

Factors Affecting Customers' Satisfaction of Mobile Phone Subscribers: An Empirical Study on Mobile Telecommunication Industry in Bangladesh

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Received: March 22, 2016

Accepted: April 11, 2016

Online Published: May 22, 2016

doi:10.5539/ijbm.v11n6p252

URL: <http://dx.doi.org/10.5539/ijbm.v11n6p252>

Abstract

In today's complex business environment, identification of factors affecting customer satisfaction is one of the paramount concerns for the marketing scholars and marketers. This study seeks to explore customer satisfaction and its influencing factors on the mobile telecommunication industry in Bangladesh. As per BTRC, the numbers of mobile phone subscribers are more than 134 million at the end of December, 2015 in Bangladesh. Due to the stiff competition, companies are trying to capture the maximum market share by introducing different new packages, promotional offers and value added services to satisfy the customer's needs, wants and demands. The existing literature suggests factors such as, price, network quality, product diversity and facilities for the subscribers influence customers' satisfaction on mobile telecommunication industry. The results of this study signify that all of the identifying factors are significantly and positively correlated with overall customer satisfaction level of Bangladeshi mobile telecom industry. The findings of this study suggest that mobile operators should develop appropriate strategies by taking into consideration of their strengths in satisfying their subscribers as well as by overcoming of their weaknesses by learning from each other services.

Keywords: customer satisfaction, mobile operators, mobile phone subscriber

1. Introduction

Mobile or Cell phone is such a vehicle that made the communication easier for the urban and rural people. This sector is showing an inspiring growth in last few decades. Bangladesh is the third biggest telecom market in Asia after China and India. Presently, there are six mobile phone operators operating in Bangladesh namely: Grameen Phone (GP), Banglalink, Robi (Aktel), Teletalk (state-owned company), Airtel (Warid) and City cell. The numbers of mobile phone subscribers are more than 134 million at the end of December, 2015 in Bangladesh (see BTRC web).

The Mobile phone operators in Bangladesh are competing with each other to capture a major portion of market share. The operators offering different new packages, voice services, promotional offers, value added services including SMS (short message service), MMS (multimedia message service), ringtone, games, electronic transaction, and web browsing etc.

As competition has escalated among the operators, it is necessary for them to learn about the customer's perception regarding the service quality, brand image, and customer's satisfaction. However, very few researcher paid attention to this industry to judge customer perception and satisfaction issues in telecom industry, and there is no available measurement scales for service quality, especially in Bangladesh. This study attempts to design the measurement scales for factors that affects customer satisfaction for mobile telecommunication industry in Bangladesh.

As it is highly competitive market, customer satisfaction becomes vital issues to retain the existing customer and attract potential customers. Failure to satisfy customer 'will result to switch customers to other operators.

1.1 Competitive Position Bangladesh Telecommunication Industry

The mobile telecommunication industry of Bangladesh is operating towards high market penetration rate. This industry has been reaching its maturity stage in telecommunication business with 2G network services. However,

3G network services has recently been introduced in our country. The aggressive competition in telecommunication industry has forced the incumbent mobile operators to reconfigure their strategy and business to sustain or improve their competitive advantages. All of them compete with each other to grab customers by providing wide range of services based on customers demand.

Bangladesh Telecommunication Regulatory Commission (BTRC) is the regulatory authority for this sector, overseeing licensing, policy etc. According to BTRC the number of mobile phone users has reached at 134 million at the end of December, 2015 in Bangladesh.

Table 1. Competitive position Bangladesh telecommunication industry

Operators	Active Subscriber (in Millions)	Comparative market share percentage
Grameen phone	56.679	42.39 %
Banglalink,	32.865	24.58 %
Robi	28.317	21.18 %
Airtel	10.710	8.01%
City cell	1.007	0.75 %
Teletalk.	4.143	3.30 %
Total	133.720	100%

Source: BTRC website (<http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-december-2015>).

1.2 Objectives of the Study

The objectives of the study are:

Broad objective: To explore the critical factors mostly influencing the level of satisfaction of the mobile phone users in Bangladesh.

Specific objectives: To attain the broad objective, the following specific objectives will be pursued.

- To measure customers perception regarding telecommunication services in Bangladesh.
- To make some recommendations to the mobile phone service providers for the improvement of service quality from the users standpoint.

