E-Banking in Bangladesh: Influence of Mass Media Communication

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Abstract
This paper sought to analyse the influence of mass communication on customers’ satisfaction regarding e-banking services, for two selected commercial banks in Sylhet city, Bangladesh. One of them is Private Commercial Bank and another one is Government Commercial Bank. A cross sectional survey was used for this research to reach the objectives and hypothesis of the study. Mass media communication is the learning of how individuals exchange information through mass media to large segments of the population at the same time. It is usually assumed to relate newspaper, periodical magazine, and book publishing, as well as radio, television and film, even via internet as these mediums are used for circulating information, news and advertising. Mass media communication is used here as an independent variable and customer satisfaction is considered as dependent variable. Total 250 questionnaires were circulated, out of which 200 were considerable for the study. Respondents are customer from aforesaid banks across Sylhet city of Bangladesh. Binary regression analysis was used to estimate a model for predicting the influence of mass media communication of customer satisfaction in context of e-banking usage in Sylhet city, Bangladesh through SPSS version 22. This paper exemplify that government should ensure the availability media (i.e. Newspaper, Internet, TV, Radio) around the country to aware about development of government’s vision.

Keywords: Binary Logistic analysis; Customers’ Satisfaction; E-banking; Mass Media Communication

Introduction
People are demanding now to have their services promptly with accuracy. Contemporary technology has also changed the service method of different service-oriented organization. E-banking is a new concept for Bangladeshi people especially outside of the capital city. These services are trying to satisfy customers of different banks. Hence, it is essential to inform customers through mass media. It helps to change customer’s choice as they expect from different service provider. By using e-banking services our financial sectors are contributing to develop our economy. Media can help also to change our Gross National Happiness which would be our new concept which already been applied in Bhutan.

Objectives of the Study
The purpose of this study is to conduct a binary logistic analysis of the factors that how mass media communication influences customers’ satisfaction in contexts of e-banking usages in Sylhet city, Bangladesh. The specific purposes are to:

a. To examine the socio-economic characteristics of e-banking users
b. To develop a binary logistic regression model for influence of mass communication
c. To make policy recommendation based on findings

Literature Review
Electronic Banking
Presently, banks are using E-channels to receive instructions and deliver their products and services to their customers. Nevertheless, the ranges of banking services provided by banks over the E-channel vary. Barnett C. [1] There are many researchers and academicians defined E-banking from different corner. This service states to numerous categories of facilities through technological support Entrust [2]. E-banking helps to increase market share of the bank, save their cost and assist the bank
management to achieve the competitive advantages. It ensures the customers prompt service, accurate information, secured transaction, convenience services and etc.

**Mass Media Communication**

Communication is important in the life pattern of human beings and that language has its importance in that context, it is necessary to go into the question of mass media communication which is a unique feature of every industrialized society. Mass media communication is a product of modern technology and one may venture to add that modern man is a product of mass communication in very many ways. ‘Mass media communication’ can be defined as a structure of building contact which is capable of reaching out to huge member and, in fact, to the nation as a whole, with the help of procedural facilities that science affords, so that the basis of such communication remains strictly impersonal. The mass media include, in order of importance, the press, the radio, the motion picture and the television, with magazines and periodicals forming a semi-separate medium by themselves.

**Factors of Mass Media Communication**

It is not as simple an affair as a speaker holding a limited audience on to his speech, and such audience can cross neither the limits of time nor those of space. The mass media have amplified the scope of the broadcast, the telecast or the total number of readers. Even if one takes the roadside hoarding as an example, one would like to consider the number of persons that every day looks it up crossing and re-crossing it on their way. Fabulous potentialities have opened up for the distorted and the seller for selling their ideas or their goods and such agencies as the mass media require, therefore, careful planning and effective control if they are to do any good to the society.

**Customers Satisfaction**

There are multiple definitions of satisfaction have been applied in the business discipline. The wide change in defining the concept of satisfaction is best resolved in their definition of satisfaction as “a summary affective response of varying intensity with a time-specific point of determination and limited duration directed toward focal points of product acquisition and consumption.” We conceptualize satisfaction as a customer’s overall evaluation of a product or service in terms of whether that product or service has met their needs and expectations. Customer satisfaction is a key agent in formation of customer’s desires for future purchase [3]. Additionally, the satisfied customers will probably talk to others about their good understanding and experience. This fact, especially in the Middle Eastern cultures, where the social life has been shaped in a way that social communication with other people enhances the society, is more significant [4]. Customer satisfaction is fundamental to the marketing concept, which holds that satisfying customer needs is the key to generating customer loyalty. Customer satisfaction generally means customer response in the context of the state of fulfilment, and customer adjudication of the fulfilled state [5]. It is defined as an overall negative or positive sense about the net value of services received from a provisional [6]. Kotler [7] described satisfaction as a person’s feeling of enjoyment or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to their expectations. Now we consider the construct of satisfaction in the online context. Anderson and Srinivasan [8] defined electronic satisfaction as the contentment of the customer with respect to their prior purchasing experience with a given electronic commerce [9,10].

