CUSTOMER PERCEPTION ON ALTERNATIVE DELIVERY CHANNEL (ADC) OF BANKS IN BANGLADESH

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Abstract:

This paper aims at understanding the level of customer's perception on alternative delivery channel of different commercial schedule banks of Bangladesh. Considering the significant development in technology and for sustainability, banking industry in Bangladesh has expanded banking operation through offering different ADCs to attract customers which are ultimately changing the perception of customers in the long run. Based on this reality, data were collected from a survey and a usable sample of 134 was taken for analysis. KAPPA test and multiple regression model is used to analyze the overall consistency of respondent's responses and measurement of consumers' perception. The results of the survey show that visibility, availability, self-security, confidential transaction ability, easiness and simplicity in the procedure of ADC makes it more attractive to consumer. The findings also suggest that security of physical establishment of ADC is vital though banks have given less importance to it. From the study, it is found that in order to change perception and to attract more users to banking; it is not going to be enough to make the system easy to interact with. Banks should develop more secured and private alternative delivery channels that will be reliable to their customers. Thus, management attention might be effectively focused on the development of such sectors that have been properly identified in this research.

Key words: Alternative Delivery Channel, Technological Advancement, Automated Teller Machine (ATM), KAPPA Test.

JEL classification: E58, G21, L22

1. INTRODUCTION

Bank is the integrated part for running business. Recently, economic world has been dependent on banking for sustaining business (Bill Gate, 2008). That indicates that basic functions of banks are explored in two ways i.e. branch oriented banking and branchless banking. Technological adaptation is the dimensional improvement in the banking sector that drive 'the creating and satisfying' the desire of customer in a bank. Branchless banking is the exploration of technological improvement of Banking. In Bangladesh, maximum banks have been adopted technological advancement in their operations considering alternative delivery channel (ADC). Branchless banking as well as alternative delivery channel of banks is first time introduced in Bangladesh by Dutch Bangla Bank Limited (DBBL) in 1991, Alternative delivery channel of different banks are doing well for sustainable banking business in Bangladesh.

2. ALTERNATIVE DELIVERY CHANNEL (ADC): CONCEPTUAL DISCUSSION

Alternative Delivery Channel (ADC) is usually defined as specific distribution channel strategy used for delivering services provided by a bank. This delivery system is conducted without the presence of branches. Basic function of a bank is to collect fund from the depositors and disburse investment to the clients. Generally, cash deposit, cash withdrawal, bill transfer and

payment, cheque receipt for clearing and transfer, speed money transfer, balance information are the basic functions of ADC to do bank has to maintain a specific convenient location, time schedule and human resource oriented framework. In order to make these services more accessible affordable, user-friendly, as needed and secure, practice of ADCS appears to be a frontline customer service at door steps where service providers and customers meet each other anytime anywhere.

United Kingdom (UK) is the earlier pioneer of Alternative delivery channel (ADC). Hongkong and Shanghai Banking Corporation (HSBC) is an innovated entrepreneur to include ADC in its operation in 1989. Generally, HSBC uses ADC for account operation through internet, post, or telephone. This is called technological advancement in the banking sector. At the first time, Dutch Bangla Bank Limited (DBBL) introduced Alternative delivery channel through introducing Automated Teller Machine (ATM) in Bangladesh in 1991. It is mentioned here that second generation bank i.e. Islami Bank Bangladesh Limited (IBBL), Al-Arafah Islami Bank limited (AAIBL), ABIBL (ICB Islami Bank Limited), Arab-Bangla Bank Limited (ABBL), National Bank Limited (NBL), Dutch Bangla Bank Limited (DBBL) etc have developed their banking activities through special banking software based computer operation from the inception of their establishment in Bangladesh in 1983.

