobile banking. As such, one may ask why more individuals are not adopting mobile banking. As a result, this study aims to provide a thorough picture of the factors influencing Bangladesh's adoption of mobile banking.

Aims and Objective of Research

The specific objectives of the research are as follows:
  i. Investigate the factors that influence the adoption of mobile banking in Bangladesh.
  ii. Offer suggestions for improvement of mobile banking in Bangladesh.

Banking Industry in Bangladesh

The banking industry in Bangladesh has undergone significant changes over the past few decades (Jahan & Nawaz, 2016). It has grown rapidly and has become more competitive, with both local and foreign banks operating in the country. The industry is regulated by the central bank, the Bangladesh Bank, which oversees the licensing and supervision of banks and sets policies for the sector. There are a variety of banking services available in Bangladesh, including traditional banking services, such as deposits, loans, and remittances, as well as more modern services, such as mobile banking, internet banking, and card payments (Sadekin & Shaikh, 2015). The growth of mobile banking has been particularly significant, with a number of banks and mobile network operators offering services that enable customers to transfer money, pay bills, and access other financial services via their mobile phones (Parvin, 2013). The banking industry in Bangladesh faces a number of challenges, including low financial literacy, high levels of non-performing loans, and a lack of access to finance for many individuals and small businesses. However, the sector has also seen significant progress in recent years, with improvements in regulatory frameworks, the adoption of new technologies, and the development of innovative financial products and services. Overall, the banking industry in Bangladesh is poised for sustained growth and development as the country continues to modernize and expand its economy.

Several banks in a variety of categories make up the sector. Banks are divided into two types: scheduled banks and non-scheduled banks (Saha et al., 2020). Bangladesh Bank, which has the authority to act under the Bank Company Act of 1991 and the Bangladesh Bank Order of 1972, fully controls and supervises all 61 scheduled banks in Bangladesh (Rashid et al., 2020). The categories of scheduled banks are as follows. The Bangladeshi government wholly or primarily owns six state-owned commercial banks. The Bangladeshi government also owns all or a majority of three specialized banks that were founded with specific goals in mind, like the development of the agricultural or industrial sectors (Ullah, 2013). There are 43 private commercial banks, most of which are controlled by private people or companies. In Bangladesh, there are now five non-scheduled banks, including Ansar VDP Unnayan Bank, Palli Sanchay Bank, Karmashangosthan Bank, Jubilee Bank, and Grameen Bank (Bangladesh Bank, n.d). There were 17 prevalent commercial banks at the time of independence (1971), two of which were controlled by Bangladeshi entities and three of which were run by non-Western Pakistani foreigners. The former State Bank of Pakistan also had two branch locations. There were 14 smaller commercial banks in existence. The highest concentration of financial services tended to be in urban regions. The newly independent government immediately designated the Dhaka branch of the State Bank of Pakistan as the nation's central bank and renamed it Bangladesh Bank. In addition to administering credit and currency, the bank was responsible for handling exchange control, the government foreign exchange reserves, and monetary policy. The Bangladeshi government originally nationalized the domestic banking sector, after which it reorganized and renamed numerous organizations. Foreign-owned banks were allowed to continue operating in Bangladesh (Siddikee et al., 2013).

Over the past 15 years, the introduction of digital technology has drastically changed Bangladesh's banking industry, bringing millions of people under the umbrella of banking services and reaching even the village level. Since clients can now complete transactions from the convenience of their homes, the transformation has made it simpler for individuals to obtain these services (Hasan, 2022). The advent of the mobile phone has opened new possibilities for financial transactions. This system is referred to as the mobile banking system. The use of cell phones in various banking transactions is ensured by the mobile banking system. This is important to comprehend the state of Bangladesh's mobile banking system today. Readers of this may gain an understanding of Bangladesh's mobile banking system and its potential, particularly for the country's rural population (SASEC Village, n.d.). Mobile banking is one of the most well-known financial service delivery technologies in many western countries and has recently begun to gain popularity in underdeveloped nations like Bangladesh as well. The first bank in Bangladesh to offer mobile banking services to help underprivileged people in distant areas access smart banking services is Dutch-Bangla Bank Limited. To connect the underprivileged segment of society with the contemporary financial system, Bangladesh Bank has already given permission to 25 banks to launch mobile banking. These 25 banks' top mobile banking service providers include BKash, Rocket (DBBL), Mcash (IBBL), and Ucash (UCB) (Mehdi, 2016).

