

E- Banking and Customer Satisfaction in Bangladesh

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Abstract

In this age of information technology, electronic communication is the cornerstone of a country for its business and economy. Electronic banking is a modern banking system that delivers the new and traditional banking products and services to the customers electronically. Electronic banking systems allow business parties or individual to pay directly or to debit accounts via telecommunication systems. It provides users, working with a home computer attached by network to their bank, with the ability to authorize payments, reconcile accounts, and access a variety of other banking services. This paper reveals the scenario of electronic banking in Bangladesh. The main objectives of the study are to evaluate the customer satisfaction of the service quality and to assess whether e-banking services provided by the institutions are satisfactory to Bangladeshi customers. Six factors are determined which accelerate customer satisfaction, but among those four factors are considered effective influence.

Keywords-Banking, Customer Satisfaction, Bank, Factors, ANOVA

1. Introduction

Electronic banking plays a vital role in the economic development of a country. Due to immense advances of information and communication technology (ICT), it certainly introduced new dimensions for the global E-banking community. It provides some attractive features for the customers than those offered by traditional banking system such as to open an account; it takes less time than traditional system. Other services offered like free fund transfer and free payment cards etc. In case of traditional banking system a fund transfer, for instance, used to take several days whereas electronic banking is capable to perform the same operations within few seconds. Customers are getting better services now because of the development of ICT in E-banking and so bank now can perform its function with high speed and accuracy.

In a constantly changing world of today, where past is replaced by dynamic present and the dynamic present is being replaced by more challenging future, the old ways of doing things is no longer valid. Change is permanent and a reality. Those who are not able to keep pace with the changes are destined to lose the race. Science and technology is changing the way financial institutions perform their transactions. Today's banks are shaking by these technological changes. Life has never been so easy, comfortable, and luxurious. Science and technology have brought our life to this stage. But a new technology brings with it not only the potential for success but also a never-ending series of questions regarding its design, its value to its users, ultimate use and acceptability. E-banking is a form of banking where funds are transferred through an exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments. For many consumers, electronic banking means 24 hours access to cash through an ATM or direct deposit of paychecks in to checking and savings accounts.

Satisfying customers in long term continuing services such as retail banking is very different from satisfying them in single transaction based services such as pay phone, highway toll etc. The fact that meeting customer expectation as a specific service quality dimension can enhance customer satisfaction in such cases (Parasuraman et al., 1985) has been widely supported in past literature (Ueltschyt et al., 2007) mainly developed in the West. Service quality can also boost satisfaction through customer involvement; the more customers perceive a service to be superior, the more is their propensity to get involved with the provider of that service resulting in increased customer satisfaction with the service provider.

2. Research Questions

Research questions which the study will try to get answer are given below:

- i) What are the major service quality dimensions to satisfy the customers in e-banking?
- ii) How much the customers are satisfied in overall?

3. Literature Review

According to Federal Financial Institutions Examination Council, E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain

information on financial products and services through a public or private network, including the Internet. Customers access E-banking services by using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone. Hirst, 1999 said that E-banking or internet banking or online banking are analogous and defined as the conduct of banking services by using electronic delivery channels such as ATM, telebanking and PC banking. Under this banking process, the branches of a bank are connected electronically in such a way so that a client or a customer of a particular bank can draw the money or make deposits anytime anywhere of the country or the world. Large number of banks world-wide offer e-banking/web banking/internet banking, whereby their customers manipulate their personal finances and execute transactions via the internet. Banks and others financial institutions advertise frequently on the significance and convenience of the e-banking facilities. Banks are encouraging their consumers to be benefited from e-banking services. E-banking will soon mature into an offensive business strategy rather than a passive. Earring Wood and Story, 1996 claimed that with the extensive technology innovation and telecommunication, they have seen new financial distribution channels increasing rapidly both in the numbers and form, from ATMs, telephone banking, PC banking to internet banking.