3. TOOLS OF ALTERNATIVE DELIVERY CHANNEL

As branchless banking, Alternative delivery channel is the strategic service of mechanism of banking. After technological advancement in the banking, every bank drives using its full effort to develop a pool of customer. For getting competitive advantage, every bank concentrates to provide a set of banking services considering the fact that the satisfaction of customer using various tools of alternative delivery channel i.e. Internet, automated teller machines (ATMs), POS devices, EFTPOS devices and mobile phones. In Bangladesh, generally, there are two types of technical form additional delivery channels i.e. a) Machine based ADC and Mobile Financial Services (MFS).

3.1 MACHINE BASED ADC

Machinery support is the basic form to introduce additional delivery channel in Bangladesh like Automated Teller Machine (ATM) and point of Sale (POS). Generally, Automated Teller Machine (ATM) is an electronic telecommunications device that enables to perform financial transactions, particularly cash withdrawal without having any support of human resource. In Bangladesh, ATM is performed by expanding the internet network. The great contribution of private bank is the introduction of ATM. Public banks are also habituated to adopt technological advancement through incorporating ATM in their services. More than 3000 ATM booths were established for meeting the customer desire in the public and private sector in Bangladesh (Zaman, 2012). Point of Sale (POS) is defined by a retail transaction where a customer makes a payment to the merchant in exchange for goods or after provision of a service. In Bangladesh, POS service is offered by bank considering with ATM booth i.e. FIRST TRACK (Service Extension of Dutch Bangla Bank Limited).

3.2 MOBILE FINANCIAL SERVICE (MFS)

Mobile Financial Services (MFS) is another technological advancement of baking by which customers execute their baking transactions using mobile wireless networks. Mobile banking is more popular in the world expresses in the table 1.

Table 1. Popularity of Mobile Banking in Different Country in the World

Country/Territory	Usage in 2012
Australia	27%
Bangladesh	22%
Canada	22%
China	42%
France	26%
Germany	14%
Hong Kong	41%
India	37%
Mexico	30%
Singapore	38%
South Korea	47%
Spain	34%
Thailand	24%
United Kingdom	26%
United States	32%

Source: CGAP Report-2012

Table 1 indicate that 3.52 million people out of 160 million (22%) in Bangladesh are involve with mobile banking. In this perspective, four mobile operators i.e. Grameen Phone, Airtel, Banglalink and Robi are contributing a lot (Zaman, 2012). In Bangladesh, MFS is used in different brands i.e.

Table 2. MFS of different Banks in Bangladesh

Name of the Bank	Brand of MFS
Islami Bank Bangladesh Limited	M-Cash
BRAC Bank	bKash
Premier Bank Limited	Prime Cash
United Commercial Bank Limited	U-Cash

Source: Annual Report of Different Banks

Out of these five dimensions of MFS, bKash is a popular strategic channel of BRAC Bank to make payments and money transfer services using mobile operators to both the un-banked and the banked people of Bangladesh. This ADC provides secure, convenient and easy way to satisfy the customer on their desire service specifically for cash withdrawal and cash deposit. Customers are able to receive electronic money into their bKash accounts through salary, loan, domestic remittance, and other disbursements and eventually cash-out the electronic money at any of bKash agents or retail points. In the present time, more than 90,000 agents or retail points are engaged to provide bkash services for all classes of people from Teknaf to Tetulia in Bangladesh (Quadir, 2012).

4. PRESENT STATUS OF ALTERNATIVE DELIVERY CHANNEL IN BANGLADESH

From the inception of independence of Bangladesh, it had to improve industrial infrastructure especially in the banking sector through LPG (Liberization–privatization-Generalization) (Ahmed, 1978). Bangladesh Govt. preserves specific budget for ICT sector providing advanced technological support for digitalization in the banking industry. Table 3, Explores the demographical nature of ADC customer in Bangladesh.