Literature Review

Banks have implemented a range of programs and services, like mobile banking, to improve their customers' banking experience. However, researchers highlight that much of the populace is apprehensive about new technology; therefore, the reaction has been divided. According to market research, there is a lack of knowledge and understanding of the technology's potential. As a consequence, many people are unaware of the ease, compatibility, and diversification of mobile

banking. This may explain why the majority of customers are either neutral or negative about new technologies.

The customer's willingness to accept new technologies is influenced by trust (Kabir, 2013; Laforet & Li, 2005). Potential customers are hesitant to adopt mobile banking because of trustworthiness; for instance, mobile banking adoption in a developing country is affected by perceived trustworthiness (Priya et al., 2018). Thus, trust is one of the most important impediments to the adoption and success of mobile banking services (Burucuoglu & Erdogan, 2016). Additionally, perceived utility is highlighted as a factor influencing the desire to adopt mobile banking (Islam & Hossain, 2014). Furthermore, perceived ease of use is a major factor in consumer satisfaction and willingness to adopt mobile banking services (Alalwan et al., 2016). Consumers are also willing to embrace mobile banking that prioritizes privacy and security (Malaquias & Hwang, 2016). In the context of mobile banking, perceived risk relates to the danger of data loss, insufficient access, and other security concerns that the customer must accept before utilizing mobile banking (Makongoro, 2014).

Trust, security, and personal innovation are contributing factors in the adoption of mobile banking in Bangladesh (Islam et al., 2017). Moreover, the traditional technology acceptance model components perceived quality and perceived ease of use have an influence in persuading customers to adopt mobile banking services (Zhang et al., 2018). Furthermore, consumers' worries about technical security, as well as reliability and privacy, have a substantial influence on whether mobile banking is adopted. An individual's degree of trust is related to their perceived ease of use and risk, but the amount of risk connected to a certain approach is related to security and privacy (Makongoro, 2014). Additionally, since threat is seen as a barrier to security and trust, a rise in perceived threat is often linked to a drop in trust (Malaquias & Hwang, 2016).

Perceived cost and perceived benefits are the important elements affecting customers' views toward the adoption of mobile banking, while awareness and compatibility have minimal impact (Elhajjar & Ouaida, 2019). Operational concerns, such as security, system design, implementation, and maintenance; client misuse of products and services; legal difficulties, such as the possibility that money laundering may be influenced without the proper legal issues; reputational issues; credit issues; and liquidity risks were all significant roadblocks in the development of mobile banking (Islam, 2013).

Security, self-efficacy, perceived ease of use, and perceived cost all have an impact on customers' willingness to adopt mobile banking (Singh, 2018). Lowering switching costs and developing more inventive acts to create consumer trust and service quality are also shown to have an effect on the adoption of mobile banking services (Hossain & Hossain, 2015). Various academic theories have evolved to find the elements that impacted adoption and explore how potential consumers evaluate an invention (Zhou, 2012).

The concept of a technology acceptance model has sparked a lot of academic interest. Davis et al. (1992) developed the technology acceptance model, which is the most widely utilized technology adoption theory because it examines the elements that influence people's trial and use of new technology. According to the paradigm, people go through a four-step process that begins with belief and ends with behavior. The model considers the perceived utility of a system, which might impact whether potential consumers are eager to embrace a technology. However, as Burucuoglu

and Erdogan (2016) reported, one of the technology acceptance models' major weaknesses is that it overlooks demographic and economic differences, which might impact a user's readiness to embrace new technologies. Additionally, these ways of deciding which technology to use do not consider the restrictions and limitations that some consumers face. The research mentioned above has made a major contribution to the body of knowledge about the variables that influence mobile banking adoption in Bangladesh. However, a set of factors affecting mobile banking adoption in Bangladesh may be insignificant in other countries. Findings might not be generalizable to other countries because of differences in culture, population, economy, and laws.