2. Literature Review

2.1 Customer Satisfaction

According to WTO (1985) customer satisfaction is a psychological concept that involves the feeling of well-being and pleasure that result from obtaining what one hopes for and expects from an appealing product and/or service. Homburg and Bruhn (1998) stated customer satisfaction as an experience-based evaluation made by the customers by comparing the actual level of service obtained with that of their expectations. In addition to, Parker and Mathews (2001) suggest two basic definitional approaches for the customer satisfaction concept. The first approach defines satisfaction as a process, while the second approach refers to the outcomes of a consumption experience. Additionally, Olson and Dover (1979); Zeithaml et al. (1990) defined process approach as an evaluation between the expected result and the anticipated result. Oliver (1993) and Vavra (1997) affirmed the outcome approach of customer satisfaction as the end-state result experiencing from the consumption of a particular good, service or idea. This end state may be a cognitive state of reward, emotional response following-on from the experience or a comparison between rewards and costs to the anticipated consequences.

In substance, customer satisfaction is not a universal phenomenon and they do not enjoy the same service experience by consuming a particular commodity, service or idea due to variations of their needs, objectives and past experiences that influence their expectations.

2.2 Factors Influencing Customer Satisfaction

In this context, Researchers have identified various factors which mostly affect the level of satisfaction of the mobile phone users.

2.2.1 Price/Call rate

According to Kotler and Armstrong (2010) price is an amount of money charged for a product or service. Chakraborty and Sengupta (2014), Santouridis and Trivellas (2010) found pricing structure is one of the major

determinants of affecting customer satisfaction for any organization to build a sustainable competitive differentiation. Customer satisfaction are normally measured based on the desired services and price level they are willing to pay for. Additionally, customer satisfaction is closely related with fair pricing on product or a service that leads to customer loyalty towards organization (Martin-Consuegra et al., 2007). Similarly, both price level and price fairness influences on customer satisfaction (Hermann et al., 2007; Malina Hanum et al., 2012)

According to Lommeruda and Sorgard (2003) telecommunications services are undifferentiated products and therefore, mobile phone subscribers will be willing to pay for services only when they are satisfied, otherwise, they will switch to another operator. As a result the customers will look for their value for the money they are willing to pay for their desired services from the mobile phone operators. Consequently, Customer satisfaction varies on different types of tariff (net tariff, off net tariff and FNF tariff) charged by the mobile phone operators. There the hypothesis would be

H1: Customer satisfaction depends on the price level on different tariff.

2.2.2 Network Quality

Network quality measures signal of mobile phone network coverage, required time to connect from caller number to receiver dialed number, frequency of call drops, level of voice clarity and time duration of sending and receiving of short messages.

Negi (2009) and Rahman et al. (2011) acknowledged network quality as one of the relevant factors in terms of evaluating service quality in determining the overall customer satisfaction. According to Chen et al. (2011) poor network quality can leads to less costumer satisfactions on mobile phone operators, subsequently that increases the number of complaints against the operators.

Chen, Y Lu, Gupta, Xiaolin (2014) conducted a survey on 783 mobile subscribers in China. The results of the study showed that low quality network service creates more dissatisfaction among mobile phone subscribers and increase the tendency to switch to the other network operators. Similarly, both the network quality and fair pricing have significant influence to choose the mobile operators as service provider (Khan & Afsheen, 2012). Thus, low network quality increasers the more number of complaints which undoubtedly lead to high customer dissatisfaction. In this regard, mobile operators must have to ensure strong network quality to satisfy their subscribers. Therefore, the hypothesis would be:

H2: Customer satisfaction depends on the level of Network quality.