**Table 3. Present Scenario of Alternative delivery Channel (ADC)
in the Banking Sector**

Particulars	Statistics
Demography of Bangladesh	
Population	150m
% of Poverty Line	31.50%
% of urban	27%
% of under age 25 Years	60%
Real Scenario of ADC in the Banking Sector	
Numbers of Banks	53
No. of Branches	7,961
ATMs	3000
Bank Accounts	55 million
Mobile Financial Service Accounts	18 million
Mobile Subscribers	89 million
Banks licensed for MFS by Bangladesh Bank	10
Live MFS deployments:	5
Mobile Accounts Opened:	442,269
Appointed Agents	9,093
Total Value of Transactions	BDT 20,700million

Source: Policy Paper of Bangladesh Bank-2012

Telecommunication Regulatory Commission of Bangladesh is the supreme authority to allow technological support to the banks to introduce alternative delivery channel. According to Bangladesh Telecommunication Regulatory Commission Report-2009, following infrastructures have been built in Bangladesh for supporting ADC expressed in the table 4:

Table 4. No. of Network Service Providers in favor of BTRC

Title of the network Service Providers	Frequency
Public switched telephone network	12
Mobile phone operators	6
International Gateway (IGW) operators	28
Interconnection Exchange (ICX) operators	26
International Internet Gateway (IIG) operator	23
Internet Protocol Telephony Service Provider (IPTSP) operators	34
International Terrestrial Cable (ITC) operators	6
Broadband Internet access	7

Source: Bangladesh Telecommunication Regulatory Commission Report-2009

5. REVIEW OF THE LITERATURE

Traditional banking is less important for business world due to the introduction of electronic banking (Roy, 2011). Electronic banking assists to the customer to save and secured their transactions. Allen & Barr (1996) proved that ICT and banking operational performance are closely related. Technological advancement makes customers closer to the bank (Howcroft & Durkin, 2003). Considering the significance of technological advancement, maximum banks and financial institutions in Bangladesh were introduced ICT for integrating of banking service both existing and new (Raihan, 2001). Integration technology assists to the banks for harvesting benefits and making effectiveness in their providing services (Chandrasekhar, 2008; Ali, 2010). Shamsuddoha (2008) mentioned Bangladeshi banking industry has matured to a enormous position and developed fantastic image in their various activities involving the technological advancement in the banking (Ali, 2010). Moreover, more than four decades have passed, Bangladesh has started its banking operation. Though, ADC have been launched in the Bangladeshi Banking Industry about more that two decades above, however, very a few research works have been found in this field of study.

Therefore, this study attempts to find the customers perception on ADC of the schedule banks in Bangladesh.

6. OBJECTIVES OF THE STUDY

This study investigates the perception of alternative delivery channel of existing bank in Bangladesh. In light of the basic objective, the study focuses the following extensions:
1. To measure what extent of alternative delivery channel are used.
2. To determine the factors constructing the perception of customers on alternative delivery channel.

7. THEORETICAL FRAMEWORK

The study uses RATER (Reliability, Assurance, Tangibility, Empathy and Responsiveness) to determine the level of customer's perception on ADC of Bank in Bangladesh. The dimensions of the RATER model for investigating the ADC perception of customers are determine on the basis of modified SERVQUAL model consisting of 23 questions. Some options of these questions are supported by existing literature and some are implied. In this study, a theoretical framework has been constructed expressed in the figure-1:

**Figure-1: Theoretical Framework of consumer's perception
on ADC of Bank in Bangladesh.**
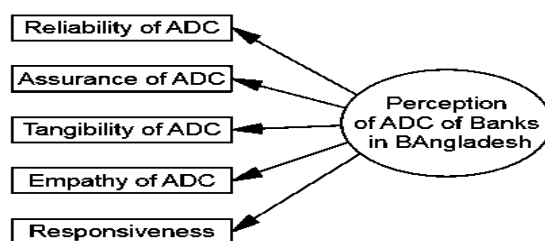
Source: Developed by Authors

8. COLLECTION OF DATA

Primary data and secondary data both are used in the study. Secondary data are used to draw a strong theoretical background and explain the infrastructure as well as technological advancement of additional delivery channel of banks in Bangladesh. Primary data are collected by using a self-administrative questionnaire consisting of basic three sections. The first section was designed to collect the information regarding their demographic and socio-economic characteristics along with some other factors such as gender, marital status, age, education, income level, residence, while second section consists of some specific questions i.e. types of customer, length of relationship with ADC's bank, tools of ADC and reasons behind use ADC of Specific bank. Finally, Section-3 incorporates 23 dimensional questions with five constructs of RATER model. The responses of the respondents were collected by using the Likert non-comparative five-point scale of the range of attitude; from 1-strongly disagree to 5-strongly agree.