Theoretical Framework

Davis (1989) established the technology acceptance model, the most frequently utilized acceptance theory in information systems research and other domains. The technology acceptance model seeks to forecast consumers' intentions of using technology based on their perceptions of ease of use and potential usefulness. The technology acceptance model has been used to explain the adoption of various sophisticated mobile services in previous research examining individual acceptance of mobile services (Bouwman et al., 2012; Ha et al., 2007; Hong et al., 2006; López-Nicolás et al., 2008; Lu et al., 2005; Luarn et al., 2005; Mao et al., 2005; Nysveen et al., 2005; Pedersen, 2005; Wang et al., 2006; Wu, 2005). The theory of reasoned action (TRA) was developed by Fishbein & Ajzen (1975). The theory states that an individual uses their knowledge judiciously while applying it. In this theory, belief, attitudes, behavioral intentions, and behavior are determinant variables in explaining the link between attitude and behavior. The theory of planned behavior (TPB) proposed by Ajzen (1991) assumes that the predictor parameters in TRA are insufficient to uncover the relationships between actions and behavior, and those additional variables, such as behavioral intention and subjective norm, should be included in TRA to better explain the interactions between these two variables. The potential customer's beliefs, attitudes, and behavioral intentions lead to planned actions that affect decision-making. The adoption of mobile banking is related to consumers' intentions to use technology based on their perceptions of ease of use and potential usefulness, risk, ease of access, cost, and comparative advantage.

Figure 1: Theoretical Framework for Factors Affecting Adoption of Mobile Banking
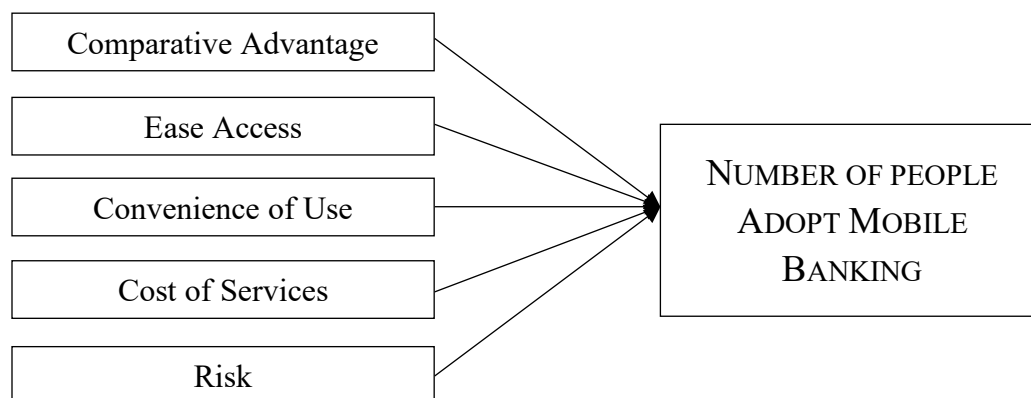
Methods

The present study is exploratory research; the data for the present study is collected from primary sources. A convenient sampling method is used to select the respondents. Primary data are

collected through a self-administered structured questionnaire. The questionnaire contains 20 questions regarding comparative advantages, ease of access, the convenience of use, cost, and risk. The sample for this study covers the Pabna district of Bangladesh. Approximately 700 respondents are interviewed in person to complete the questionnaire, from which fitted questionnaires are selected for analysis. The analysis is done with SPSS software, which is used to examine the data and assess how the answers to all the questionnaires on the five-point Likert scale related to behavior.

