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Factors Affecting Customers' Experience in Mobile Banking of Bangladesh

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Abstract- Bangladesh is a densely populated country of the world. More than 170 million people live in this country. Mobile banking is a very important and new phenomenon in Bangladesh. In recent years, mobile banking has got highest importance by the customers in the country as it provides immense scope for consumers for banking transactions at any time with the option to access bank's facilities anywhere of the country. It is a subset of electronic banking, the use of which is increasing day by day in Bangladesh. Hence, this paper aims at indentifying the factors that influence the customer experience in mobile banking in Bangladesh. This study is based on a survey of 231 mobile banking customers of nine private commercial banks of Bangladesh. Literature review identified some factors related to mobile banking like convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty that affect customers' experience in mobile banking systems etc. Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics were used to describe the present situation of the mobile banking systems in Bangladesh.

Keywords: *mobile banking, responsive system, transaction security, technical difficulty, transaction security.*

GJMBR-A Classification: *JEL Code: M19*



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Factors Affecting Customers' Experience in Mobile Banking of Bangladesh

Dr. Nazrul Islam [α], Mohitul Ameen Ahmed Mustafi [σ], Md. Nafizur Rahman [ρ], Nowshin Nower [ω], Md. Mostafa Asef Rafi [¥], Mayisha Tasnim Natasha [§], Rashik Hassan [χ] & Dr. Sharmina Afrin [ν]

Abstract- Bangladesh is a densely populated country of the world. More than 170 million people live in this country. Mobile banking is a very important and new phenomenon in Bangladesh. In recent years, mobile banking has got highest importance by the customers in the country as it provides immense scope for consumers for banking transactions at any time with the option to access bank's facilities anywhere of the country. It is a subset of electronic banking, the use of which is increasing day by day in Bangladesh. Hence, this paper aims at indentifying the factors that influence the customer experience in mobile banking in Bangladesh. This study is based on a survey of 231 mobile banking customers of nine private commercial banks of Bangladesh. Literature review identified some factors related to mobile banking like convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty that affect customers' experience in mobile banking systems etc. Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics were used to describe the present situation of the mobile banking systems in Bangladesh. Inferential statistics like factor analysis, multiple regression analysis and Structural Equation Modeling (SEM) were used to identify the relationships between the overall experience of the mobile banking customers and the specific factor(s) that affect customers experience in mobile banking. Results show that the convenient and responsive system, transaction security in ATM booth and technological difficulty are significant factors that affect the customers experience in mobile banking of Bangladesh. This study suggests that the policymakers should focus on the convenient and responsive system of mobile banking, transaction security in ATM booth and technological difficulty factors that affect customers experience in doing mobile banking for the improvement of the mobile banking services in Bangladesh.

Keywords: mobile banking, responsive system, transaction security, technical difficulty, transaction security.

I. Background

Banking sector of Bangladesh is one of the most important service sectors of Bangladesh which is also a highly regulated industry in the world. In recent years, private banks of Bangladesh are increasing in a geometric rate with new services like mobile banking. Bangladesh Bank is the central bank and is responsible for managing all other banks of the country. It oversees the banking system and implements the government's financial and monetary policies. Bangladesh's banking system was government-owned until 1982 except some foreign banks. Due to the liberation of financial policy, the government of Bangladesh allowing more private commercial and investment banks to increase competition in the financial market of the country. In 2001, there were 52 licensed banks, among them 4 were nationalized commercial banks, 5 were specialized banks, 30 were private commercial banks, and 13 were foreign banks in Bangladesh. Now, there are 57 scheduled banks in Bangladesh who operate under the full control and supervision of Bangladesh Bank that is empowered to do so through Bangladesh Bank Order, 1972 and Bank Company Act, 1991. According to that act, banks are categorized under schedule banks that include state-owned commercial banks, private commercial banks, Islamic commercial banks, and foreign commercial banks. Banks established for distinct and specific objectives fall under non-schedule banks[1]in Bangladesh.

Now, both private and public banks are operating with the use of latest technologies and are adopting highly aggressive marketing strategies. These latest technologies have a significant impact in banking service. This has helped the customers to access their banks at anytime through Internet or mobile banking system. Mobile banking refers to the use of a smartphone or other cellular device to perform online banking tasks while away from the home computer, such as monitoring account balances, transferring funds between accounts, bill payment and locating an ATM[2]. Consumers are attracted to these technologies because of the convenience in use, increasing ease of use, and in some instances cost savings, etc. However, customers are also experiencing some problems such as, security in transaction, authentication risks, reliability, connectivity problem between bank and its customers, application security, etc. Therefore, this study aims at

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[1]https://www.academia.edu/34969653/Banking_Sector_of_Bangladesh_-_An_Overview.docx

[2]https://investinganswers.com/financial-dictionary/personal-finance/mobile-banking-2595

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identifying the factors concerning the experience of mobile banking users in Bangladesh.

II. Objectives of the Study

The main objective of this study is to identify the factors affecting the customers' experience in mobile banking of Bangladesh. The specific objectives are as follows.

- To describe the mobile banking systems in the private commercial bank of Bangladesh;
- To identify the factors concerning the experience of mobile banking customers in Bangladesh;
- To provide some suggestions for the improvement of the mobile banking services in Bangladesh.