A total of 200 questionnaires were distributed for measuring the perception on alternative delivery channel. Out of them, only 134 questionnaires were received (67% response rate) that are useable for analysis. Specifically, questionnaires were distributed to the selective consumers considering the conformation to use ADC. However, the data were collected from Chittagong metropolitan city.

9. STATISTICAL TOOLS USED IN THE STUDY FOR ANALYZING

A set of statistical techniques were used in this study. Descriptive analysis are used to understand the demographical nature of the respondent's as ADC's customers. KAPPA test is also used to analyze the "overall consistency" of the respondent's responses. Data normality distribution is tested using Skewness and kurtosis. Finally, Multiple Regression Model is used in the study to measure the consumer's perception on ADC of Banks in Bangladesh.

10. RESPONDENTS' DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE

Consumer is the optimal direction path of any business organization. So, the demographic characters and socio-economic profile must qualitatively qualify due to the proper justification of respondent's responses (Elangovan, 2011). In this sturdy, the majority of respondents are males (76.12%) followed by female (23.88%) from which is represented by 81% from graduate and post graduate as their education level. In this study, majority portion are come from young group (age from 21-40 years) at 81.27%. It is worth mentioning here that 63% respondents are incorporated in this study whose income level is more than BDT 20,000 per month. This demographic profile indicates the adequate sample representation is existed in this study.

Table 5. Demographic and Socio-Economic Profile of n=134 Respondents

Gender			Religious Status		
Male	102	76.12%	Muslim	117	87.31%
Female	32	23.88%	Others	17	12.69%
Marital Status			**Types of Customer**		
Married	108	80.60%	Depositor	109	81.34%
Unmarried	26	19.40%	Investors	25	18.66%
Residence			**Age of the respondents**		
Urban	97	72.39%	Up to 20 Years	22	16.42%
Rural	37	27.61%	21-30 Years	62	46.27%
Education Level			31-40 Years	47	35.07%
Below HSC	22	16.42%	Over 40 Years	3	2.24%
HSC	31	23.13%	**Income Level**		
Graduate	41	30.60%	Upto BDT 10,000	17	12.69%
Post Graduate	40	29.85%	BDT 10,000-20,000	32	23.88%
Length of Relationship with ADC of respective bank			BDT 20,000-30,000	36	26.87%
			BDT 30,000-40,000	26	19.40%
0-3 Years	41	30.60%	BDT 40,000-50,000	13	9.70%
4-6 Year	66	49.25%	Above BDT 50,000	10	7.17%
7-10 Years	27	20.15%			

Source: Calculated by Authors

11. DESCRIPTIVE STATISTICS

Descriptive statistics of the respondent's responses in their level of agreement on the 23 dimensions are expressed on the table 6 that is used in this study to measure the perception on additional delivery channel of bank on the basis of mean score, standard deviation, skewness and kurtosis.

The mean value of the dimension of ADC shows a stable value ranging from 4.84 to 3.29 (table 6). The standard deviations of these ranging from 0.36 to 1.49 are quiet normal and the values

of Skewness and kurtosis are ranging from -2.47 to -0.17 (not exceed the limit ±3) and -0.03 to 5.70 (not exceed the limit ±8). All the measures of descriptive statistics reveal that the distribution is not widely dispersed and shows the normality of the respondent's scale of agreement.

