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DETERMINANTS OF CUSTOMER SATISFACTION OF MOBILE BANKING AND ITS PROBLEMS IN RURAL AREAS OF MOULVIBAZAR DISTRICT

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Abstract

Mobile banking is a latterly added amenity in the banking sector that eases banking via mobile devices. The present study seeks to examine the determinants influencing customers' satisfaction and problems of mobile banking in rural areas. Data were collected from 140 mobile banking users from Kamalganj and Sreemangal Upazila of the Moulvibazar district by using the simple random sampling procedure. Primary data were collected from the respondents through face to face interview using a structured interview schedule during the period of March-April, 2019. Multiple regression analysis was carried out to analyze the determinants affecting customers' satisfaction of mobile banking. Major problems faced by the rural mobile banking customers were determined by using the Kruskal-Wallis test. The study showed that the easy and convenient factor of mobile banking had the most positive influence on customer satisfaction, whereas, service charge had a negative effect. Having insufficient digital skills to fully utilize mobile banking was ranked as the highest problem by the respondents. The absence of training facilities, poor network availability and lack of security in transactions were some other constraints faced by the mobile banking users in the study area. Providing with basic training facilities, launching special services for rural communities and developing strong network coverage can improve useful steps for the growth of mobile based banking system. Overall awareness of the rural people should be raised to abate the fraudulent occurrences.

Keywords: Mobile banking, Customer satisfaction, Problems of mobile banking, Rural area

Introduction

Bangladesh's economy has grown 8.13 percent in 2018-19 fiscal years, the highest in its history till date (BBS, 2019). In response to the evolving needs of this growing economy, the financial sector in Bangladesh is also growing progressively. Although there are impressive gains in per capita income, capital base and other areas, still the financial sector remains behind in reaching out with adequate financial services for rural populations in Bangladesh. The financial sector in Bangladesh is dominated by commercial banks and these banks have very low penetration in rural areas. According to a report published by Bangladesh Bank the total number of bank branches in the country is now over 10,000 of which 4,890 bank branches of the total are operating in rural areas (Dhaka Tribune, 2018). Therefore, the rural population has less access to financial services compared to their urban counterparts in developing economies.

Bangladesh Bank defines the Mobile Financial Services (MFS) as an approach to offer financial services that combines banking with mobile wireless networks which enables a user to execute banking transactions. This means the ability to make deposits, withdraw and to send or receive funds from a mobile account (Islam and Salma, 2016). In the last few years, mobile financial services have brought over five crore unbanked people under financial service (The Independent, 2018). Mobile banking focuses to bring those people under the

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umbrella of financial service who are distant from banking facilities. The aim is to provide an effective means to save and have easy access to finance in both urban and rural areas at an acceptable cost. A survey conducted by the World Bank in Bangladesh found that nearly 48 percent of the mobile banking users reside in urban areas and 20 percent in semi-urban areas, while 32 percent resides in rural areas (Rahman *et al.*, 2017). This result shows that a good number of people residing in rural areas are mobile banking users.

In today's competitive business environment, organizations are more influenced by customer expectation and meeting the demand for customer satisfaction is very important for them. Recently, mobile banking has proven to be a significant factor to bring customer satisfaction for banking services (Asfour and Haddad, 2014). The level of satisfaction of customers derives from using mobile banking services must be dependent on some determinants regarding the quality of services. Also, there are several issues that tend to hinder the continued progress of this digital banking system.
Ansari in his study identified the unavailability of fund, educational gap and inexperience to be important indicators of mobile banking problems in our country (Ansari, 2018). Like in any emerging technology, these problems greatly affect the smooth development of mobile banking services. Hence, it is important that a study was carried out to analyze the determinants that might affect the customer satisfaction of mobile banking and observe the major problems of using mobile banking services in a developing country like Bangladesh, especially in the rural areas. The Specific objectives of this study are to identify the most influential determinants of customer satisfaction in mobile banking and to find out the problems of mobile banking faced by the rural customers.

Materials and Methods

The overall study was based on both primary and secondary data. The simple random sampling technique was used to select samples from a list of mobile banking users from ten unions of Kamalganj and Sreemangal Upazila of Moulvibazar district. Then Primary data were collected during the period of March-April, 2019 from 140 mobile banking users by using pretested interview schedules through face to face interview. A five point Likert scale varying from 1= highly dissatisfied' to 5 = highly satisfied' was used for recording the responses regarding customer satisfaction. In addition to field level primary data, secondary data were also collected from various journals, newspapers, reports etc. A multiple regression model was fitted to assess the influence of the key determinants on the customer satisfaction of mobile banking .The major problems faced in using mobile banking services according to the respondents were examined by using the Kruskal-Wallis test. The analysis was done using Microsoft excel, SPSS and R.