Sampling Design

The research is conducted using a quantitative and inductive approach. It consists of respondents from the Pabna district in Bangladesh. The factors influencing mobile banking adoption in Bangladesh are addressed using exploratory factor analysis. To identify the determinants influencing mobile banking adoption, each respondent is asked questions about the comparative advantages of ease of access, simplicity of use, cost, and risk in mobile banking. A convenient sampling technique is used to draw the sample to simplify the study and ensure it is conducted within a set time frame and budget. In addition, the researcher uses their judgment to select samples from the population.

Justification of Region Selection

Bangladesh is a developing country globally known as the *emerging tiger of Asia*. The country consists of 64 districts, one of which is the Pabna district. It is located in the northwest region of the country. The Pabna district has a total population of 2,260,540 (The World Bank, n. d), of which 1,156,809 are males and 1,103,731 are females. The literacy rate for males is 71.8%, and for females is 65.7%. The occupation of the inhabitants is mostly agriculture. Thus, the selection of this area represents the total country. Because the Pabna University Science and Technology is situated in this location, and due to the COVID-19 pandemic, it was not possible to include other areas in the present study; therefore, we must select this region.

Target Population

The current research is limited to the Pabna district. The study focuses on the inhabitants of the Pabna district; the target population is the entire population of this district, which fits the study's objectives.

Sampling and Sample Size

Kothari (2004) suggested the following formula for a finite population (population of the district) in his book Research Methodology: Methods and Techniques:

$$n = \frac{z^2.p.q.N}{e^2(N-1)+z^2.p.q},$$

Where:
- N = the size of the population (2,260,540, the total population in the Pabna district);
- p = population proportion (0.5);

- $q = 1 - p = 1 - 0.5 = 0.5$;
- $e = .05$ (the estimate within 5% of the true value); and
- $z = 1.96$ (the area under the normal curve using a 5% level of significance).

Using the formula at a 5% level of significance, the expected sample size is as follows:

$$n = \frac{z^2 . p . q . N}{e^2(N-1) + z^2 . p . q}$$

$$n = \frac{(1.96)^2 \times (0.5) \times (0.5)(2260540)}{(0.05)^2(2260540) + (1.96)^2 \times (0.5) \times (0.5)}$$

$$n = \frac{2171022.616}{5652.3104}$$

$$n = 384.0947$$

After determining that the minimum number of respondents is 384, the authors have collected the primary data from 700 respondents from January 2021 to June 2021 using a structured questionnaire to reach the study's objectives. By contrast, Kabir (2013) has chosen 385, and Elhajjar and Ouaida (2019) have chosen 380 respondents for their studies. Thus, the selected sample is sufficient to represent the population.

Questionnaire Design

The survey questionnaire is developed based on the literature review and the goals of the study. The survey is divided into two sections: the first collects demographic information from respondents, and the second rate the relative importance of 20 variables that respondents consider to be essential attributes within five factors and have a significant impact on their decision to use mobile banking. On a Likert scale with five points, one means *Strongly Disagree*, and five means *Strongly Agree*.

Data Collection

After completing the arduous sampling design, sample selection, and questionnaire development, researchers collect data. Pilot studies of 50 questionnaires are initially conducted to judge the consistency of the responses. The result is satisfying, so researchers start final data collection. The respondents are chosen randomly while visiting different areas throughout the Pabna district. The respondents differ in age, level of education, occupation, and income level. The researcher collects the responses from users and non-users of mobile banking through a structured questionnaire survey. The questionnaires are distributed to respondents, the researchers communicate with participants about the questions, and participants subsequently fill out questionnaires and return them.

Results, Discussion, and Findings

Respondents' Demographics

The following section discusses respondent demographic features. The participants' demographic profile (as shown in Table 1) indicates that 82.1% of respondents are male, and just 17.9% are female. This indicates that the majority of respondents are male. Of the respondents 6.3% of respondents are below 20 years, 40.2% between 21 to 30 years, 30.5% between 31 to 40 years, 13.5 % between 41 to 50 years, and 9.5% above 50 years. This reflects that the highest percentage of respondents' age lies between 21 to 30 years.