Table 6. Descriptive Statistics
of the Respondent's Responses on n=134

Dimensions	Mean	STD	Skewness	Kurtosis
Reliability	**4.48**	**0.36**	**-1.91**	**1.67**
Self & Secured	4.84	0.41	-2.47	5.70
Confident	4.70	0.55	-1.69	1.95
Easy & Simple	4.32	0.78	-1.02	0.58
Available Fund	4.12	0.70	-0.17	-0.96
Assurance	**4.04**	**0.80**	**-0.16**	**-1.18**
Quick Transaction	3.78	1.27	-1.12	0.22
More Technological Options	3.48	1.32	-0.68	-0.72
Desirable	3.60	1.36	-0.76	-0.73
Bill Payment Options	3.60	1.41	-0.79	-0.75
Effectively Handle	3.53	1.31	-0.55	-0.98
Tangibility	**3.76**	**0.90**	**-0.07**	**-0.93**
Availability	3.32	1.37	-0.26	-1.39
Attractive	3.42	1.28	-0.41	-1.06
Interior Decoration	3.41	1.36	-0.34	-1.26
Exterior Expression	3.39	1.26	-0.29	-1.18
Communicative	3.29	1.49	-0.36	-1.39
Empathy	**4.01**	**0.64**	**-0.19**	**0.10**
Sophisticate Behavior	3.81	1.12	-0.81	-0.40
Reception	3.51	1.30	-0.39	-1.20
Favorable Environment	3.34	1.29	-0.29	-1.13
Convenient Location	3.68	1.23	-0.89	-0.25
Relation with 3rd Party	3.81	1.20	-0.89	-0.33
Responsiveness	**4.10**	**0.80**	**-0.18**	**-1.43**
Common for all	3.52	1.37	-0.67	-0.86
Cost Incentive	3.54	1.29	-0.72	-0.61
Minimum Balance Limit	3.96	1.11	-0.99	-0.03
Social Living Standard	3.87	1.17	-0.93	0.02

Source: Calculated by Authors

12. KAPPA ANALYSIS

The study is primary data based exploratory research. Likert 5 scale non-comparative tool is used in this study. 134 samples are used in this study using moderate dimensions RATER model proposed by Parasuraman (1990) under SERVQUAL model. Under RATER Model, Reliability, assurance, tangibility, empathy and responsiveness are constructed by 4, 5, 5, 5 and 4 dimensions respectively. Considering the research nature, the study attempts to use Kappa coefficient for justifying the validity of the data used in this study. Using Cohen (1960) guidelines, the study found that value of Kappa Statistics is 0.63 (k = 0.63) that indicate the substantial positions of respondents agreement (Viera, 2005).

13. CONSUMER PERCEPTION ON ADC

The study attempts to measure the customer's perception on ADC of Bank in Bangladesh considering multiple regression effect. In this regards, the following functional relationship is considered:

$P_{ADC} = f(R,A,T,E,R)$

Where:

P_{ADC} = Customer's perception on ADC

R, A, T, E, R = Dimensions of service quality.

Thus the multiple equation is assumed fit for the regression as

$P_{ADC} = \alpha + \beta_1 \, Rel + \beta_2 \, Asu + \beta_3 \, Tan + \beta_4 \, Emp + \beta_5 \, Res + \varepsilon$ … (i)

Rel (R) = Reliability

Asu (A) = Assurance

Tan (T) = Tangibility

Emp (E) = Empathy

Res (R) = Responsiveness

And α, β_1, β_2, β_3, β_4, β_5 are constants and ε indicates as sample error.

Table-7 explores outputs of regression effect of RATER on ADC in the banking sector of Bangladesh considering standard weight (B), standard error (S.E.), t-value with significance, p-value, F-statistics, R^2 & adjusted R^2 and D-W value.