**Research Methodology**

By nature, it is a descriptive study. A field survey is done through randomly selected customers in Sylhet city, Bangladesh. A private commercial bank and government bank is selected for the study.

**Sampling and Data Collection**

The research is mainly based on primary data, a source which is examined by using quantitative research methods. This type of research involves hefty samples and structured questionnaire that is then numerically and statistically analysed. Customers of two different banks in Sylhet city who are enjoying any of the E-banking facilities have been considered as respondents or interviewer. Those respondents have been selected through non-probability sampling method i.e. convenience sampling. Total 250 questionnaires were circulated, out of which 200 were considerable for the study. Respondents are from different banks of Sylhet city in Bangladesh. The respondents replied to a questionnaire consisting of some demographic questions as well as questions on each measurement of service quality on five-point Likert Scale.

**Hypothesis**

- H1: Socio-economic Demographic (SD) factors have impact on Customers’ Satisfaction.
- H2: Mass Media Communication (MMC) has impact on Customers’ Satisfaction.

**Conceptual Framework**

To find out the outcome, a framework has been developed where E-banking risks and benefits are independent variable and employee satisfaction is dependent variable. The framework is shown through (figure 1).
Method of Data Analysis

Collected data were analysed and a demographic profile is expressed (Table 1) the respondents detail i.e., Gender, Age, Marital Status, Education, Income, Advertisement and Length of use of e-banking. It is seen that most of the customers are male (78%), most of them are married (58%), their income range is between 40 to 80 thousand taka and the age range of them is 31 to 40 years old which are as below:

| Variable               | Frequency | Percentage |
|------------------------|-----------|------------|
| **Gender**             |           |            |
| Female                 | 43        | 21.5       |
| Male                   | 157       | 78.5       |
| Total                  | 200       | 100.0      |
| **Age**                |           |            |
| 20 to 30yr             | 72        | 36.0       |
| >30 to 40yr            | 93        | 46.5       |
| >40 to 50yr            | 26        | 13.0       |
| over50yr               | 9         | 4.5        |
| Total                  | 200       | 100.0      |
| **Marital Status**     |           |            |
| Single                 | 83        | 41.5       |
| Married                | 117       | 58.5       |
| Total                  | 200       | 100.0      |
| **Educational Qualifications** | | |
| Below SSC              | 1         | 0.5        |
| SSC                    | 7         | 3.5        |
| HSC                    | 34        | 17.0       |
| Graduate               | 65        | 32.5       |
| Post Graduate          | 90        | 45.0       |
| MPhil/PhD/Postdoc      | 3         | 1.5        |
| Total                  | 200       | 100.0      |

| Monthly Income          | Frequency | Percentage |
|-------------------------|-----------|------------|
| Below 35,000            | 47        | 23.5       |
| 36,000 - 40,000         | 53        | 26.5       |
| 41,000 - 80,000         | 45        | 22.5       |
| Above 80,000            | 54        | 27.0       |
| Nil                     | 1         | .5         |
| Total                   | 200       | 100.0      |

| Advertisement           | Frequency | Percentage |
|-------------------------|-----------|------------|
| Yourself                | 56        | 28.0       |
| Advertisement           | 88        | 44.0       |
| Employee                | 47        | 23.5       |
| Other                   | 9         | 4.5        |
| Total                   | 200       | 100.0      |

| Length of usage e-banking | Frequency | Percentage |
|---------------------------|-----------|------------|
| Less than a year          | 65        | 32.5       |
| Between1-3 yrs.           | 60        | 30.0       |
| Between 4-6yrs.           | 50        | 25.0       |
| More than 6yrs.           | 25        | 12.5       |
| Total                     | 200       | 100.0      |

Table 1: Socio-economic characteristics of customers

Binary Logistic Regression Model

Binary Logistic Regression Model is used to find a relationship between a dependent variable “Y” and independent variable “X”. The dependent variable “Y” is a discrete variable which is customers’ feedback, from a set of mutually exclusive choice or categories. Discrete choice models are used to develop models of behavioural choice or of event classification. There are some assumptions about data that need to be satisfied. These include:

a. The interpretations on dependent variable “Y” are assumed to have been randomly sampled from the population of interest. “Y” is caused by “X’s”. The “X’s” are determined by independent variable of the model.

b. There is uncertainty in the relation between “Y” and “X’s”, as reflected by a scattering of observations around the functional relationship.

c. The error distribution terms must be assessed to determine if a selected model is appropriate.

The choice variable, on the other hand, must meet the following three criteria,
a. Category must be predetermined.

b. The set of choices must be mutually exclusive; that is a particular outcome can only be denoted by one choice or classification and

c. The set of choice must be collectively comprehensive, that is all choices or classification must be represented by the choice set or classification.