Nyangosi, Arora, Singh (2009) argued that banking through electronic channels has gained increasing popularity in recent years. This system, popularly known as 'e-banking', provides alternatives for faster delivery of banking services to a wide range of customers. Huda, Momen and Ahmed (2004) commented that the banking sector in Bangladesh is clearly recognizing the importance of information technology to their continued success. Mia, Rahman and Debnath (2007) observed that the latest development in marketing financial services by banks is online banking, where banks have now put themselves in the World Wide Web to take advantage of the Internet's power and access to cope with the accelerating pace of change of business environment. Ahmed and Islam (2008) observed that adopting e-banking services, banks in developing countries are faced with strategic options between the choice of delivery channels and the level of sophistication of services provided by these delivery channels. Chandrasekhar and Sonar (2008) depicted that banks will reap the benefits of IT truly and totally, if and only if they pay adequate attention to technological progress as well as efficiencies on the input and output sides. Shamsuddoha (2008) argued that in Bangladesh, banking industry is mature to a great extent than earlier period. It has developed superb image in their various activities including electronic banking. Now modern banking services have launched by some multinationals and new local private commercial banks. Electronic banking is one of the most demanded and latest technologies in banking sector. Rahman(2010) who is the Governor of Bangladesh Bank argued that Bangladesh Bank has achieved a historic milestone in the trade and business arena, departing from conventional banking with the introduction of e-commerce recently; against stride towards digital Bangladesh.

Service literature, comprising empirical studies mostly undertaken in the advanced Western societies, tends to view service quality as a major construct in explaining customer satisfaction. But studies on service quality-customer satisfaction link in the context of traditional societies such as Bangladesh are rather few and sporadic. The current study adopts SERVQUAL (Parasuraman, Zeithaml and Berry, 1985), a tool most widely used by researchers to measure service quality in various services. This research assumed it to play an antecedent role for developing *customer involvement* defined as an individual's stimulation for participating in a goal related object (Andrews *et al.*, 1990). In real life, customers tend to examine their relationships with the service provider on the basis of the extent of their involvement with that firm and then evaluate their satisfaction accordingly (Goodman *et al.*, 1995). The 'confirmation/disconfirmation theory' (Churchill and Surprenant, 1982; Oliver, 1980) views satisfaction as a function of the confirmation of expectations. It implies that fulfillment of the customers' expectations regarding the quality of banking services and level of customer involvement with the bank can produce the desired level of customer satisfaction. Carse, 1999 banks customers' taste and desire have begun to raise the stakes of expectation of exceptional services. Customers want to transact their banking transactions at any time and location convenient for their life-style. They want to pay their regular household bills, buy and sell stocks and shares.

4. Rationale of the study

The study will show how the e-banking services satisfy the customers. The study will also explore that to enjoy the e-banking services a lot of service characteristics should be ensured first by the service provider. Then customer will adopt the systems properly. This research study has done to provide some service quality variables that are liable to satisfy the customers by rendering right services.

5. Objective of the Study

Main objective of the study is to measure the customer satisfaction of level of E-Banking in Bangladesh. Other major objectives are as follows:

- To give the status of electronic banking system in Bangladesh
- To study the importance and impact of service quality and customer satisfaction in E-banking.
- To find the most important dimensions of service quality that affect customer satisfaction in E-banking.

6. Methodology of the study

6.1 Data Source

The study is mainly based on the primary data source and the secondary also. For general concept development about the survey in primary sources and questionnaire used for collecting data about the customer satisfaction in e-banking of commercial banks in Bangladesh.

6.2 Sampling and Sample Size

The study tries to focus on 26 Qualitative Characteristics. Our total study population was unknown and so 400 sample size was taken. The customers were selected by random sampling method.

6.3 Hypothesis

Hypothesis1:

Ho= There is no impact of the combination of six factors (responsiveness, visibility, charges, easiness, reliability, assurance) over the customer satisfaction of E banking in Bangladesh.

Ha= There is impact of the combination of six factors (responsiveness, visibility, charges, easiness, reliability, assurance) over the customer satisfaction of E banking in Bangladesh.

Hypothesis2:

Ho= Responsiveness does not have any impact on the customer satisfaction level over e-banking

Ha = Bank Responsiveness has impact on the customer satisfaction level over e-banking

Hypothesis 3:

Ho= Visibility does not have any impact on the customer satisfaction level over e-banking

Ha = Visibility has impact on the customer satisfaction level over e-banking

Hypothesis 4:

Ho= Charges do not have any impact on the customer satisfaction level over e-banking

Ha = charges have impact on the customer satisfaction level over e-banking

Hypothesis 5:

Ho= Easiness does not have any impact on the customer satisfaction level over e-banking

Ha = Easiness has impact on the customer satisfaction level over e-banking

Hypothesis 6:

Ho= Reliability does not have any impact on the customer satisfaction level of e-banking

Ha = Reliability has impact on the customer satisfaction level of e-banking

Hypothesis

Ho= Assurance does not have any impact on the customer satisfaction level of e-banking

Ha = Assurance has impact on the customer satisfaction level of e-banking.