Table 1: Demographic Response of the Participants

Characteristic	Category	Frequency	Percent	Characteristics	Category	Frequency	Percent
Gender	Male	517	82.1	**Bank Account**	No	339	53.8
	Female	113	17.9		Yes	291	46.2
	Total	**630**	**100.0**		**Total**	**630**	**100.0**
Education Status	PSC	82	13.0	**Desire for Banking Services**	No	72	11.4
	SSC	146	23.2		Yes	558	88.6
	HSC	208	33.0		**Total**	**630**	**100.0**
	Bachelor	151	24.0	**Desire for Mobile Banking**	Strongly Uninterested	49	7.8
	Master	43	6.8		Uninterested	5	0.8
	Total	**630**	**100.0**		Neutral	4	0.6
Job Status	Student	135	21.4		Interested	253	40.2
	Farmer	23	3.7		Strongly Interested	319	50.6
	Business	220	34.9		**Total**	**630**	**100.0**
	Service Holder	172	27.3	**Use Cell Phone**	Yes	627	99.5
	Others	80	12.7		No	3	0.5
	Total	**630**	**100.0**		**Total**	**630**	**100.0**
Income	Below Tk. 30000 ($375)	459	72.9	**Telecom**	GP	438	69.5
	Tk. 30001–50000 ($376-625)	132	21.0		Robi	109	17.3
	Tk. 50001–70000 ($626-875)	24	3.8.0		Banglalink	51	8.1
	Above Tk. 70000 ($875)	15	2.3		Airtel	23	3.7
	Total	**630**	**100.0**		Others	9	1.4
Age	Below 20 Years	40	6.3		**Total**	**630**	**100.0**
	21–30 Years	253	40.2	**Mobile Banker**	Bkash	361	57.3
	31–40 Years	192	30.5		Rocket	114	18.0
	41–50 Years	85	13.5		Nagad	96	15.2
	Above 50 Years	60	9.5		Ukash	2	0.3
					Others	58	9.2
	Total	**630**	**100.0**		**Total**	**630**	**100.0**

The report reveals interesting findings: the majority of respondents are educated, with 13% having completed basic school, 23.2% having completed secondary school, 33% having completed higher secondary school, 24% having achieved a bachelor's degree, and 6.8 % having completed a master's degree. The educational qualification findings highlight that the majority of respondents have higher secondary schooling. Of the respondents, 21.4% are students. 3.7% farmers, 34.9% businessmen, 27.3% employees, and 12.7% others. The highest percentages of respondents are businessmen. Of the respondents 72.9% of respondents have an income of less than taka 30,000, while 21% have an income of taka 30,001–50,000. 3.8% of respondents have an income of between taka 50,001–70,000, and 2.3% have higher than taka 70,000.

Among the respondents, 46.2% have a formal bank account, and 53.8% have no formal bank account. Table 1 illustrates that 99.5% of respondents have their own mobile phone, and only 0.5% do not possess a mobile phone. This indicates that most of the respondents use a mobile phone. Among the respondents, 69.5% use Grameen phone, 17.3% Robi, 8.1% Banglalink, 3.7% Airtel,

and 1.4% other operators. Of the respondents, 90.8% of respondents wish to have banking services, while 9.2% of respondents do not want mobile banking services. Of these respondents, 57.3% use Bkash, 18% Rocket, 15.2% Nagad, 0.3% Ukash, and 9.2% others.

From the above respondent demographics, it is clear that respondents are of low income, are educated, and desire mobile banking services but do not currently use it. Importantly, in spite of having a desire to utilize mobile banking in Bangladesh, what are the factors preventing its use?

Factor Analysis

Measure of Sampling Adequacy (MSA) Test

The Kaiser-Meyer-Olkin test of sampling adequacy is used to determine the data's suitability for factor analysis. The KMO value is .801, indicating that there is adequate connection between the variables. The Kaiser-Meyer-Olkin and Bartlett's test of sphericity adequacy tests indicate that the sample size is enough for factor analysis. Table 2 summarizes both tests.