In binary logistic regression, the dependent variable is a binary or dichotomous, that is, it only contain data coded as 1 (True, Success, Yes etc.) or (False, Failure, No etc). The formula for predicting a logit transformation is given as follows

\[
\text{Logit} (p) = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots + b_k X_k \quad \text{(i)}
\]

where, \( p \) is the probability of presence of the characteristics of interest. The logit transformation is defined as the logged odds:

\[
\text{Odds} = \frac{p}{1-p} \quad \text{(ii)}
\]

\[
\text{logit} (p) = \ln \left( \frac{p}{1-p} \right) \quad \text{(iii)}
\]

The hypothesized, binary logistic regression model for this study is as follows:

\[
\text{Logit} (p) = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + b_8 X_8 + b_9 X_9 + b_{10} X_{10} + b_{11} X_{11} + b_{12} X_{12} \quad \text{(iv)}
\]

Where,

- \( X_1 \) = Gender of respondents
- \( X_2 \) = Age
- \( X_3 \) = Marital Status
- \( X_4 \) = Education
- \( X_5 \) = Appropriate Media
- \( X_6 \) = Completeness
- \( X_7 \) = Concreteness
- \( X_8 \) = Planning
- \( X_9 \) = Timeliness
- \( X_{10} \) = Feedback
- \( X_{11} \) = Availability
- \( X_{12} \) = Ease of Use

**Empirical Results of the Binary Logistic Regression Model**

The empirical results presented in the (Table 2) revealed that Completeness, Concreteness, Planning, Timeliness, Feedback, Availability and Ease of Use are the significant determinants of customer satisfaction regarding e-banking services enjoyed by them. All these are positively correlated with satisfaction. Likewise, Planning and Timeliness are significant but negatively correlated with satisfaction. Furthermore, Gender and Marital Status are insignificant and negatively correlated with satisfaction and Age, Education, and Appropriate Media are also insignificant and positively correlated with satisfaction. This implies that an increase/decrease in these variables will lead to higher probability of satisfaction. The Nagelkerke R Square which is 0.559 implies that about 60% of the variance in satisfaction of e-banking usages. The remaining 40% variance is due to chance and other variables outside the control of the researchers.

| Variable | B     | S.E.  | Wald Statistics | Sig.   | Exp.(B) |
|----------|-------|-------|-----------------|--------|---------|
| \( X_1 \) | -0.145| 0.582 | 0.062           | 0.803  | 0.865   |
| \( X_2 \) | 0.006 | 0.323 | 0.000           | 0.985  | 1.006   |
| \( X_3 \) | -0.255| 0.550 | 0.215           | 0.643  | 0.775   |
| \( X_4 \) | 0.047 | 0.289 | 0.027           | 0.871  | 1.048   |
| \( X_5 \) | 0.089 | 0.250 | 0.126           | 0.722  | 1.093   |
| \( X_6 \) | 0.553 | 0.270 | 4.199           | 0.040  | 1.738   |
| \( X_7 \) | 0.869 | 0.335 | 6.724           | 0.010  | 2.383   |
| \( X_8 \) | -0.395| 0.162 | 5.948           | 0.015  | 0.673   |
| \( X_9 \) | -1.448| 0.593 | 5.968           | 0.015  | 0.235   |
| \( X_{10} \) | 0.651 | 0.233 | 7.821           | 0.005  | 1.918   |
| \( X_{11} \) | 0.726 | 0.251 | 8.382           | 0.004  | 2.067   |
| \( X_{12} \) | 0.470 | 0.220 | 4.565           | 0.033  | 1.600   |
| Constant | -4.107| 1.965 | 4.366           | 0.037  | 0.016   |

Nagelkerke R Square: 0.559, -2 Log likelihood: 142.861, Cox & Snell R Square: 0.393, Degree of freedom: 1, S.E.: Standard Error, * Significant at p < 0.05, ** Significant p < 0.01

**Table 2:** Empirical Results of the Binary Logistic Regression Model.

**Findings and Recommendations**

Based on the findings of this study, the mass media communication has positive impact on customers' satisfaction. It
is seen from the study that planning and appropriate media need to be more appropriate. Those have negative impact on customer satisfaction. Hence it is very important to select appropriate media to promote e-banking to the customers. Simultaneously proper planning is also essential for influences to change or attract customers from one product to another product. More effective planning need to be taken from public and private sector.

Limitation

Sylhet is not that much well developed like Dhaka and Chittagong. Hence, people are not that much well trained and well known about E-banking services. Customers of the banks are not informed about advantages and disadvantaged of e-banking services. Sometimes it is seen from the study that customers are not that much literate about new technology and products or services given by the bank. However, they do not feel comfort to answer as asked for the study.

Future Work

This is a very contemporary issue in context of Bangladesh. More study should start in different areas and different aspect i.e. hospital, university, banking industry, garments sectors and so one. Especially service oriented industry.

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