2.2.3 Product/Service Diversity and Customers' Facility

According to Berger et al. (2007) product or service variety and customers' facility have significant positive influence on brand choice based on the principle of 'the more, the better'. In addition, customers' satisfaction generally depends on wider array of product or services and facilities offered by the marketers regardless of conditions remain constant. Dirisu et al. (2013) also conclude that customers' satisfaction is closely related with product diversity. Moreover, customers are willing to pay more for products if that are capable to meet their desire expectation like: size, style, taste, need or expression. In addition, product diversity and customers' facility have greater influence on customers, especially young people, who looks past pricing for the value generated from products or services, also depends on distinguishing features of that particular product or service (Kodama, (2011). Value added services and promotional offers have the capability to distinguish the service features than competitors. According to the Ahmed Shamsad (2014) the value added services and promotional offers like: Ring tones, SMS, MMS, credit transfer, Bonus have significant influence on customers' satisfaction but Welcome Tune, mobile jokes, occasional gifts do not have much influence on customers' satisfaction. However, value added and promotional offers not merely includes above factors but other factors like: Tele-medicine, sports news (match alerts), religious verse, banking information alerts, ticketing, travel and holiday bookings, music on demand, stock portfolio message etc.

Thus, product differentiation and customers' facility (availability of recharge, Bill payment system, customer care facility, number of FNF: Friends and Family) strategy can be used as powerful tool of competitive advantage adopted by organizations for offering products to the customers that satisfy individual customer's needs. However, the degree of competitiveness of the telecommunication sector, including variations of services and facilities as well as the degree of customization, may influence customers' satisfaction level and subsequently their brand choice. Therefore, the hypotheses would be:

H3: Customer satisfaction depends on product diversity.

H4: Facilities for customers influence customer satisfaction.

3. Research Methodology

3.1 Sampling Design

To conduct the study judgmental sampling method is used for designing sample and collecting data, as the respondents are limited to mobile phone subscribers subscribed in Bangladesh Telecommunication Industry. For data collection purposes a self-reporting semi structured questionnaire distributed among 250 respondents having different ages, professions, and income levels. However, 200 respondents respond positively and analyzed to get the research output.

3.2 The Questionnaire

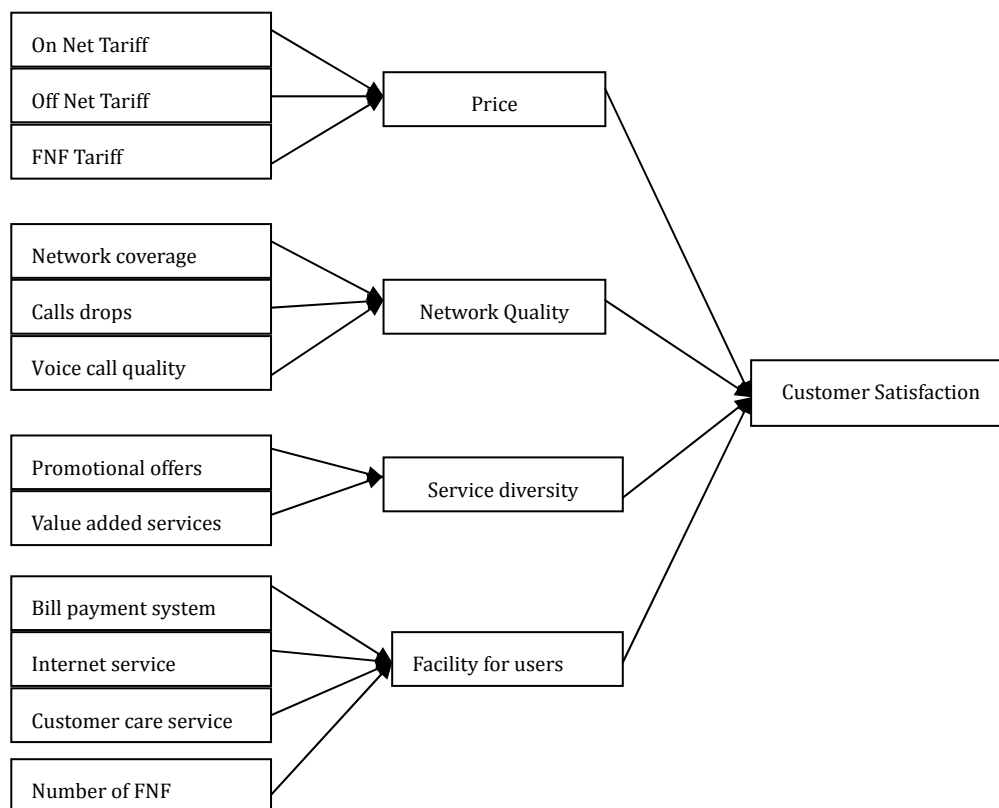
The questionnaire contains three sections regarding respondents' personal information, their satisfaction, observation and suggestions.

