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Factors Influencing Adoption of Mobile Banking Services in Bangladesh in Post-COVID-19 Context

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Abstract

Purpose: This study presents a brief scenario of the current state of mobile banking services adoption in Bangladesh by identifying the factors that affect customers' adoption of mobile banking services in the post-COVID-19 pandemic context.

Design/Methodology/Approach: This study applied a mixed-method approach, where a quantitative survey followed a qualitative study to develop the conceptual framework. Using a convenience sampling method, a structured questionnaire was used to collect data from 250 respondents regarding mobile banking services adoption in Rangpur, Bangladesh. Multiple regressions were used to test the hypothesized relationships.

Findings: Findings revealed that perceived usefulness, perceived trust, social distancing, and social influence significantly influence mobile banking services adoption in the COVID-19 context.

Implications: The government is planning to spread government's disbursement of numerous social security aids, grants, and allowances through mobile banking to transact all sorts of money to build up a smart Bangladesh by 2040. Hence, this study has implications for the government and mobile banking service providers.

Originality/Value: The researcher extends theoretical reasoning from TAM and UTAUT by adding social distancing from the COVID-19 perspective in the Bangladesh context for the first time.

Keywords: Mobile banking, TAM, UTAUT, perceived ease of use, perceived usefulness, perceived trust, social distancing, social influence, Bangladesh.

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Introduction

In recent years, technological improvement has induced the mass penetration of mobile phones across the globe. Due to the speedy increase in mobile phone use, many businesses have been compelled to introduce mobile-enabled business transactions. Mobile banking is such an innovation in the banking industry in Bangladesh. Mobile banking is a process that permits customers to access their bank or mobile accounts and related products and services via mobile devices (Khatun et al., 2021). Mobile banking offers customers a suitable means to meet their banking needs by giving them access to comprehensive and timely information at their convenience (Baptista & Oliveira, 2015). New technologies create new markets and opportunities for the banking service providers, thus managing and satisfying the customers in this new banking environment has become a key issue for the players in the industry (Jayawardhena & Foley, 2000).

In Bangladesh, coronavirus disease (COVID-19) was confirmed for the first time on March 8, 2020, and the government started taking lockdown measures on March 26, 2020 (Alam & Khatun, 2021). This shutdown affected the financial service sector the most as the banks and non-banking financial institutions had to operate through limited branches and short hours to prevent the spread of COVID-19. Besides, Bangladesh Bank orders all the banks to encourage customers to use banking instruments like cheques, mobile banking, internet banking, etc., instead of cash transactions to tackle the spread of the virus ("Coronavirus: BB orders", 2020). Despite the new challenges created by COVID-19, people increasingly depend on digital solutions for their everyday needs and mobile banking witnessed tremendous growth during COVID-19 (Hasan, 2021). Therefore, the pandemic resulted in a quick increase in mobile banking transactions.

The number of mobile banking services such as bKash, Nagad, Rocket, MCash, SureCash etc. accounts surpassed the 19.80 crore mark in the country in March 2023. The total number of mobile banking services users increased more than 100% to 19.80 crore in March 2023 from 8.25 crore in March 2020. With the technological advancement and rapid penetration of low-budget mobile phones, the utility of digital payments, cash in and cash out, and send money among mobile banking users increased manifold in the COVID-19 pandemic. Currently, 13 commercial banks and financial institutions are operating these services, and already 198.09 million mobile banking accounts have been operated, creating employment of more than 1.59 million agents across the country. Average daily transaction through mobile banking services has increased by more than Tk. 3498.94 crore in March 2023 from Tk. 1283.39 crore in March 2020 (Bangladesh Bank, 2023).

With the government's drive to digital Bangladesh, cashless or contactless mobile banking services have been gaining popularity sharply. The convenience of transferring money from city to village areas across the country through millions of agents also triggers this radical change. Besides, people have become more affluent with mobile banking services than physical and cash-based banking transactions since the beginning of the COVID-19 pandemic. Although several studies have already been conducted by many scholars on mobile banking acceptance and usage behaviors (Inam & Islam, 2013; Kabir, 2013; Siddik et al., 2014; Sohel et al, 2012), there exist very few studies on mobile banking services in the COVID-19 pandemic context. In addition to the government's disbursement of numerous social security aids, grants, and allowances through mobile banking services, many garments, factories, and

business houses are now paying their workers' wages, salaries, and bonuses through mobile banking services. This surge in mobile banking services adoption attracts the researcher to conduct the study by focusing on the COVID-19 pandemic scenario.