6.4 Model

We have used the customer satisfaction as the dependent variable and the six dimensions of service quality are namely reliability, responsiveness, assurance, empathy, and tangibles as the independent variables. We have run the multiple Regression model to determine the significance level of the variables for the customer satisfaction in e-banking. The basic model was as follows: Customer satisfaction in e-banking= f (Reliability, Easiness, Charges, Assurance, and Responsiveness).

Basically, CSEB= $\alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$

Where, CSEB= Customer Satisfaction in E-Banking,

X_1 = responsiveness

X_2 = visibility

X_3 = charges

X_4 = easiness

X_5 = reliability

X_6 = assurance

There α is constant and β s are coefficients to estimate, and e is the error term. Customer satisfaction in e-banking is dependent variable and Reliability, Easiness, Charges, Assurance, and Responsiveness.

7. Analysis and Findings

A total of 400 questionnaires were distributed to the respondents. We discarded incomplete questionnaires and considered 382 questionnaires containing all information. Finally sample size was 382 in suitable form. After analyzing the online banking services in the convenient commercial banks in Bangladesh several questions were asked to the different respondents related to the online service & their expectation about it. The following information was gathered which is helpful to observe the customer satisfaction about online banking services. 382 respondents are valuable customers of online banking services. Few demographic & variable questions were asked for taking swift concept about customer satisfaction.

Out of the total respondents 55.2% are in between 19-25yrs and 23.3% are 26-35yrs, 14.5% are in between 36-45 yrs, 4.6% are in between 46 or above yrs. The male was 83.2% and the female was 16.8%, 41.5% are students, 15.7% are business people, 7.3% are self-employed, 12.2% are in managerial level, 10.7% are teachers, 1.9% are in military service and 10.6% do others job (see Chart 1). 44.8% earn below TK.1500, 9.5% earn TK.15000-TK.19999, 11.8% is in the income level of TK.20000-TK.24999, 10.9% earn TK.25000-TK29999, 11.1% earn TK30000-TK.34999, 12% earn above TK.35000 (Chart 2).