III. Literature Review

Mobile banking is the key for the socio-economic development of the country at large. It has brought services closer to the people thus making it easy to transact without delays and restrictions of time limits Makongoro, 2014). Mobile banking is a relatively new service adopted by the private and government commercial banks in Bangladesh. However, there are some unknowns to the mobile bank service users that sometimes give them negative experience regarding the services. This experience is concerned with the use of the mobile banking services. Study (Islam, & Hossain, 2014) shows that the infrastructural facility updates user friendly technology and its availability in Bangladesh towards mobile banking. Service quality as a whole is a strong antecedent of customer satisfaction, but only three dimensions have a positive influence on satisfaction such as reliability and responsiveness, efficiency and convenience. (Sagib, & Zapan, 2014).

Study (Kabir, M. R. 2013) shows that the factors like performance risk, security/privacy risk, time risk, social risk and financial risk are negatively related with the usages of mobile banking as perceived risk make the users confused about their security in using mobile banking. While the factors like ability, integrity, benevolence, perceived usefulness, perceived ease of use relative cost and time advantages are positively related with the intention to use mobile banking services. It is also found that, the security and trust factor is the most influential factor where ineffective advertisement has negative influence on the customer satisfaction of mobile banking (Ahmed, & Jannat, 2015). The results of structural equation modeling (SEM) indicate that perceived financial cost, perceived risk and subjective norm are the most influencing factors that affect people's behavioral intention to adopt or continue to use mobile banking (Siddik,. Sun,. Yanjuan, & Kabiraj, 2014).

Findings who suggest that internet mobile banking use increases if the banks' customers' perceive that it is not risky, the credibility of the bank is good, and it is easy to use that, lead to increased acceptance of internet banking (Shahriar, 2014). Study (Hossain, & Hossain, 2015) shows that the correlation and regression analysis in the examination endow with full support for the hypothesis which are related to reliability, responsiveness, trust, switching costs and demographic environment. The findings advocate that the executives of the banks should put more focus on escalating switching cost, developing more creative activities to grow trust among clients to increase loyalty. Research also shows that action loyalty, customer satisfaction has positive relationship with the use of mobile banking. The main factors which determine customer experience in digital banking are service quality, functional quality, perceived value, employee-customer engagement, perceived usability and perceived risk. There is a significant relationship among customer experience, satisfaction and loyalty, which are related to financial performance of the banks (Mbama, & Ezepue, 2018). The analysis also explored the predictors as good core service, sufficient security and privacy policy and fair pricing and cost saving play the key role to retain the online customers of the banks (Jahan, & Khan, 2018).

Consumers' behavioral intention is also a factor related to the mobile banking. The study results reveal that driving factors of consumers' behavioral intentions to adopt mobile banking at the static, interaction, and transaction service phases are significantly different, providing important theoretical and practical contributions (Shareef,. Baabdullah,. Dutta,. Kumar, & Dwivedi, 2018). The results also suggested that perceived risk, relative advantage and convenience are the determinant factors in influencing consumers' adoption decisions of mobile banking. It's been recommended that banks in Tanzania should invest massively in mobile banking and other information technology innovations in order to further promote efficient service delivery and increase adoption of mobile banking services (Makongoro, 2014)

The analysis of the workshop's results shows that customer's trust in security for mobile banking will be increased by finger print mechanism. To promote mobile banking, it is necessary to improve customer trust in terms of security (Bilal, & Sankar, 2011). There is a positive relationship between four independent variables (Security & Privacy, Customer Loyalty, Service Quality, and Convenience) with the dependent variables (Customers' Satisfaction towards Online Banking) which is consistent with the mobile banking systems (Lee,. Chia,. Choong,. & Foo, 2017). The research also indicates that trust has a positive effect on the adoption of Internet banking. Moreover, there are many factors related to trust in electronic services. The majority of the research has been conducted in the context of Internet banking (Goudarzi,. Ahmad,. Soleymani,. & Mohammad hosseini, 2013).

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Perceived benefits and ease of use are also important factors for mobile banking. The study reveals that perceived benefit and ease of usage significantly influence and determine the behavioral intention of customers to adopt mobile banking. The finding also discloses that perceived risk and monetary cost do not help customers from adopting mobile banking (Anyanwu,. Ubi, & Ananwude, 2017). The study also revealed that, each factor measured had some level of significant effect on consumer intention to adopt and use mobile banking services. Additionally, the study unveiled that, perceived credibility and perceived financial cost were the major setback with regards to customers adoption of mobile banking services and as a result of this, Ghanaians have formed a negative behavioral pattern towards mobile banking (Cudjoe,. Anim,. & Nyanyofio, 2015).

The service awareness is another factor concerned with mobile banking. The results show that service awareness has a direct effect on performance and effort expectancy, but not on perceived risk. As anticipated, performance expectancy, effort expectancy, and perceived risk have direct and significant effects on behavioral intentions to use m-banking (Alkhaldi, 2017). The study explores that the reliability, responsiveness and assurance have more contribution to satisfy the customers of e-banking in Bangladesh (Nupur, 2010).

Quality factors and assurance have also relationship with the mobile banking. The findings suggest that quality factors and structural assurance have significant and direct effect on both trust and customer satisfaction. Trust is shown to fully mediate the interrelationships of information quality, system quality and company reputation on customer satisfaction (Yousuf, 2017). The study indicated that the major barriers Ethiopian banking industry faces in the adoption of Electronic banking are: security risk, lack of trust, lack of legal and regulatory frame work, lack of ICT infrastructure and absence of competition between local and foreign banks (Bultum, 2014). Hence, mobile banking experience is concerned with some important factors. The important issues related to mobile banking concerning the customers experience are shown in Table 1.