Research Objectives

The objectives of the study are the following:

- To present a brief scenario of the current state of mobile banking services adoption in Bangladesh.
- To identify the factors influencing customers' adoption of mobile banking services in post COVID-19 pandemic context.
- To suggest some policy implications to mobile banking service providers.

Literature Review

Developed by Fishbein & Ajzen (1975), the theory of reasoned action (TRA) is popularly used in different contexts as a cognitive theory to understand human behavior. According to the TRA, attitudes and subjective norms can successfully predict an individual's intention, which in turn can predict an individual's actual behavior. Ajzen (1991) further extended the TRA and offered the theory of planned behavior (TPB) to clarify an individual's intention to participate in certain behavior considering a particular time and place context. The TPB argues that behavioral intentions result from the functioning of an individual's attitude toward specific behavior, subjective norms, and perceived behavioral control. Behavioral intentions then cause actual behavior. Davis (1989) conceptualized the technology acceptance model (TAM) that has been used as a pioneering theory of technology acceptance. The TAM postulates that perceived ease of use and perceived usefulness drive an individual's new technology use intention. Rogers (1995) established the innovation diffusion theory (IDT) to explain the adoption and diffusion of new technology among users. According to the IDT, adoption refers to the regular and continuous use of innovation. Rogers (1995) states that new technology diffusion occurs as a result of four components, namely innovation, communication channels, time, and social system. The UTAUT model (Venkatesh et al., 2003) is a theoretical model that posits behavioral intentions that can drive the actual use of technology. According to the UTAUT, the apparent probability of embracing any technology is determined by the direct interplay of performance expectancy, effort expectancy, social influence, and facilitating conditions. All these theories act as the foundation of explaining customer adoption of mobile banking services.

Theoretical Background

Name of the Theory	Researcher(s)	Considered Variables
Theory of reasoned action (TRA)	Fishbein & Ajzen (1975)	Attitude, subjective norms, intention, and behavior
Technology acceptance model (TAM)	Davis (1989)	Perceived ease of use, perceived usefulness, attitudes, and actual behaviors

Theory of planned behavior (TPB)	Ajzen (1991)	Attitude, subjective norms, Perceived behavioral control, intention, behavior
Innovation diffusion theory (IDT)	Rogers (1995)	Innovation, adopters, communication channels, time, and a social system
The unified theory of acceptance and use of technology (UTAUT)	Venkatesh et al. (2003)	Performance expectancy, effort expectancy, social influence, facilitating conditions, intention, behavior

Theory Extension and Hypothesis Development

The researcher reviewed the abovementioned theories and models commonly used to explain ICT adoption in different contexts. Besides those established theories, existing literature also revealed many factors that can affect mobile banking services adoption. These factors include perceived ease of use, perceived usefulness, perceived risk, perceived safety, perceived security, trust, convenience, relative advantages, cost factors, facilitating conditions, social distancing, etc. Moreover, the researcher conducted in-depth interviews with knowledgeable university teachers having expertise in ICT adoption, bankers, and mobile banking customers and agents to finalize the variables. Hence, by considering the qualitative findings and available theories and models related to mobile banking services adoption, the researcher extends theoretical reasoning from TAM and UTAUT by adding social distancing from the COVID-19 perspective in the Bangladesh context.

Adoption of Mobile Banking Services (MBSA): Mobile banking (or "m-banking") is a service that enables users to execute financial transactions using their mobile or smartphones (Khatun et al., 2021). Customers can access mobile banking services by downloading and installing applications or using already-available services like USSD (Unstructured Supplementary Service Data) (Fadila et al., 2022). The adoption process involves complex stages through which individuals pass from first learning about a product to its continued usage (Davis, 1989). Mobile banking services are adopted when customers accept the service and use it regularly (Hu et al., 2019). In Bangladesh, mobile banking services were offered successfully from March 2011 (Siddik et al., 2014). The present government's initiative to accelerate financial inclusions through mobile banking services also triggers its rapid adoption. However, the COVID-19 pandemic gives new shapes to mobile banking services usage in Bangladesh. During the pandemic time, mobile banking services transactions increased by at least three times (Bangladesh Bank, 2023; Hasan, 2021).