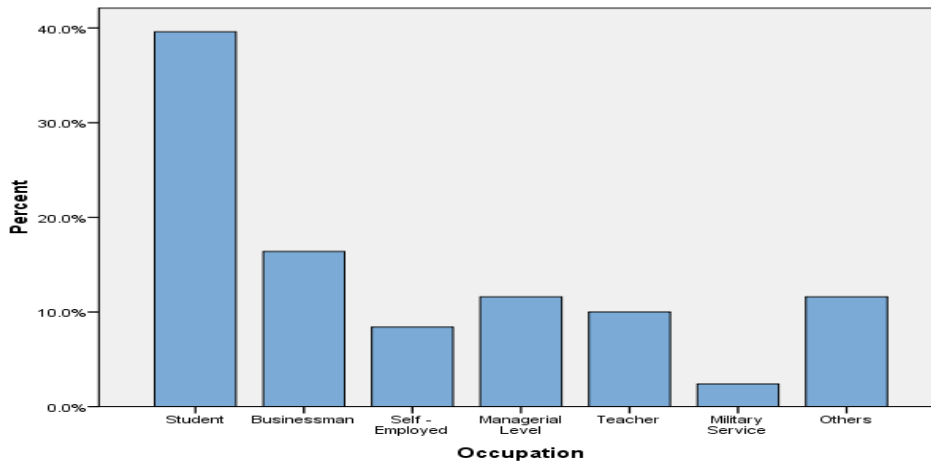


Chart 1: Occupation of Respondents

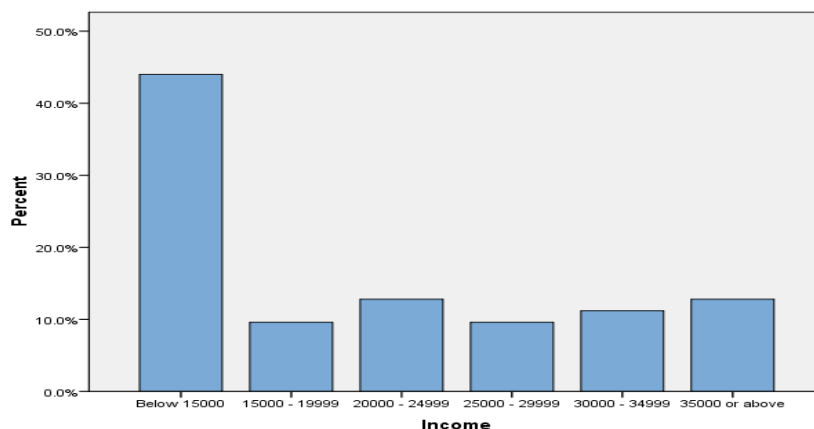


Chart 2: Income Level of Respondents

Table 1 shows the mean value depicting the overall customers satisfaction. As far as this descriptive statistics is concerned, customers' satisfaction on E-Banking is above satisfactory level with a mean value of 3.81 on a 5 point Likert scale. The table also suggests that the main factors on which the customers of E-Banking are generally satisfied. As far as the mean values are concerned, customers are fairly satisfied on Reliability, Easiness, Charges, Assurance, and Responsiveness. This satisfaction comes from quick services, easiness of depositing and withdrawing money, discontinuous function of server, ATM booth, satisfied on equipment, physical facilities, appealing materials etc. The customers are less satisfied on service charges, online service

charges, charges of using another bank ATM booth etc, However a regression analysis is to run to identify those means are above the neutral level of satisfaction and to explain the variables affecting the level of satisfaction in e-banking in Bangladesh.

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Overall Customer Satisfaction	3.81	.778	382
Responsiveness	3.437	0.977	382
Visibility	3.768	0.887	382
Charges	3.043	1.158	382
Easiness	3.597	1.009	382
Reliability	3.337	1.069	382
Assurance	3.703	0.922	382

KMO stands for Kaiser-Meyer-Olkin test (Table 2) is the test of sampling adequacy. That means it examines the appropriateness of factor analysis. If value of KMO is less than .50 it implies that factor analysis may not be appropriate. If it is above .70 that factor analysis will be excellent. Here in the following table the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is .889 which is excellent. That means the sample is adequate to run the factor analysis. Bartlett's Test of Sphericity identifies whether any correlation among variables. According to scree plot we get six factors.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.889
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	2687.900
	325
	.000

From the ANOVA Test it shows (table 4) Sig. value 0.05 is greater than the calculated Sig. value 0.000. It reflects the null hypothesis at 5% level of significance. It means there was a significant correlation between dependent variable and independent variables. Therefore customer satisfaction level depends on quality dimension in different private commercial banks in Bangladesh. But it does not mean that all factors of service quality have significant correlation with customer satisfaction level. The overall predictability of the model is shown in the table 03 above. The adjusted R square value of .449 indicates that the model explains roughly about 45% of the factors responsible for quality in E-Banking. The ANOVA table shown under table 04 depicting significant F values implies that the model and data are well fit in explaining customer satisfaction in E-Banking. Based on the data found in the table 05, it can be interpreted that the independent variables such as responsiveness, visibility, charges and assurance have strong impact on customer satisfaction; hence, the other two variables easiness and reliability were dropped from the final analysis based on 5% significance level.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680 ^a	.462	.449	.578

a. Predictors: (Constant), , Reliability, Easiness, Charges, Assurance, Responsiveness, Visibility

Table 4: ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	69.701	6	11.617	34.815	.000 ^a
Residual	81.083	243	.334		
Total	150.784	249			

a. Predictors: (Constant), Assurance, Reliability, Easiness, Charges, Visibility, Responsiveness

Table 4:ANOVA^b

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a. Predictors: (Constant), Assurance, Reliability, Easiness, Charges, Visibility, Responsiveness

b. Dependent Variable: Overall Customer Satisfaction

Table 5: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.808	.037		104.233	.000
Responsiveness	.193	.037	.248	5.268	.000
Visibility	.391	.037	.503	10.695	.000
Charges	.121	.037	.155	3.292	.001
Easiness	.014	.037	.018	.389	.697
Reliability	.069	.037	.089	1.888	.060
Assurance	.265	.037	.340	7.226	.000

a. Dependent Variable: Overall Customer Satisfaction

From the above findings we can develop the following regression model:

$$CSEB = 3.808 + .193 X_1 + .391 X_2 + .121 X_3 + .265 X_6$$

$$R \text{ square (Adj.)} = .449, F = 34.815$$

Where,

CSEB= Customer satisfaction on E-Banking

X_1 =Responsiveness

X_2 = Visibility

X_3 =Charges and

X_6 = Assurance

Coefficient analysis shows the relationship between dependent variable and each independent variable. The significant value of easiness and reliability is greater than the table significant value .05. That is why they are not included in the regression model. According to Sig. value responsiveness, visibility, charges and assurance has significant correlation with customer satisfaction level. Here, table Sig. value is 0.05 which is greater than calculated value of responsiveness, visibility, charges and assurance. So, these factors have some impact on service quality. Here,

X_1 (Responsiveness) = 0.193 i.e., 100% change in responsiveness leads to 19.3% change in customer satisfaction level.