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Table 1: Literature Review on Mobile Banking Experience

	Convenient	Easy to use	Secured service	Cost effective	Time saving	Trustworthiness	Infrastructure	Regulatory Constraint	Reliability	Responsiveness	Efficiency	Assurance	Self Efficacy	Risk & Security
(Bhuiyan & Rahman, 2013)	√	√	√	√										
(Islam, 2013)	√		√	√	√	√	√	√						
(Sagib & Zapan, 2014)	√	√	√						√	√	√	√		
(Rahman, Hasan & Mia, 2017)	√								√	√		√		
(Islam & Hossain,2015)							√	√						
(Dewan,2010)	√	√					√							
(Bank, B. 2012)	√	√		√		√			√		√	√		
(Islam & Karia, 2017)			√			√	√	√						√
(Islam & Hossain, 2014)	√	√					√			√			√	√
(Ahmed, Kader ,Rashid & Nurunnabi, 2017)	√	√			√			√		√	√	√	√	
(Siddik, Sun, Yanjuan & Kabiraj ,2014)				√		√		√	√	√	√			√
(Hossain &Hossain,2015)	√	√	√	√		√			√					
(Parvez,Islam &Woodward,2015)	√	√	√	√					√	√	√		√	
(Reyan,2014)	√	√	√	√				√			√	√		
Nisha, Idrish& Hossain, 2017)			√			√								√

IV. Methodology

This section discusses participants and procedures, questionnaire design and test of reliability, determination of sample size, data collection, normality of data, analytical tools, test of reliability and validity, etc.

a) Participants and Procedures

This study used 231 data collected from the mobile banking users of nine private commercial banks in Bangladesh. Out of 231 respondents, 49.4% are 21-30 years, 24.2% are 31-40 years and 5.6% are 50 years and above age group (Table 2).

Table 2: Demographic Information of the Respondents

Variables	Scale	Frequency	Percentage	Cumulative Percentage
Age	Less than 20	27	11.7	100
	21-30	114	49.4	
	31-40	56	24.2	
	41-50	21	9.1	
	Above 50	13	5.6	
Education status	No Education	2	.9	100
	Secondary School	1	.4	
	igher Secondary School	53	22.9	
	Bachelor	145	62.8	
	Diploma / Pass	30	13.0	
Marital status	Married	86	37.2	100
	Unmarried	145	62.8	
How many years are you using mobile banking systems?	Less than 1 Year	75	32.5	100
	1-3 years	93	40.3	
	4-6 years	48	20.8	
	More than 6 years	15	6.5	

b) Questionnaire Design and Test of Reliability

This study interviewed 235 respondents from 9 leading private commercial banks such as, AB Bank Limited, City Bank Limited, Dhaka Bank Limited, Dutch-Bangla Bank Limited, Eastern Bank Limited, IFIC Bank Limited, Mercantile Bank Limited, Mutual Trust Bank Limited, Jamuna Bank Ltd. and Prime Bank Limited of Bangladesh that have mobile banking services. A structured questionnaire with 23 items was used to collect the data. The data were collected through surveying the customers of mobile banking users with the help of a structured questionnaire which was developed through literature review. This structured questionnaire with the 5-points scale was developed for the items related to the customers' experience regarding the mobile banking in Bangladesh.

c) Determination of Sample Size

To determine the sample size of the mobile banking users by using the formula published by University of Florida was used as a reference. This study used formula for taking sample data from population suggested by Yamane (1967).

$$n=\frac{N}{(1+Ne^2)}$$

Where, n=Sample Size, N= Population, e=Level of Precision, in calculating number of sample the following assumptions were made to determine, n=204, if Population Size is more than 100000; Level of precision is 7%. However, this study finally used 231 data at the screening process.

d) Data Collection

The sample respondents were selected by using the convenience sampling method. After collecting 235 data through direct interview, incomplete, biased, and abnormally answered data were discarded through scrutinizing process and finally accepted 231 data which were used in the analysis of this study. The reliability of 23 items in the questionnaire has been tested by using SPSS software (Table 5).

e) Normality of Data

According to Tabachnick and Fidell (2001), the value of Skewness and Kurtosis statistic lies between -4 to +4 that is deemed to be acceptable. Table 3 shows that all the data met the acceptable range indicating the normal distribution of data.

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Table 3: Normality of the Information

Descriptive Statistics			
Variables	N	Skewness	Kurtosis
	Statistic	Statistic	Statistic
1. Mobile Banking is easy to use	231	-.207	-1.338
2. Transaction speed in mobile banking is good	231	-.198	-1.319
3. Transaction process is accurate	231	-.160	-1.340
4. Mobile Banking is a Cost effective process	231	-.230	-1.198
5. Mobile Banking is a Low cost transaction process	231	-.457	-.982
6. Mobile Banking is a Responsive System	231	-.876	-.252
7. Mobile Banking is convenient to use	231	-.945	-.040
8. Mobile Banking can be accessible from any mobile	231	-.451	-.941
9. Mobile Banking provides quick service	231	-1.222	1.120
10. Apart from parent bank, mobile banking can be used in other banks system	231	-.525	-.422
11. Mobile Banking provides 100% assurance in transaction process	231	-.220	-1.176
12. Unavailability of fund is not prominent in mobile banking	231	-.029	-.198
13. Mobile Banking Service is reliable	231	-.541	-.761
14. Mobile Banking System is available 24/7	231	-.658	-.883
15. Network overload has been reduced in mobile banking in Bangladesh	231	.090	-.648
16. Technological difficulty is still prominent in Mobile Banking	231	-.497	-.878
17. People are not well accustomed to mobile banking due to ineffective marketing	231	.059	-1.003
18. Security threat is the main barrier for gaining people trust in mobile banking	231	-.235	-1.107
19. People's unwillingness towards mobile banking is due to confidentiality concern	231	-.455	-.903
20. People are more secured in doing transaction through ATM Booth	231	-.482	-.668
21. Educational Gap regarding mobile banking is decreasing among the people	231	-.644	-.888
22. Considering above factors, do you think customer experience in mobile banking in Bangladesh is continuously increasing?	231	-1.286	2.215