Section A (Personal Information): This section contains personal information of the respondents such as gender, age, occupation, income level etc.

Section B (Satisfaction Measurement Questions): This section contains different independent variables and sub variables namely: price, network quality, product diversity, facilities for the customers. To measure customer satisfaction five point Likert scales ranging from (1) "Highly dissatisfied" to (5) "Highly Satisfied" is used. The questionnaire designed in Bengali language in order to get exact responses from the respondents as the respondents native language is Bangla. Choosing other language like English may lead to inaccurate response due to the difficulty in understanding the questions from the respondents' point of view.

Section C (Other questions): This section contains five other related questions for collecting data regarding customers' observation and suggestions for the improvement of service quality.

3.3 Research Model



4. Analysis and Findings

4.1 Impact of Price Level on Customer's Satisfaction

The below table describes the impact of price level on customer's satisfaction. The study represents that 54%

customers are satisfied on net tariff, whereas 43% users are satisfied on off net tariff. However, maximum numbers of customers (59%) are satisfied on the call rate charged by the operators for calling on FNF tariff.

Table 2. Impact of price level on customer's satisfaction

Factors	Satisfied	(%)	Dissatisfied	(%)
Net Tariff	108	54	92	46
Off Net Tariff	86	43	114	57
FNF Tariff	118	59	82	82

Frequency Table 2: Impact of price level on customer's satisfaction

The Results on Linear regression and Testing H1

After conducting the ANOVA test on independent variable (price) and dependent variable (number of customer) it is evident that there is a significant relationship between price level and customer's satisfaction. As the p value is 0.000 which is less than .05, thus, the test supports the hypothesis 1 and proves that the lower price level (call rate on different tariffs) leads higher customer's satisfaction.

Table 3. Statistics

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	563367.500	3	187789.167	356.369	.000 ^a
	Residual	103282.500	196	526.952		
	Total	666650.000	199			

a. Predictors: (Constant), FNF Tariff, Off net tariff, Net Tariff.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	159.500	2.358		67.638	.000
	Off net tariff	-51.011	4.977	-.432	-10.249	.000
	Net Tariff	-19.875	7.028	-.172	-2.828	.005
	FNF Tariff	-48.500	5.997	-.413	-8.088	.000

a. Dependent Variable: No of Customer.

4.2 Impact of Network Quality on Customer's Satisfaction

Below table shows the impact of network quality on customer's satisfaction. The study represents that 64.5% customers are satisfied on network coverage, whereas only 44.5% users are satisfied on voice call quality. However, maximum numbers of customers (59.5%) are dissatisfied on frequent call drops at the time of conversation among users. According to the mobile users' point of view, the higher the network quality ensured by the mobile operators, the higher will be their satisfaction level.

Table 4. Impact of network quality on customer's satisfaction

Factors	Satisfied	Percentage (%)	Dissatisfied	Percentage (%)
Network coverage	129	64.5	71	35.5
Call drops	81	40.5	119	59.5
Voice call quality	89	44.5	111	55.5

The Results on Linear regression and Testing H2

After conducting the ANOVA test on independent variable (network quality) and dependent variable (number of customer) it is found that there is a significant relationship between network quality and customer's satisfaction. As the p value is 0.000 which is less than .05, thus, the test supports the hypothesis 2 and proves that the more quality full network ensured by the mobile operators leads higher customer's satisfaction.

Table 5. Statistics

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	587178.000	3	195726.000	482.715	.000 ^a
	Residual	79472.000	196	405.469		
	Total	666650.000	199			

a. Predictors: (Constant), Voice call quality, Network coverage, Call drops.

b. Dependent Variable: No of Customer.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	165.000	2.390		69.045	.000
	Network coverage	-55.500	3.981	-.460	-13.942	.000
	Call drops	-44.500	7.463	-.378	-5.963	.000
	Voice call quality	-24.000	7.799	-.207	-3.077	.002

a. Dependent Variable: No of Customer.