Perceived ease of use (PEOU): Davis (1989) refers to perceived ease of use as the degree to which the prospective customer expects the future system to be free of effort. Customers usually prefer clear, understandable, and easy-to-use mobile banking services (Malaquias & Silva, 2020). Perceived ease of use is believed to be an essential variable that can positively influence individuals' technology usage intention (Davis et al., 1989; Venkatesh et al., 2003). Mobile banking services are easy to understand, speedy, and convenient, which also helps to perform, check, and make inquiries about any financial transactions by staying at home. The

findings of the qualitative study also confirm that the convenience and ease of use of mobile phone is the main support for the use of technology-dependent mobile banking services in Bangladesh. Therefore, the researcher proposes the following hypothesis-

H1: Perceived ease of use significantly affects customers' adoption of mobile banking services.

Perceived usefulness (PU): Venkatesh & Davis (2000) define perceived usefulness as the customers' belief that using innovation will enhance their execution of everyday jobs. Customers assess mobile banking services based on their perceptions of convenience, time, and location (Malaquias & Silva, 2020). Both the TAM and UTAUT model argue that new technology adoption depends largely on their perceived usefulness. The speed, privacy, confidentiality, cost, and time-saving features, infrastructural support from the banks, and 24x7 hours service protocol, etc. express the usefulness of mobile banking services in our country. Experts (Agwu & Carter, 2024; Noor, 2011; Uppal, 2010) argue that the increased usefulness of mobile banking services with multi-faceted operations attracts more customers to use this service. Hence, the researcher planned the following hypothesis-

H2: Perceived usefulness significantly affects customers' adoption of mobile banking services.

Perceived Trust (PT): Mayer, Davis & Schoorman (1995) infers that trust is certainly associated with hazards related to the satisfactory behavior of web-based innovation. It is related to users' overall observation of an innovation's value and can stimulate behaviors and the development of enduring relationships (Al Amin et al., 2022; Hu et al., 2019). Extensive research has demonstrated the significant role trust plays in shaping customers' attitudes and behaviors toward mobile banking services, as noted by Luo et al. (2010) and Suh & Han (2002). Although there are security risks, performance risks, financial risks, customer misuse risks, etc., the reliability, efficiency, and transparency of mobile banking services make it a trustworthy innovation in Bangladesh. The trend of using mobile banking will increase once service providers can establish trust. Thus, the researcher formulated the below hypothesis:

H3: Perceived trust significantly affects customers' adoption of mobile banking services.

Social Distancing (SD): Social distancing refers to physically separating people from one another, living alone both physically and emotionally, or maintaining a complete or nearly complete lack of communication out of necessity (Alam et al., 2021; Raza et al., 2021). During the pandemic, cashless transactions through mobile banking services enable customers to maintain social distancing to prevent the spread of coronavirus (Al Amin et al., 2022). Mobile banking services providing institutions have long offered various solutions that enable individuals to conduct transactions, transfer funds, deposit checks, and even establish new accounts without the need for direct face-to-face interactions during the pandemic time (Khatun et al., 2021). These options can significantly reduce or eliminate person-to-person contact while still providing clients with the necessary services they require. In the COVID-19 context, maintaining social distancing in financial transactions becomes imperative, and mobile banking acts as a game changer in ensuring that. Thus, the researcher posited the following hypothesis:

H4: Social distancing significantly affects customers' adoption of mobile banking services.

Social Influence (SI): When using new technology, especially in the social media age, customers are mostly influenced by the opinions of the people around them (Ameen et al., 2020). Customers may be persuaded to adopt mobile banking services by the favorable recommendations of friends, family members, and coworkers (Grover & Kar, 2020). Society plays a significant role in guiding people. From birth, individuals naturally seek social interaction with others. Rogers (2003) proposed that social influences greatly impact behavior. When individuals who use mobile banking are positively influenced by their social circles, they are more inclined to have a strong intention to adopt mobile banking services. That means there is a positive association between social influence and mobile banking adoption by customers (Danyali, 2018; Makanyeza, 2017). But in many instances, it was found that users prefer doing their monetary planning alone, without consulting anybody else (Sing and Srivastava, 2018). Similar negative findings related to the association of social influence and mobile banking service adoption were also reported by Raza et al. (2019), Merhi et al. (2019), and Baabdullah et al. (2019). By considering both the positive and negative impact, the researcher planned the following hypothesis:

H5: *Social Influence significantly affects customers' adoption of mobile banking services.*

Conceptual Framework

To acquire valuable knowledge for this study, the researcher examined numerous resources like electronic books, journals, newspapers, articles, and other electronic databases. Having thoroughly examined a variety of relevant literature pertaining to this study context, the researcher is now equipped to suggest a conceptual framework. In figure 1, a model is presented that shows how independent factors such as perceived ease of use, perceived usefulness, perceived trust, social distancing, and social influence relate to the adoption of mobile banking services in the post-COVID-19 pandemic. This model specifically explores customers' attitudes toward adopting mobile banking services in the post-COVID-19 pandemic in Rangpur, Bangladesh.
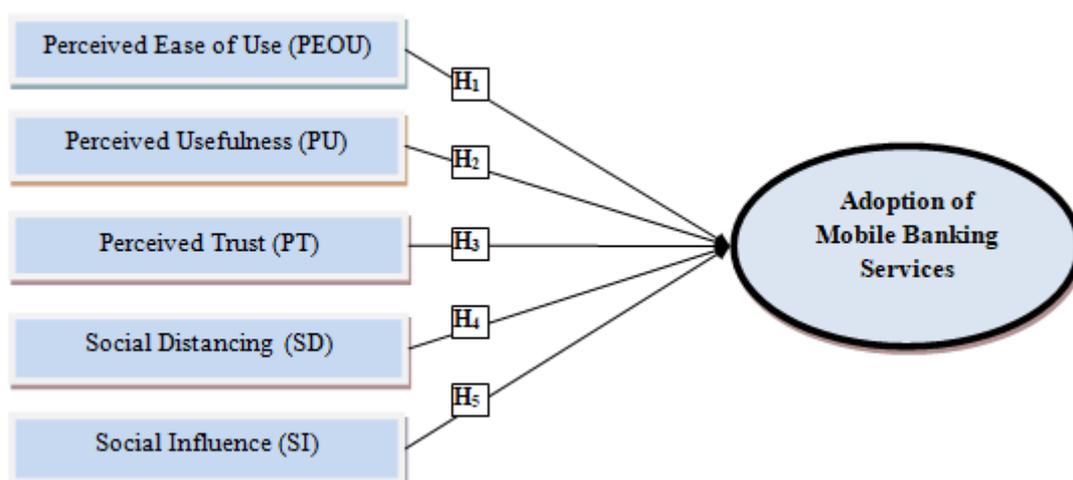

Figure-1: Proposed Framework for the Study (Source: Author's own compilation)

Methodology

The researcher applied a mixed-method approach where a quantitative survey followed a qualitative study to generate better results (Dana & Dumez, 2015). To finalize the variables, the author conducted face-to-face in-depth interviews with experienced university professors with experience in ICT adoption, bankers, and mobile banking customers and agents, in addition to researching the pertinent literature.

Table 1: Interviewees' classification

Respondent No	Gender	Age group	Education	Genre
UT1	Male	31-40	Post Graduation	University Teachers
UT2	Male	31-40	Post Graduation	
BNK1	Male	51-60	Post Graduation	Bankers
MBA1	Male	21-30	Graduation	Mobile Banking Agents
MBA2	Male	41-50	HSC	
MBC1	Male	21-30	Graduation	Mobile Banking Customers
MBC2	Male	31-40	HSC	
MBC3	Female	21-30	Graduation	

Source: The Author (2023)

The qualitative phase of the study consists of 8 in-depth interviews involving four types of interviewees (see table-1). As a standard parameter, 5-50 respondents are acceptable for qualitative research (Dworkin, 2012). However, after eight respondents, the researcher stopped interviewing as the interviews had reached saturation, and more respondents could not yield any new information regarding the variables. (Fusch and Ness, 2015; Vasileiou et al., 2018).