Source: **Survey**

f) Analytical Tools

Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics like mean, standard deviation, a simple percentage was used to describe the customers experience about the mobile banking in Bangladesh. Along with descriptive statistics[3], inferential statistical[4] techniques such as, Factor Analysis and Multiple Regression Analysis, Structural equation Modeling (SEM) were used to analyze the data. A Principal Component Analysis (PCA) with an Orthogonal Rotation (Varimax)[5] using the SPSS (Statistical Package for Social Sciences) was performed on the survey data. Multiple Regression Analysis[6] was run to identify the relationships between the dependent

[3] *Descriptive statistics includes statistical procedures that we use to describe the population we are studying. The data could be collected from either a sample or a population, but the results help us organize and describe data. Descriptive statistics can only be used to describe the group that is being studying. That is, the results cannot be generalized to any larger group.*

[4] *Inferential statistics is concerned with making predictions or inferences about a population from observations and analyses of a sample. That is, we can take the results of an analysis using a sample and can generalize it to the larger population that the sample represents.*

[5] *Varimax rotation is an orthogonal rotation of the factor axes to maximize the variance of the squared loadings of a factor (column) on all the variables (rows) in a factor matrix, which has the effect of differentiating the original variables by extracted factor. Each factor will tend to have either large or small loadings of any particular variable. A varimax solution yields results which make it as easy as possible to identify each variable with a single factor. This is the most common rotation option.*

[6] *In statistics, regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable (or 'Criterion*

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and independent variables of the model. Inferential statistics like Factor Analysis (FA) was used to separate the factors related to the customers' experience in mobile banking. Multiple Regression Analysis (MRA) was used to identify the significant factors from the factors identified through factor analysis. Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were conducted to identify the significant factors concerning the customers' experience regarding the mobile banking in Bangladesh.

g) Test of Reliability and Validity

To analyze the reliability of the data, this study used Cronbach's alpha, composite reliability, average variance extracted from the data which are shown in Table -5 is at the acceptable limit as per Nunnally and Berstein (1994), Hair et al. 1998, Fornell & Larcker, (1981); Henseler, Ringle, & Sinkovics, (2009) respectively.

For checking the discriminant validity, this study followed Fornell Larcker's (1981) criterion that compares AVE Value with corresponding correlation values with other variables. The square-root value of AVE needs to be greater than the corresponding correlation values with other variables (Hair et al., 2014). The Discriminant Validity of the factors is shown in Table 4.

Table 4: Discriminant Validity

Factors	Descriptive Statistics			Correlations				Alpha
	Mean	SD	1	2	3	4	5	
Factor 1: Convenient and Responsive System	3.01	1.01	0.77					0.85
Factor 2: Transaction Speed and Accuracy	3.14	0.84	.475	0.86				0.92
Factor 3: Reliability	3.92	0.71	.171	.165	0.77			0.74
Factor 4: Transaction Security in ATM Booth	3.74	0.7	.165	.140	.346	0.71		0.69
Factor 5: Technological Difficulty	3.53	0.75	0.06	.123	.289	.277	0.70	0.63

h) The Coefficient of Determination

The analysis shows that the R square value of the model is 0.332 (Table 7). That means, all five independent factors like (i) convenient and responsive system, (ii) transaction speed and accuracy, (iii) reliability, (iv) transaction security in ATM booth and (v) technological difficulty factors explained 33.32% of the variance in the overall customers' experience about the mobile banking in Bangladesh.

V. Results and Discussions

This section describes the results of Exploratory Factor Analysis (EFA), Results of Confirmatory Factor Analysis (CFA), and Structural Equation Model (SEM).

a) Results of Factor Analysis (EFA & CFA)

To assess EFA, four commonly used assumptions were followed in this study (Hair et al., 1998; Field, 2000) such as, (i) sampling adequacy (Kaisers – Mayesolkin) measure greater than 0.5; (ii) the minimum eigenvalue for each factor; (iii) considering the sample size, factor loading of 0.50 for each item considered as the threshold for retaining items to ensure greater confidence; and (iv) varimax rotation was used since it is a good general approach that simplifies the interpretations of the factors (Field, 2000).

Table 5 shows the results of Exploratory Factor Analysis and Confirmatory Factor Analysis. Hair et al. (2010) suggested that the factor the analysis can be performed when Kaiser-Meyer-Olkin (KMO) Test and Bartlett's Test of Sphericity are significant. An index of Kaiser's measures of sampling adequacy (Overall MSA= 0.809) and Bartlett's Test of Sphericity $\chi^2(p=0.000)$ suggested that the factor analysis is appropriate for analyzing the data (Table 5). After examining the pattern matrix of EFA, this study found that all the items had factor loadings greater than 0.50 (Table 5).