Multiple Regression Analysis

To assess the influence of the key determinants on the customer satisfaction of mobile banking, multiple regression analysis was used in the present study. Here customer satisfaction was the dependent variable. Eleven other variables were identified to be major determinants of customer satisfaction based on the literature review. These were selected as the independent variables.

The regression model for this study is determined as follows:

$$\text{Customer satisfaction} = \alpha + \beta_1 (ST) + \beta_2 (STF) + \beta_3 (TSM) + \beta_4 (PS) + \beta_5 (CS) + \beta_6 (TS) + \beta_7 (SA) + \beta_8 (EC) + \beta_9 (EHC) + \beta_{10} (AS) + \beta_{11} (SC) + e_i$$

α = Intercept
β = Coefficient
ST = Speed of transaction
STF = Safe transaction with feedback on transfer
TSM = Trust in security of mobile banking services
PS = Physical security
CS = Cost saving
TS = Time saving
SA = System availability
EC = Easy and convenient

EHC = Effective handling of complaint
AS = Advertisement of the service
SC = Service charge
e_i = Error term

Kruskal-Wallis Test

This test statistic is denoted by H. The equation for estimating the ranks is outlined underneath:

$$H = \left[\frac{12}{n(n+1)}\sum_{i=1}^{k}\frac{r_i}{n_i}\right] - 3(n+1)$$

Where, n = sum of sample sizes for all samples
K = number of samples
r_i = sum of ranks in the ith sample,
n_i = size of the ith sample.

To conduct this test, data were ranked from highest to lowest as they comprised a single sample.

Results and Discussion

Determinants of customer satisfaction in mobile banking in rural areas

To test the strength of associations between the study variables, a multiple regression analysis was run with 95% confidence interval.

Table 1. Coefficients and related statistics

Model	Coefficients	Std. Error	Level of significance
Constant	7.014	1.217	0.000
Speed of transaction	0.555***	0.179	0.002
Safe transaction with feedback on transfer (e.g. sms)	0.979***	0.160	0.000
Trust in security of mobile banking service	1.109***	0.170	0.000
Physical security (no need to go out with cash)	1.108***	0.156	0.000
Cost saving	1.377***	0.154	0.000
Time saving (no need to go to bank or ATM)	1.026***	0.161	0.000
System Availability (More locations to cash out money)	0.937***	0.164	0.001
Easy and Convenient (user friendly system)	1.703***	0.177	0.000
Effective Handling of Complaint	0.483**	0.208	0.022
Advertisement of service	0.201	0.198	0.311
Service charge	-0.487**	0.200	0.016
R		0.901	
R^2		0.812	
Adjusted R^2		0.796	
F- Value		50.221	

***=Significant at 0.1% level **=Significant at 1% level
Source: Author's estimation, 2019

The R value of 0.901 in Table 1 suggests that there is a steady effect of these eleven independent variables on customer satisfaction. The value of R^2 is 0.812 which indicates strong association and that 81.2% variation of the dependent variable can be explained by the independent variables. The value of the F test is 50.221 which is significant at the 5% level indicating the overall fitness of the model. Thus, it can be said that the relationship between customer satisfaction and the selected independent variables is statistically strong. Using the values from the coefficients table given above the regression model becomes the following:

Customer satisfaction = 7.014 + 0.555 (ST) + 0.979 (STF) + 1.109 (TSM) + 1.108 (PS) + 1.377 (CS) + 1.026 (TS) + 0.937 (SA) + 1.703 (EC) + 0.483 (EHC) + 0.201 (AS) - 0.487 (SC)

It has been found that, the easy and convenient factor is the most influential determinant of customer satisfaction in the study area with the highest coefficient value 1.703. Table 1 also shows that determinants, namely cost saving, trust in the security of mobile banking services, physical security, time saving, a safe transaction with feedback on transfer, system availability, speed of transaction and effective handling of complaints are statistically significant and have a positive influence on customer satisfaction; whereas the factor advertisement of the service is not statistically significant which means it has little influence on customer satisfaction. This result contrasts with the study of Jannat and Ahmed where the ineffective advertisement was found to have a negative influence on the customer satisfaction of mobile banking (Jannat and Ahmed, 2015). Lastly, the service charge is seen to have a negative influence on customer satisfaction of mobile banking in the study area.