Besides, the researcher conducted a pilot survey of 30 respondents to check the research instruments (i.e., survey questions and structure) (In, 2017). The researcher then distributed the final questionnaire to collect data from 250 respondents using a convenience sampling method for low-cost and faster data collection (Rahi, 2017; Rakib, 2019; Tetteroo & Markopoulos, 2015). As a standard parameter, a reasonable sample size falls between 200 and 400 (Hair et al., 2014). A desired sample-to-variable ratio of 15:1 or 20:1 is suitable for establishing sample size (Hair et al., 2018; Memon et al., 2020). Based on the 20:1 ratio, this study may have a sample size of 100, considering its five independent variables. Hence, a sample size of 250 is sufficient for the present study. Data for this study were collected between November 2022 and January 2023.

All the items of the latent variables were adapted from the previous study and fitted for the current research accordingly. Items of perceived ease of use were adapted from Davis (1989) and Malaquias & Silva (2020); perceived usefulness from Venkatesh & Davis (2000) and Malaquias & Silva (2020); perceived trust from Al Amin et al. (2022) and Hu et al. (2019); social distancing from Alam et al. (2021) and Raza et al. (2021) and social influence from Ameen et al. (2020) and Grover & Kar (2020). The reliability of the collected data was tested by Cronbach's alpha value ranging from 0.52 to 0.81, indicating moderate (acceptable) reliability (Hinton et al., 2004). Finally, the researcher used multiple regression analysis to test the proposed hypotheses.

Data Analysis and Findings

Demographic Profile of the Respondent:

Table-2: Respondents' Demographic Profile

Demographics		Frequency (n)	Percentage (%)
Gender	Male	115	46.0
	Female	135	54.0
Age	Less than 21 years	16	6.4
	21-30 years	167	66.8
	31-40 years	34	13.6
	41-50 years	19	7.6
	51-60 years	14	5.6
Profession	Private Job	22	8.8
	Government Job	44	17.6
	Business	19	7.6
	Homemaker	21	8.4
	Student	144	57.6
Education	SSC Level	4	1.6
	HSC Level	39	15.6
	Graduation Level	100	40.0
	Post Graduation Level	75	30.0
	More	32	12.8
Monthly Income	Less than 10000 tk	119	47.6
	10001-20000 tk	57	22.8
	20001-30000 tk	27	10.8
	30001-40000 tk	23	9.2
	40001-50000 tk	12	4.8
	More than 50000 tk	12	4.8
Name of the MBS Provider	bKash	84	33.6
	Nagad	69	27.6
	Rocket	37	14.8
	MCash	24	9.6
	SureCash	19	7.6
	Upay	7	2.8
	Tap	10	4.0

Source: Field Survey

Table-2 displays the demographic summary of the respondents. The gender distribution of the respondents represents that in a total of 250 respondents, 115 were male, 46% of the total respondents, and 135 were female, 54 % of the total respondents. The age distribution of the respondents shows that 167 of them belong to the age group of 21-30 years, making up about 66.8% of the respondents, whereas 34 respondents belong to 31-40 years age group representing 13.6% of the total respondents. Among the respondents, 144 are students representing 57.6%, and 44 hold government jobs representing 17.6% of the entire mobile

banking users. Respondents educational level shows that of the total, 100 are graduates representing 40% of the respondents and 75 are postgraduates representing 30% of the MBS users. This high literacy rate of the MBS users may result from the field force collecting data from young users of the Rangpur city area. As most of this study's respondents are students, their monthly income statistics show that 119 users earn less than 10000 Tk, indicating 47.6% of the respondents, and 57 users earn less than 10001-20000 Tk, meaning 22.8% of the respondents in Rangpur city. However, among the mobile banking service providers, bKash ranked top in Rangpur, Bangladesh. Of the 250 MBS users, 84 are using bKash, 69 are using Nagad, and 37 are using Rocket, representing 33.6%, 27.6%, and 14.8% of the total MBS users in Rangpur city, Bangladesh.