Table 7. Summary of Statistics Determining Independent Variable Perception of ADC of Bank in Bangladesh Considering Regression Effect

Dimensions of ADC	Standardized Weight (B)	S.E.	t-value	p-value
(Constant)	0.912	0.256	3.567	0.001
Reliability (Rel)	0.118	0.052	2.916	0.004
Assurance (Asu)	0.204	0.029	4.097	0.000
Tangibility (Tan)	0.495	0.023	11.164	0.000
Empathy (Emp)	0.260	0.034	5.521	0.000
Responsiveness (Res)	0.181	0.029	3.645	0.000
F-Statistics =	108.870 (0.000)			
R Square =	0.810			
Adjusted R Square =	0.802			
D-W =	2.029			

ADC had started its operation with technological advancement in Bangladesh from 1991. There are four module of ADC survived in Bangladesh consisting 3000 ATM Booths and more than 0.5 million registered clients. Therefore, general proposition regarding ADC is truly justified that mean service quality dimensions, RATER are existed in the performance of ADC in Bangladesh. This proposition is reflected in the table-7 but in a disappointed position i.e. $\boldsymbol{\alpha}_{ADC} = 0.912$ (P = .001<0.05). The value of F-statistics (F= 108.870 with p=0.000) indicates indifferent nature of the factors, $R^2= 0.810$ expresses the standard sample representation and D-W shows no evidence of auto-colinearity in this model. Considering the results from table-7, the following model can constructed for ADC of Banks in Bangladesh:

$P_{ADC} = 0.912 + 0.118 \, \textbf{Rel} + 0.204 \, \textbf{Asu} + 0.495 \, \textbf{Tan} + 0.260 \, \textbf{Emp} + 0.181 \, \textbf{Res}$ …(ii)

Equation-(ii) indicates that perception on ADC performance in Bangladesh exist in a disappointed position where tangibility nature of ADC is the most effective factor ($\beta_{Tan}= 0.495$) followed by

empathy (β_{Emp}= 0.260), assurance (β_{Asu}= 0.204), responsiveness (β_{Res}= 0.181) and reliability (β_{Rel}= 0.118). All coefficents of regression value are significant at 5% level.

14. OBSERVATIONAL FINDINGS

The study observes some specific finding analyzing the respondent's perception to use different ADC of bank. Observations are mentioned in the bellows:

    i.   Visibility of alternative delivery channel is fit enough to draw more attention of customers.

    ii.   Self & Secured, Confident transaction, Easy & Simple procedure and availability are the most attractive nature of ADC in Bangladesh.

    iii.   Minimum Balance Limit (specially zero balance for student), meaning of Social Living Standard, professional Behavior of people in the ADC management, Quick Transaction, Convenient Location, Desirability, Bill Payment Options, Cost Incentives, indifferent facility for all, Reception in ADC cell, Available Fund are more favorable factors to draw the positive attention to customers, and

    iv.   Finally, More Technological Options, Interior Decoration, Exterior Expression, Favorable Environment, Availability, Communicative nature of ADC are less effective factors to accept the performance of ADC in Bangladesh.

    v.   It should mention here that security of physical establishment of ADC is the important factor but not existed in Bangladesh.

15. CONCLUSION

Banks plays a vital role in the economic development of any country. Every bank tries to develop a strong pool of customer. In Bangladesh, a comprehensive and competitive situation exists due to the introduction of technological advancement. More over, systematic advancement is another source to create more competitive situation in Bangladesh i.e. Interest Free Banking System (IFBS). Therefore, for sustaining the business operation, bank is not important issue as banking. In that scale, additional delivery channel (ADC) is the technological advancement to survive the banking.

Tangibility is one of the important effective factors to attract customer in ADC followed by empathy, assurance, responsiveness and reliability. In dimensional analysis, general proposition of ADC quality is performed to develop ADC in Bangladesh. Security of ADC infrastructure is the problematic issue to its expansion in Bangladesh. For proper adoption of ADC, it requires social consciousness to understand the significance of ADC. In light of consciousness, contribution of legal force is much significant to maintain the infrastructure security as well as the social security of banking. ADC is contemporary technological advanced system of banking that assists business environment for digitalization of economic services in Bangladesh.

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