This result indicates that the factor analysis is appropriate. After confirming research constructs, Principal Component Analysis (PCA) and the Varimax Rotation Method (VRM) were used to extract factors from 23 items. Hair et al. (2010) recommended that each item factors loading must be more than 0.50 values that are considered highly significant. Based on eigenvalue greater than 1, a five-factor model was identified that explains 65.31% of the total variance of the data set. As a whole, 20 items were grouped (based on eigenvalue) into five different factors like (i) convenient and responsive system, (ii) transaction speed and accuracy, (iii) reliability, (iv) transaction security in ATM booth and (v) technological difficulty factors by the analysis. The EFA result also showed 0.594 as the lowest and 0.961 as the highest factor loadings of the variables. The result of the factor analysis showed that all the factors, as a whole, are acceptable for further analysis (Table 5).

Variable') changes when any one of the independent variables is varied, while the other independent variables are held fixed.

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The results of Confirmatory Factor Analysis (CFA) confirmed the five factors identified through EFA. Through confirmatory factor analysis, factors like (i) mobile banking provides quick service, (ii) apart from parent bank, mobile banking can be used in other banks system, (iii) unavailability of fund is not prominent in mobile banking, and (iv) educational gap regarding mobile banking is decreasing among the people were excluded from the analysis (Table 5). The reasons can be attributed by the low factors loadings of the variables.

Table 5: Factors Affecting Customer Experience of Mobile Banking in Bangladesh

Factors	EFA	CFA	AVE	CR
Factor 1: Convenient and Responsive System (Total variance=5.693, % of Variance=28.46, Cumulative % =28.46)				
1. Mobile Banking is a Low cost transaction process	.665	0.60	0.59	0.85
2. Mobile Banking is a Responsive System	.882	0.85		
3. Mobile Banking is convenient to use	.845	0.89		
4. Mobile Banking can be accessible from any mobile	.756	0.71		
5. Mobile Banking provides quick service	.662	Deleted		
6. Apart from parent bank, mobile banking can be used in other banks system	.709	Deleted		
Factor 2: Transaction Speed and Accuracy (Total variance=2.38, % of Variance=11.89, Cumulative % =40.36)				
1. Mobile Banking is easy to use	.870	0.78	0.735	0.916
2. Transaction speed in mobile banking is good	.961	0.96		
3. Transaction process is accurate	.937	0.92		
4. Mobile Banking is a Cost effective process	.594	0.75		
Factor 3: Reliability (Total variance=2.12, % of Variance=10.58, Cumulative %=50.94)				
1. Mobile Banking provides 100% assurance in transaction process	.594	0.74	0.595	0.814
2. Unavailability of fund is not prominent in mobile banking	.775	Deleted		
3. Mobile Banking Service is reliable	.839	0.84		
4. Mobile Banking System is available 24/7	.625	0.73		
Factor 4: Transaction Security in ATM Booth (Total variance=1.596, % of Variance=7.98, Cumulative % =58.92)				
1. Security threat is the main barrier for gaining people trust in mobile banking	.616	0.65	0.51	0.737
2. People's unwillingness towards mobile banking is due to confidentiality concern	.735	0.76		
3. People are more secured in doing transaction through ATM Booth	.825	0.67		
4. Educational Gap regarding mobile banking is decreasing among the people	.630	Deleted		
Factor 5: Technological Difficulty (Total variance=1.28, % of Variance=6.39, Cumulative % =65.31)				
1. Technological difficulty is still prominent in Mobile Banking	.867	0.65	0.51	0.629
2. People are not well accustomed to mobile banking due to ineffective marketing	.795	0.70		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.809, df=190, Significant value=0.000				

Note: AVE>0.50 (Fornell & Larcker, 1981); Henseler, Ringle, & Sinkovics, 2009), Composite Reliability>0.70 (Hair et al. 1998), Cronbach's alpha>=0.60, (Nunnally and Berstein (1994)).

b) Model Fit Indices (CFA)

The purpose of CFA analysis was to confirm the unidimensionality of the measurement that is resulted from the EFA. The relative Chi-Square for this model was 2.331 that were smaller than 5.0 recommended by Marsh and Hocevar (1985). Other fit indexes also showed a good fit for the measurement model. The GFI is of the model is 0.904 which is equal to the recommended value of 0.90 (Joreskog & Sorbom (1993). Furthermore, the non-incremental fit index, such as the Comparative Fit Index (CFI) is 0.930 that exceeds the recommended cut-off level of 0.90 (Bentler, 1990). Finally, the Root Means Square Error of Approximation (RMSEA) is 0.076, which is also less than the suggested

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good fit to the data (Browne & Cudeck, 1993). The summary result of the analysis is shown in Table 6. The fit indices showed good model fit to the data.