Reliability Statistics:

Table-3: Reliability statistics of the items

Name of the Variable	No of Items	Cronbach's Alpha
Perceived ease of use (PEOU)	5	0.53
Perceived usefulness (PU)	4	0.61
Perceived Trust (PT)	5	0.52
Social Distancing (SD)	5	0.56
Social Influence (SI)	5	0.56
Adoption of Mobile Banking Services (MBSA)	5	0.81

The reliability of the gathered data was checked by Cronbach's alpha value. Cronbach's alpha coefficient assesses the internal consistency, or reliability, of each construct's survey items. High Cronbach's alpha levels imply that response values for each participant across the questions evaluating each dimension are consistent. Five items of PEOU were adapted from Davis (1989) and Malaquias & Silva (2020); four items of PU from Venkatesh & Davis (2000) and Malaquias & Silva (2020); five items of PT from Al Amin et al. (2022) and Hu et al. (2019); five items of SD from Alam et al. (2021) and Raza et al. (2021) and five items of SI were adapted from Ameen et al. (2020) and Grover & Kar (2020). However, Cronbach's alpha value found in table-3 ranging from 0.52 to 0.81, indicating moderate (acceptable) reliability (Ekolu & Quainoo, 2019; Hinton et al., 2004, Streiner, 2003) of the study constructs.

Relationships among the Influencing Factors with Adoption of Mobile Banking Services
According to the model summary presented in table-4, the value of R is 0.686, showing a high degree of correlation among the variables under consideration in this investigation. The R^2 value of 0.471 indicates that all independent factors i.e., perceived ease of use, perceived usefulness, perceived trust, social distancing, and social influence, may explain only 47.1% of the total variation in mobile banking services adoption in the post-COVID-19 pandemic context in Rangpur city, Bangladesh.

Table-4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686[a]	.471	.460	.56574
a. Predictors: (Constant), PU, SI, SD, PEOU, PT				

Source: Compiled by the Author

The regression model successfully predicts the dependent variable for this investigation, according to the ANOVA table-5. The regression model used by the researcher has statistical significance because its p value (0.000) is less than 0.05.

Table-5: ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.592	5	13.918	43.487	.000[b]
	Residual	78.094	244	.320		
	Total	147.687	249			
a. Dependent Variable: Adoption of mobile banking services (MBSA)						
b. Predictors: (Constant), PU, SI, SD, PEOU, PT						

Source: Compiled by the Author

The researcher applied the following mathematical model to evaluate the effect of five independent variables on the adoption of mobile banking services.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mathcal{E}_i$$

Where,

Y = Adoption of mobile banking services (MBSA)

B_0 = Constant (Y-intercept)

X_1 = Perceived ease of use (PEOU)

X_2 = Perceived usefulness (PU)

X_3 = Perceived trust (PT)

X_4 = Social distancing (SD)

X_5 = Social influence (SI)

$\mathcal{E}_i$ = Error term

$B_1 \ldots B_5$ = Regression coefficient of factor 1 to factor 5.

So, the estimated regression equation is,

$$Y = .679 + .124X_1 + .508X_2 + .203X_3 + .167X_4 - .149X_5$$

The researcher accepts hypotheses *H2, H3, H4,* and *H5* based on the coefficient table-6, where the significance level of these factors is less than 0.05, and rejects hypothesis *H1* as the significance level is more than 0.05. In the post-COVID-19 new reality, the factors perceived usefulness (0.000), perceived trust (0.003), social distancing (0.011), and social influence (0.003) have a significant influence on customers' adoption of mobile banking services. However, study findings indicate that the effect of social influence on mobile banking adoption is negative. That means mobile banking service adoption decreases with increased social

influence. However, in Rangpur, Bangladesh, users' uptake of mobile banking services is unaffected by the factor perceived ease of use (0.074).

Table-6: Results of Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Result
		B	Std. Error	Beta			
1	(Constant)	.679	.291		2.329	.021	
	PEOU	.124	.069	.100	1.797	.074	H1: Rejected
	PU	.508	.057	.491	8.857	.000	H2: Accepted
	PT	.203	.067	.172	3.010	.003	H3: Accepted
	SD	.167	.065	.140	2.573	.011	H4: Accepted
	SI	-.149	.049	-.147	-3.023	.003	H5: Accepted
a. Dependent Variable: MBSA							

Source: Compiled by the Author

Discussion on Findings

The regression model describes the combined effect of all the constructs in the model. The study found that social distance, perceived trust, social influence, and perceived usefulness significantly impact the intention to adopt mobile banking services after the COVID-19 context in Bangladesh, while perceived ease of use has no significant influence. Thus, hypotheses *H2, H3, H4,* and *H5* were supported, and hypotheses *H1* were rejected.