X_2 (Visibility) = 0.391 i.e., 100% change in responsiveness leads to 39.1% change in customer satisfaction level.

X_3 (Charges) = 0.121 i.e., 100% change in assurance leads to 12.1% change in customer satisfaction level.

X_6 (Assurance) = 0.265 i.e., 100% change in assurance leads to 26.5% change in customer satisfaction level

8. Limitations of the study

There are some limitations for conducting this research are given below:

- Many respondents have a little knowledge about the e-banking services in Bangladesh.
- They have not enough time for responding to the questionnaires.
- Only Dhaka city of Bangladesh has been considered.
- The customers may be biased.

9. Conclusion

In this age of information technology and competitive world, banking sectors should be modernized. In order to keep pace with the changing world we have to replace our traditional banking systems by electronic banking

systems. It has been found that local private and state-owned banks are not doing well as compared to foreign banks. Foreign banks are using new technology and they are earning more. Most of the countries have adopted E-banking and the consumers seem to like the convenience of E-banking despite some continuing hesitancy. The widespread uses of ATMs has paved the way for greater acceptance of other forms of electronic money such as smart cards and POS. direct deposit, and to a lesser extent gaining popularity. In addition, as more people purchase personal computer and use the internet, home banking should become more widely accepted. But a cashless or checkless financial system is still not in the state of foreseeable future.

E-Banking is in its nascent state in Bangladesh. At present, Information Technology (IT) is a subject of widespread interest in Bangladesh. The government has declared IT as thrust sector and set up a vision of Digital Bangladesh in 2021. But Bangladesh has a long way to go in a very short time to enjoy the fruits of information age. It will be only possible when there will be political commitment with better IT infrastructure, internal network, country domain and above all a high speed fiber optic link to the information highway.

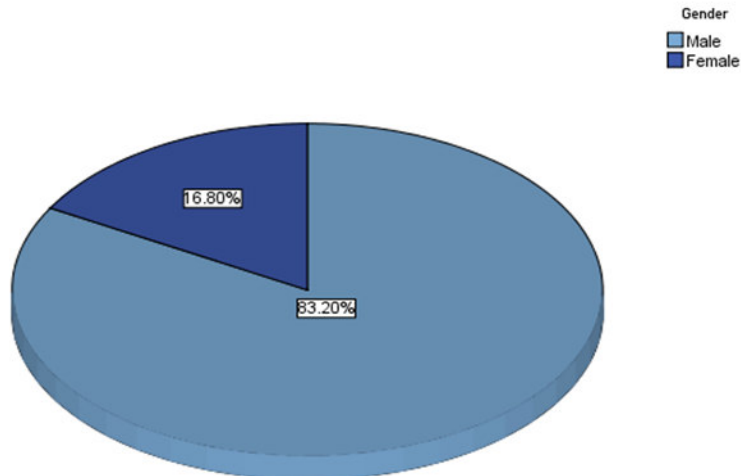
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Appendix

Table 6: Hypothesis Testing

Null Hypothesis	Decision	Description
There is no impact of the combination of six factors (responsiveness, visibility, charges, easiness, reliability, assurance) over the customer satisfaction of E banking in Bangladesh.	Rejected	Here, the significance level .05 is greater than the calculated value .000. So we reject the null hypothesis.
Responsiveness does not have any impact on the customer satisfaction level over e-banking	Rejected	Here, the significance level .05 is greater than the calculated value .000. So we reject the null hypothesis.
Visibility does not have any impact on the customer satisfaction level over e-banking	Rejected	Here, the significance level .05 is greater than the calculated value .000. So we reject the null hypothesis.
Charges do not have any impact on the customer satisfaction level over e-banking	Rejected	Here, the significance level .05 is greater than the calculated value .001. So we reject the null hypothesis.
Easiness does not have any impact on the customer satisfaction level over e-banking	Accepted	Here, the significance level .05 is greater than the calculated value .697. So we accept the null hypothesis.
Reliability does not have any impact on the customer satisfaction level of e-banking	Accepted	Here, the significance level .05 is greater than the calculated value .060. So we accept the null hypothesis.
Assurance does not have any impact on the customer satisfaction level of e-banking	Rejected	Here, the significance level .05 is greater than the calculated value .000. So we reject the null hypothesis.



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