Table 6: Model Fit Indices and Their Acceptable Thresholds

Goodness of Fit Indices	Value	Level of acceptance	Reference
Chi-square/df	2.331	< 5.0	Marsh and Hocevar (1985)
CFI	.930	>0.90	Bentler (1990)
GFI	.904	>0.90	Joreskog & Sorbom (1993)
RMSEA	.076	<0.08	Browne & Cudeck (1993)

In sum, the measurement model exhibited a fairly good fit for the data collected. The measurement model was further assessed for construct reliability and validity. Construct reliability can be interpreted as the resultant coefficient that is similar to that of Cronbach's alpha, except that it also takes into account the actual factor loadings rather than assuming each item to be equally weighted in the composite load determination. The construct reliability for all the factors is above 0.70 in the measurement model, which can be identified as an acceptable threshold (Hair et al. 1998).

c) Results of Structural Model (SEM)

A multivariate analysis technique like covariance-based structural equation modeling was used to identify the significant relationships between overall factor concerning customers' experience about mobile banking in Bangladesh and the factors identified through factor analysis like convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty. Table 7 lists the structural parameter estimates and hypothesis testing results. This study examines the impact of convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty factors on the overall customers' experience about the mobile banking in Bangladesh.

The path diagram of this study revealed that only three factors like convenient and responsive system (β=0.175, p=.000), transaction speed and accuracy (β=0.110, p=.013), and transaction security in ATM booth (β=0.140, p=.006) positively influence the overall experience of the customers' about the mobile banking in Bangladesh (Table 7). But reliability (β=0.090, p=.074), and technological difficulty (β=0.077, p=.224) are not significantly related to the overall customers experience of mobile banking in Bangladesh. Structural Model of the Customers' Experience about the Mobile Banking in Bangladesh is shown in Figure 1.

Table 7: Results of Structural Relationships

	Estimate	S.E.	C.R	P	Decisions
Overall <- Convenient and Responsive System	.175	.053	3.318	.000	Significant
Overall <- Transaction Speed and Accuracy	.110	.044	2.495	.013	Significant
Overall <- Reliability	.090	.050	1.789	.074	Not Significant
Overall <- Transaction Security in ATM Booth	.140	.051	2.752	.006	Significant
Overall <- Technological Difficulty	.077	.063	1.217	.224	Not Significant
R-square	.332				

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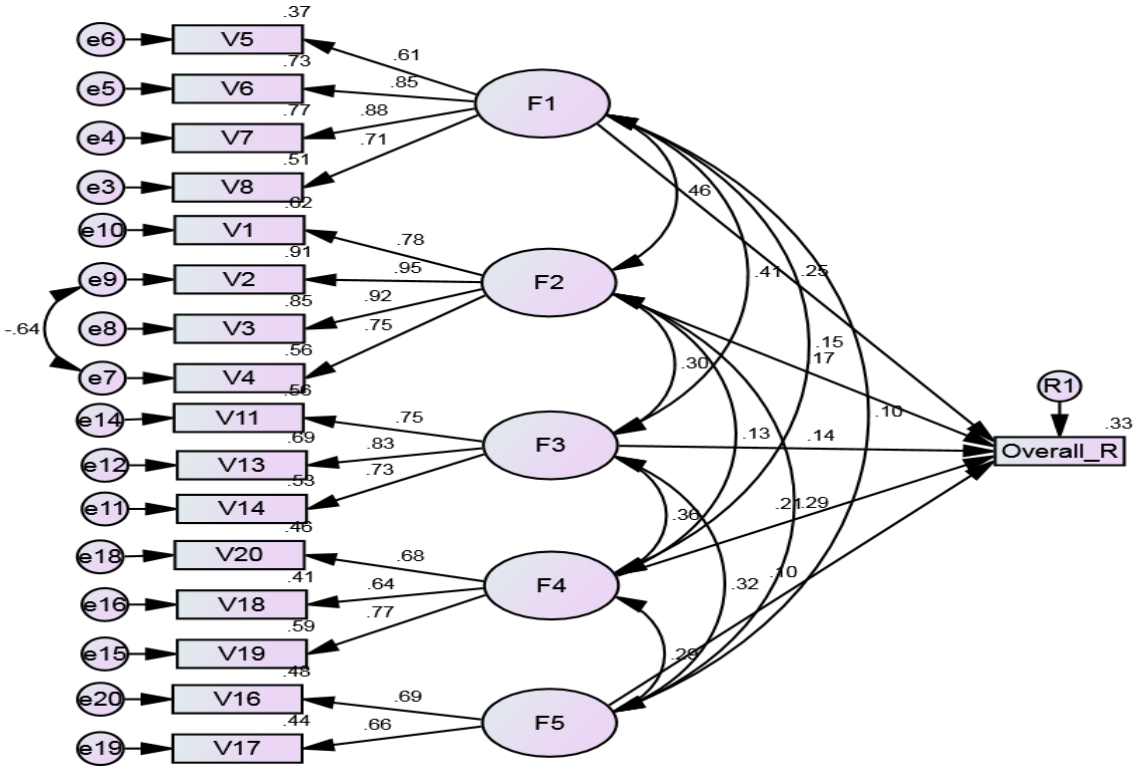

Figure 1: Structural Model of the Customers' Experience about the Mobile Banking in Bangladesh

d) Multi-Group Analysis of Data

This study also identified the differences in experience with mobile banking between the male and female respondents which are discussed in the following sections.

i. *Multi-Group Analysis for Male*

The results of the analysis show that for the factors concerning male respondents' like convenient and responsive system, transaction speed and accuracy and transaction securities in ATM booth are significant. Reliability and technological difficulty factors are not significant for the male users of mobile banking in Bangladesh (Table 8).