It was anticipated that perceived usefulness directly influences mobile banking services adoption. The study's findings show that perceived usefulness (0.000) positively attracts people to use contactless mobile banking services throughout the COVID-19 pandemic, as it provides more benefits than physical transactions on banks, booths, or stores. All eight participants from in-depth interviews (i.e., UT1, UT2, BNK1, MBA1, MBA2, MBC1, MBC2, and MBC3) also expressed the opinion that, *"mobile banking services are useful as it saves my time and money".* This finding also matches previous studies' findings (Agwu & Carter, 2024; Noor, 2011; Malaquias & Silva, 2020; Uppal, 2010). This may result from users finding mobile banking fast, time-saving, less costly, and safer.

Most mobile banking transaction procedures now involve two-stage verification, resulting in much-more safety protocols for its users. The increased trustworthiness of mobile banking services makes it popular across the country. In-depth interview participants UT1, UT2, BNK1, MBA1, and MBC3 coined that, "although there is always a fear of online fraud, two-factor authentication, and personal consciousness on not sharing one-time password makes my mobile banking transactions a trusty financial means of money management." The study result showed that perceived trust (0.003) positively affects the intention and usage of mobile banking services in Rangpur, Bangladesh. Many previous studies of mobile banking adoption (Al Amin et al., 2022; Hu et al., 2019; Luo et al. (2010); Suh & Han, 2002) also confirmed similar findings.

To prevent the spreading of COVID-19, lockdown and social distancing measures are widely practiced across the globe. Although it started lately, Bangladesh also imposed measures to prevent COVID-19 diseases. Participants UT1, UT2, BNK1, MBA2, MBC1, and MBC2 from the in-depth interview strongly briefed that, "*I've been using MBS for last couple of years, but since the coronavirus hit the nation, I've used it more because I'm now much less likely to handle physical cash.*" This study finds that social distancing (0.011) positively triggers the adoption of mobile banking services in Bangladesh, as mobile banking customers increased by more than 100% to 19.80 crore in March 2023 from 8.25 crore in March 2020. This finding also aligns with Al Amin et al. (2022) results and Khatun et al. (2021) results.

Society plays a vital role in persuading people. Customers may be persuaded to adopt mobile banking services by the favorable recommendations, opinions, and suggestions of friends, family members, relatives, and colleagues. The study result showed that social influence (0.003) significantly impacts customers' acceptance and continuance usage of mobile banking services in a negative direction. This negative relationship of social influence with mobile banking service adoption indicates that mobile banking service adoption decreases with increased social influence. This result contradicts the conclusion that is typically found in the literature. But this might be because, when it comes to making financial decisions, our young users don't seem as interested in following the advice and viewpoints of their reference groups—that is, friends, family, relatives, and coworkers. Besides, in many cases, customers are skeptical about the advice of taking financial services from mobile banking operators or agents. However, perceived ease of use was also found influential in prior studies (Davis et al., 1989; Malaquias & Silva, 2020; Venkatesh et al., 2003); this study found perceived ease of use (0.074) having no significant impact on user's adoption of mobile banking services in the COVID-19 pandemic context. Such findings may originate from users' habituation with mobile banking services use; therefore, it has no separate dealings concerning the pandemic.

Conclusions and Recommendations

Mobile banking services are a promising means of financial transactions for mass people in Bangladesh. The study intends to find individual's mobile banking services adoption in Bangladesh by using and extending the TAM and UTAUT model in the COVID-19 pandemic context. As these services are gaining popularity and rapid momentum during and after the COVID-19 pandemic, the study has implications for the government and mobile banking service providers. The government is planning to spread government's disbursement of numerous social security aids, grants, and allowances through mobile banking to transact all sorts of money to build up a smart Bangladesh by 2040. The country's citizens' positive outlook would help foster the pace of mobile banking usage in Bangladesh. The government, central bank, service-providing institutions, and other stakeholders should undertake a mass promotional program and initiate extended awareness-building campaigns to the mass level that may help develop general positive attitudes towards mobile banking services in Bagladesh and help them retain and grow their customer base to ensure their sustainable business. This study is limited to specific geographical regions and has a small sample size. Therefore, future studies could have been undertaken by incorporating more areas and a large sample size. Besides, structural equation modeling may be employed to measure the joint effects of all the

variables considered in the study. As this study includes mostly the young generation's data, moderating effects of age and gender may also be tested in the future.

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