Table 2: Sampling Adequacy KMO and Bartlett's Test

KMO and Bartlett's Test		Results
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	2461.206
	df	190
	Sig.	.000

Reliability Analysis

Cronbach's alpha is used to determine the data's trustworthiness. The study's Cronbach's alpha for 20 items is .83, which is higher than the acceptable .70. This is adequate for the research since the data is trustworthy.

Table 3: Reliability Statistics

Scale	Cronbach's Alpha
Total	.830
Risk	.850
Convenience of use	.821
Ease of access	.811
Cost	.804
Comparative advantage	.794

Results of Factor Analysis

The variable's contribution to the development of the pertinent factor is expressed by the factor loadings. Therefore, factor loadings must be checked (Sürücü et al., 2022). The interpretation of the number of factors to be retained is unaffected by the signs of the factor loadings, which show the direction of the association (Kline, 1994). Nonetheless, the values of the factor loadings play a crucial role in choosing how many factors to keep. In this regard, some experts believe that the loading should be at least .60, while others believe that it should be at least .50 (Costello & Osborne, 2005; Guadagnoli & Velicer 1988; Preacher & MacCallum, 2002). Given that the factor accounting for around 50% of that item's variation may be used to describe this circumstance. In the present study, each construct contains four items.

Varimax rotation is used in conjunction with factor analysis, a reduction method, to investigate how the chosen measurements are loaded onto anticipated structures. For the analysis, the 20 variables are loaded with eigenvalues greater than 1. In multivariate data, the eigenvalues indicate a division of the entire variation. When performing a principal component analysis on a correlation matrix, the sum is the number of variables. 2.255, 1.332, 1.159, 1.122, and 1.1105 are the eigenvalues for the five factors. The factor analysis explains 78.737% of the total cumulative variance. This implies that the five extracted factors combined account for more than 78% of the variation in the variables. They are, accordingly, factor 1 (risk), factor 2 (convenience of usage), factor 3 (ease of access), factor 4 (cost), and factor 5 (comparative advantage). As a result, these are the variables that impact the adoption of mobile banking. In other words, risk, simplicity of use, accessibility, cost, and comparative advantage are the factors to consider.

Table 4: Rotated Component Matrix

Factor	Item	Component				
		1	2	3	4	5
Risk	Q-18	.898				
	Q-17	.896				
	Q-20	.593				
	Q-19	.570				
Convenience of use	Q-9		.835			
	Q-10		.809			
	Q-11		.570			
	Q-12		.551			
Ease of access	Q-7			.839		
	Q-6			.735		
	Q-9			.580		
	Q-8			.565		
Cost	Q-13				.860	
	Q-14				.744	
	Q-15				.562	
	Q-16				.526	
Comparative advantage	Q-2					.655
	Q-4					.640
	Q-1					.530
	Q-3					.501
Eigenvalue		2.255	1.332	1.159	1.122	1.105
Variance Explained (%)		21.360	17.711	17.434	16.848	5.384
Total Variance Explained (%)				78.737		
Cronbach's Alpha				.830		
KMO				.801		

Note. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
    a. Rotation converged in six iterations.

Risks of using mobile banking include procedure safety, mobile network security, and loss of money due to mistakes, hacking, and fraud. These are the factors that may lead to financial loss for the user. The convenience of use implies that mobile banking is easy to learn, operational steps are easy to remember, mobile banking apps provide all financial services required by customers, and interactions with mobile banking do not require much mental effort. Ease of access means that mobile banking allows constant access to banking facilities, provides easy-to-open accounts, does not require long-distance travel, and makes agent points and ATM facilities available. The cost of mobile banking covers the cost of access to mobile banking services, the cost of transferring funds, and the cost of cash out and account maintenance fees. The adoption of mobile banking would allow one to do banking transactions more effectively; conduct banking transactions faster, and handle finances. When a person wishes to use mobile banking, they consider the above-mentioned factors. When mobile users feel mobile banking has comparative advantages, is easily available, convenient to use, and has low risk and cost of service, then they adopt the service. Results of the