Table 8: Regression Weights: (Male - Default Model)

	Estimate	S.E.	C.R.	P	Label
Overall_R<-Convenient and Responsive System	.195	.063	3.100	.002	Significant
Overall_R<--Transaction Speed and Accuracy	.119	.049	2.430	.015	Significant
Overall_R<--- Reliability	.084	.061	1.375	.169	Not Significant
Overall_R<-Transaction Security in ATM Booth	.142	.069	2.038	.042	Significant
Overall_R<--- Technological Difficulty	.077	.087	.877	.381	Not Significant

ii. *Multi-Group Analysis for Female*

The analysis also shows that for the female respondents, the only significant factor is transaction security in ATM booth. On the other hand, convenient and responsive system, transaction speed and accuracy, reliability, and technological difficulty are not significant for the female users of mobile banking in Bangladesh (Table 9). Female mobile banking users have only concern with the transaction security and ATM booth.

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Table 9: Regression Weights: (Female - Default Model)

			Estimate	S.E.	C.R.	P	Label
Overall_R<-Convenient and Responsive System			.127	.113	1.119	.263	Not Significant
Overall_R<--Transaction Speed and Accuracy			.087	.106	.821	.412	Not Significant
Overall_R<--- Reliability			.130	.118	1.100	.271	Not Significant
Overall_R<-Transaction Security in ATM Booth			*.175*	*.089*	*1.971*	*.049*	*Significant*
Overall_R<--- Technological Difficulty			.063	.092	.688	.491	Not Significant

VI. Conclusions and Recommendations

This study was designed to identify the factors concerning the experience of the mobile banking users in Bangladesh. Factor analysis identified five factors related to the experience in mobile banking of Bangladesh. The factors are: convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth, and technological difficulty. The results of Confirmatory Factor Analysis (CFA) also confirmed these five factors. The GFI is of the model is 0.904 which is equal to the recommended value of 0.90. Furthermore, the non-incremental fit index, such as the comparative fit index (CFI) is 0.930 that exceeds the recommended cut-off level of 0.90. Finally, the Root Means Square Error of Approximation (RMSEA) is 0.076, which is also less than the suggested good fit to the data. These all fit indices show good model fit to the data and the model is acceptable.

A multivariate analysis technique like covariance-based structural equation modeling was used to identify the significant relationships between overall customers' experience about mobile banking and the factors identified through factor analysis like convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty. This study examines the impact of convenient and responsive system, transaction speed and accuracy, reliability, transaction security in ATM booth and technological difficulty factors on overall customers' experience about mobile banking in Bangladesh. Results show that the convenient and responsive system, transaction speed and accuracy, and transaction security in ATM booth are positively and significantly related to the overall experience of the customers' about the mobile banking in Bangladesh. However, factors like reliability and technological difficulty are not significantly related to the overall customers' experience of mobile banking in Bangladesh.

This study also identified the differences in experience between the male and female respondents. The results of the analysis show that for the male respondents' factors like convenient and responsive system, transaction speed and accuracy and transaction security in ATM booth are significant. Reliability and technological difficulty factors are not significant for the male users of mobile banking in Bangladesh. The analysis also shows that for the female respondents, the significant factor is transaction security in ATM booth. On the other hand, convenient and responsive system, transaction speed and accuracy, reliability, and technological difficulty are not significant for the female users of mobile banking of Bangladesh. Female mobile banking users have only concern with the transaction security and ATM booth. This study only covered the mobile banking customers of nine private commercial banks in Bangladesh. However, there is an ample scope to conduct further study by taking more banks and more customers into account for more precise results in future.

References Références Referencias

1. Ahmed, Z., Kader, A., Rashid, H. U., & Nurunnabi, M. (2017). User Perception of Mobile Banking Adoption: An Integrated Ttf-Utaut Model. Journal of Internet Banking and Commerce, 22(3), 1-19.
2. Ahmed,. & Jannat, M. (2015). Factors Influencing Customer Satisfaction of Mobile Banking Services: A Study on Second-Generation Banks. European Journal of Business and Management www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.7, No.26.
3. Alkhaldi, A. N. (2017). An empirical examination of customers' mobile phone experience and awareness of mobile banking services in mobile banking in Saudi Arabia. Interdisciplinary Journal of Information, Knowledge, and Management, 12, 283-308.
4. Anyanwu, F. A., Ubi, H. U., & Ananwude, A. C. (2017). Trust and Distrust Determinants of Mobile Banking Adoption in the Nigerian Banking Industry: A Study of First Bank Nigeria Limited. Asian Research Journal of Arts & Social Sciences, 3(4), 1-25.
5. Bank, B. (2012). Mobile financial services in Bangladesh: An overview of market development. Bangladesh Bank Policy Paper, 1-28.