Explanation of the Model

The coefficients indicate how much the customer satisfaction (dependent variable) changes given a one-unit shift in the independent variable while holding other variables in the model constant. A one unit change in the easy and convenient factor of mobile banking service would change the customer satisfaction by 1.703 units while other variables are held constant. Similarly, the customer satisfaction would change by 1.377, 1.109, 1.108, 1.026, 0.979, 0.937, 0.555 and 0.483 units due to a one unit shift in the determinants i.e. cost saving, trust in the security of mobile banking services, physical security, time saving, safe transaction with feedback on transfer, system availability, speed of transaction and effective handling of complaint respectively. There is no significant relationship between advertisement of service and customer satisfaction in the study area as the regression coefficient of this determinant is seen to be statistically insignificant. The coefficient of the service charge from the model is seen to be negative (- 0.487). A negative coefficient suggests that as the independent variable increases, the dependent variable tends to decrease. So if the service charge increases by one unit, customer satisfaction of mobile banking in the study area will decrease by 0.487 units. This implies that the higher the service charge the lower the customer satisfaction happened.

Problems faced by the mobile banking customers in rural areas

Mobile banking users do face some problems concerning the use of this technology, especially in rural areas. On the basis of practical experiences in the study area eight problems were identified and the respondents were asked to rank the extent of these problems from lowest to highest given as a scale of 1 to 8 according to their perception.

Table 2. Summary of Kruskal–Wallis Test for Customers' Problem in Mobile banking

Problems	Mean	Rank
Not having sufficient experience about mobile banking	451.50	3
Lack of security in transactions	575.50	5
Insufficient Digital Skills	855.50	8
Absence of training facilities to adopt technologies like mobile banking	743.50	7
Receiving fake messages or scams (Phishing)	467.50	4
Inefficient handset operability	294.50	1
Poor network availability	690.50	6
Low transaction limit	405.50	2
Total	1120	
Chi-square	343.842***	
Degree of freedom	7	
Assymp. Sig.	0.000	

1–8: Lowest to Highest *** = Significant at 0.1% level

Source: Author's estimation, 2019

Table 2 indicates that there exist statistically significant differences between the identified problems as the chi-square value (348.842) is significant at the 1% level. Results showed that insufficient digital skills in using mobile banking thoroughly were ranked as the highest problem with the highest mean value. Due to a lack of standard education most of the respondents were digitally challenged and depended on mobile banking agents to perform mobile banking activities properly. This was followed by the absence of training facilities, poor network availability, lack of security in transactions, phishing and insufficient experience. Though a lot more customers may be willing to switch to this digital platform from the traditional way of banking but the mobile banking, education service is limited across our country (Haque, 2014). Strong network availability or internet connection is required for the smooth use of mobile banking, but it was found to be weak and slow in the study area. A study found that those who live in rural area face more difficulties to access mobile banking (Chandran, 2014). Also the problem of phishing and lack of security in transactions has increased in our country which has its effect on the study area. Phishing is the fraudulent attempt to obtain sensitive information such as usernames, passwords and credit card details by disguising oneself as a trustworthy entity in an electronic communication (Rahman, 2010). Recently cyber security and crime division officials reported that some employees of bKash or other mobile banking service providers hand the customer's secret information to the fraudsters (Daily Sun, 2019). On the other hand, low transaction limit and inefficient handset operability were spotted as the minor problems in the study area. Customers except those who received foreign remittances or were big business man didn't find the low transaction limit to be much of a problem. Sometimes handset operability can be an issue as different handsets support different technology, which may lead to complication. As mobile banking users in the study area ranked it as a minor problem, it can be said that their mobile handsets were more or less efficient and operable. Respondents were appealed to suggest some solutions which they thought would resolve the identified problems. In response they proposed for proper training facilities which would enhance their ability to use all the features of mobile banking services more efficiently. The strong and flawless network should be developed to increase the speed of internet connection in rural areas. Also legal steps should be taken against frauds and hackers to safeguard their accounts and privacy.

Mobile banking has been familiar in our country for the past some years. The real potential of mobile banking may be to make basic financial services more reachable to the people living in backward areas. This research might be able to contribute to the limited knowledge available on mobile banking studies in rural perspective. The study analyzed customer satisfaction of mobile banking users and also aimed to point out the major problems regarding this banking system which the people were facing in the rural areas. Results revealed that the easy and convenient factor of mobile banking had the most positive influence on customer satisfaction. On the contrary, the service charge of this mobile based banking had a negative effect on customer satisfaction. Having insufficient digital skills to use mobile banking was the most prevalent problem. Besides this security threat, the inexperience of respondents, the transaction limit also had an impact in regard to this matter. It is needed to provide the customers with appropriate and adequate training services so they can improve their self-efficiency. Robust actions need to be taken to bring the remote areas under strong network connection and internet facilities. Moreover, mobile banking service providers should work towards combating frauds and increasing the security of account holders.

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