above table indicate that risk is the most important factor, more so than the convenience of use, ease of access, cost of mobile banking, and relative advantage. Similar studies were conducted by Elhajjar and Ouaida (2019); Giovanis et al. (2019); Koksal (2016); Mohammadi (2015); Priya et al. (2018); Riquelme & Rios (2010); Singh and Srivastava (2017); Tobbin (2012); Zhang et al. (2018); and Zhou (2011). They found that perceived risk, simplicity of use, accessibility, cost, and relative benefits are important factors that affect the choice to adopt mobile banking, which is supported by the present findings.

Conclusion and Recommendations

The findings show that five broad factors influence the adoption of mobile banking in Bangladesh: Risk, simplicity of use, accessibility, cost, and comparative advantage. Risk is the most important factor in deciding whether to use mobile banking in Bangladesh. Risk is a major deterrent to mobile banking adoption in Bangladesh, which, like other research (Claudy et al., 2013; Hanafizadeh et al., 2014; Kabir, 2013), is justified since the higher the risk involved with adopting mobile banking, the lower the adoption rate. This confirms the findings of previous research that mobile banking is possibly riskier than conventional banking, which is one of the reasons why some people refuse to; use it because of the long-distance relation (Hanafizadeh et al., 2014). Mobile banking adoption would enable one to make banking transactions more efficiently and quicker; it would be a rapid method to complete financial transactions and would be convenient for managing money. In Bangladesh, Kabir (2013) highlighted convenience and comparative benefits as factors that influence mobile users' behavioral intention to participate in mobile banking. Mobile banking enables 24-hour banking, it is simple to create an account, it does not require long-distance travel to get services, and there are agent locations and ATMs nearby. According to Schierz et al. (2010) and Singh and Srivastava (2018), the ease of use had a significant impact on customer views, which supports our findings. The cost of mobile banking includes the cost of accessing the service, transferring funds, cash out, and account maintenance. People are less likely to utilize mobile banking when the cost rises. The results of Islam et al. (2018) confirm our findings. The regulatory body and the bank should place a strong focus on the above-mentioned elements to reach the target market and achieve the goals. Based on these factors, findings should assist managers and the central bank in developing a new framework and more specific strategies to promote mobile banking services to accomplish the objective of financial inclusion. The research also helps with the knowledge and correlation of users' perceptions and, therefore, the technical aspect of the system (i.e., anticipating mobile banking users' behavior). The research may help the sector and small- and medium-sized businesses reconsider their strategies for facilitating the spread of mobile banking in new regions. The findings also impact stakeholders, who might then act on the loopholes to improve the efficiency and effectiveness of mobile banking in rural regions.

Recommendations

Based on the above findings, the following recommendations are presented:
- If the regulatory body (central bank) aims to include mass people in financial services through financial inclusion by introducing mobile banking, it should address factors like risk, ease to use, cost of the service, and comparative advantage.
- The prominent factor is the risk of losing money and information while using mobile financial services. This risk should be reduced. The risk of losing money and information can be reduced by providing punishment for fraudulent actions.

- The cost of the mobile service is high, especially (cash out) in Bangladesh. The cost of the services should be reduced. The cost of mobile banking can be reduced by applying lesser charges for cash out and money transfers from one account to another account.
- The security of financial transactions should be enhanced. When a customer uses mobile banking, they use the mobile network, internet, and bank network; problems with any network may lead to a financial loss for the user. Financial security can be enhanced by regular updates of the mobile network, internet, and bank network security.

Policy Implications

Policy makers are in a position to spread the use of financial services; while they write policy, they should be aware that the risk of losing information, money, cost of services, convenience of use, and better services at low costs are important barriers to quickly spreading mobile banking.

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