© 2019 Global Journals

6. Bentler, P. M. (1990). Comparative fit indexes in structural models. Psychological bulletin, 107(2), 238.
7. Bhuiyan, M. S. R., & Rahman, M. M. (2013). Implementation of Mobile Banking in Bangladesh: Opportunities and Challenges. IOSR Journal of Electronics and Communication Engineering (IOSR - JECE), e-ISSN: 2278-2834, p-ISSN: 2278-8735. Vol.7(5): 53-58 (Sep.-Oct. 2013), www. iosrjournals.org
8. Bilal, M., & Sankar, G. (2011). Trust & Security issues in Mobile banking and its effect on Customers. Master's Thesis Computer Science Thesis no: MCS: 2011: 24 September 2011, School of Computing Blekinge Institute of Technology SE – 371 79 Karlskrona Sweden.
9. Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. Sage focus editions, 154, 136-136.
10. Bultum, A. G. (2014). Factors affecting adoption of electronic banking system in Ethiopian banking industry. Journal of Management Information System and E-commerce, 1(1), 1-17.
11. Cudjoe, A. G., Anim, P. A., & Nyanyofio, J. G. N. T. (2015). Determinants of mobile banking adoption in the Ghanaian banking industry: a case of access bank Ghana limited. Journal of Computer and Communications, 3(02), 1.
12. Dewan, S. M. (2010, December). Issues in M-banking: Challenges and opportunities. In Computer and Information Technology (ICCIT), 2010 13th International Conference on (pp. 364-369). IEEE.
13. Field, A. (2000). Discovering statistics using SPSS for Windows: Advanced techniques for beginners (Introducing Statistical Methods series).
14. Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of marketing research, 382-388.
15. Goudarzi, S., Ahmad, M. N., Soleymani, S. A., & Mohammad Hosseini, N. (2013). Impact of trust on internet banking adoption: a literature review. Australian Journal of Basic and Applied Sciences, 7(7), 334-347.
16. Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis. 1998. Upper Saddle River.
17. Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In New challenges to international marketing (pp. 277-319). Emerald Group Publishing Limited.
18. Hossain, N., & Hossain, Y. (2015). Mobile Banking and customer satisfaction: The case of Dhaka city. World Review of Business Research, 5(3), 108-120.
19. Islam, M. M., & Hossain, M. E. (2014). Consumers' Attitudes towards Mobile Banking in Bangladesh. In The Second International Conference on E-Technologies and Business on the Web (EBW2014) (pp. 31-45). The Society of Digital Information and Wireless Communication.
20. Islam, M. M., & Hossain, M. E. (2015). An Investigation of Consumers' Acceptance of Mobile Banking in Bangladesh. International Journal of Innovation in the Digital Economy (IJIDE), 6(3), 16-32.
21. Islam, M. S. (2013). Mobile banking: An emerging issue in Bangladesh. ASA University Review, 7(1), 123-130.
22. Islam, M. S., Karia, N., Soliman, M. S. M., Fouji, M. H., Khalid, J., & Khaleel, M. (2017). Adoption of Mobile Banking in Bangladesh: A Conceptual Framework. Review of Social Sciences, 2(8), 01-08.
23. Jahan, K., & Khan, F. (2018). Assessment of the Factors Influencing Online Banking Customer Satisfaction: A Banking Perspective in Bangladesh. World, 8(1), 142-158.
24. Kabir, M. R. (2013). Factors influencing the usage of mobile banking: Incident from a developing country. World Review of Business Research, 3(3), 96-114.
25. Lee, A. J. Y., Chia, A. M., Choong, L. W., & Foo, K. Y. (2017). Customers' Satisfaction Towards Online Banking In Malaysia: A Primary Data Analysis (Doctoral dissertation, UTAR).
26. Makongoro, G. (2014). Factors Influencing Customer Adoption of Mobile Banking Services in Tanzania (Doctoral dissertation, The Open University of Tanzania).
27. Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. Psychological bulletin, 97(3), 562.
28. Mbama, C. I., & Ezepue, P. O. (2018). Digital banking, customer experience and bank financial performance: UK customers' perceptions. International Journal of Bank Marketing, 36(2), 230-255.
29. Nisha, N., Idrish, S., & Hossain, M. Z. 9 Consumer Acceptance and Use of Mobile Banking Services in Bangladesh.
30. Nunnally, J.C. and Bernstein, I.H., 1994. The assessment of reliability. Psychometric theory, 3(1), pp.248-292.
31. Nupur, J. M. (2010). E-banking and customers' satisfaction in Bangladesh: An analysis. International review of business research papers, 6(4), 145-156.
32. Parvez, J., Islam, A., & Woodard, J. (2015). Mobile Financial Services in Bangladesh. USAID, mSTAR and fhi360.

© 2019 Global Journals

33. Rahman, A., Hasan, M., & Mia, M. A. (2017). Mobile banking service quality and customer satisfaction in Bangladesh: An analysis. The Cost and Management, 45(2), 25-32.
34. Reyan, Q. (2014). Problems and prospects of mobile banking in Bangladesh.
35. Sagib, G. K., & Zapan, B. (2014). Bangladeshi mobile banking service quality and customer satisfaction and loyalty. Management & Marketing, 9(3).
36. Shahriar, S. (2014). Acceptance of Internet Banking in Bangladesh: Evidence from Bangladesh. International Conference on Business, Law and Corporate Social Responsibility (ICBLCSR'14) Oct 1-2, 2014 Phuket (Thailand)
37. Shareef, M. A., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. K. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. Journal of Retailing and Consumer Services, 43, 54-67.
38. Siddik, M. N. A., Sun, G., Yanjuan, C. U. I., & Kabiraj, S. (2014). Financial Inclusion through Mobile Banking: A Case of Bangladesh. Journal of Applied Finance and Banking, 4(6), 109.
39. Tabachnick, B. G., & Fidell, L. S. (2001). Principal components and factor analysis. Using multivariate statistics, 4, 582-633.
40. Yamane, T. (1967). Statistics, introductory Analysis of problems.
41. Yousuf, M. (2017). Examining the role of trust in shaping customer satisfaction of mobile banking (Doctoral dissertation, Universiti Tun Hussein Onn Malaysia).

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