4.3 Impact of Product Diversity on Customer's Satisfaction

Below table shows the impact of product diversity on customer's satisfaction in the mobile telecom industry in Bangladesh. The study represents that only 35% customers are satisfied on promotional offers, whereas only 40% users are satisfied on value added services. According to the mobile users' point of view, the higher the promotional offers and value added services offered to them by the mobile operators, the more scope they will get to enjoy these facilities, the higher will be their satisfaction level.

Table 6. Impact of product diversity on customer's satisfaction

Factors	Satisfied	Percentage (%)	Dissatisfied	Percentage (%)
Promotional offer	70	35	130	65
Value added services	80	40	120	60

The Results on Linear regression and Testing H3

After conducting the ANOVA test on independent variable (product diversity) and dependent variable (number of customer) it is found that there is a significant relationship between product diversity and customer's satisfaction. As the p value is 0.000 which is less than .05, thus, the test supports the hypothesis 3 and proves that the more variations on promotional offers and value added services offered by the mobile operators leads higher customer's satisfaction.

Table 7. Statistics

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	494000.000	2	247000.000	281.836	.000 ^a
	Residual	172650.000	197	876.396		
	Total	666650.000	199			

a. Predictors: (Constant), Value added services , Promotional offer

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	140.500	2.702		51.990	.000
	Promotional offer	-40.000	10.008	-.330	-3.997	.000
	Value added services	-65.000	9.744	-.552	-6.671	.000

a. Dependent Variable: No of Customer.

4.4 Impact of Facilities to the Customers on Customer's Satisfaction

Table 8 is indicating the influence of facilities to the customers on customer's satisfaction. The study represents that maximum (65%) customers are satisfied on bill payment systems, whereas 60% users are satisfied on the number of FNF for enjoying FNF tariff call rate which is significantly lower than that of normal tariff. In addition to, only 45% users are satisfied regarding customers care facilities. However, maximum numbers of customers (59%) are dissatisfied on internet service facilities. According to the mobile users' point of view, the more of these facilities offered to them by the operators, the more comfortably they can enjoy mobile services, the higher will be their satisfaction level.

Table 8. Facility for the customers

Factor	Satisfied	%	Dissatisfied	%
Bill payment system	130	65	70	35
Internet service	82	41	118	59
Customer care	90	45	110	55
No. of FNF	120	60	80	40

The Results on Linear regression and Testing H4

After conducting the ANOVA test on depended variable (facilities for the customers) and independent variable (number of customer) it is found that there is a significant relationship between facilities and customer's satisfaction. As the p value is 0.000 which is less than .05, thus, the test supports the hypothesis 4 and proves that the more facilities to the mobile users ensured by the mobile operators leads higher customer's satisfaction.

Table 9. ANOVA test

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	589760.000	4	147440.000	373.921	.000 ^a
	Residual	76890.000	195	394.308		
	Total	666650.000	199			

a. Predictors: (Constant), Internet service, Bill payment system, No. of FNF, Customer care.

b. Dependent Variable: No of Customer.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	165.500	2.373		69.732	.000
	Internet service	-45.000	7.355	-.383	-6.118	.000
	Customer care	-19.000	7.901	-.164	-2.405	.017
	No. of FNF	-20.000	7.251	-.170	-2.758	.006
	Bill payment system	-40.000	6.713	-.330	-5.959	.000

a. Dependent Variable: No of Customer.

5. Conclusions

Telecommunication industry facilities the communication process much easier than ever before in Bangladesh as using cell phone now become a part of the country's culture across the society. In today's complex business environment, customer satisfaction plays a vital role to capture the market share. Change of customers' demand is a continuous process, mobile service providers should carry on research continuously for finding the best possible way of satisfying the customers. Otherwise, it will not be possible for the operators to retain the existing subscribers and to attract the potential users.

This study has been conducted for measuring the critical factors affecting customers' satisfaction. Data has been collected from 250 respondents by using a semi-structured based questionnaire. However; we are able to get positive response from 200 respondents in this regard. Researchers follow the judgment sampling method to confine specific people in order to collect desired information for this study. 5-point Likert type scale has been applied for collecting data on four main factors and sub factors.

To analyze data, researchers have used Microsoft excel and SPSS as statistical tools. The results of the study found that all of the identifying factors (price, network quality, product diversity, and facilities for the customers) are significantly and positively correlated with overall customer satisfaction level in the telecom industry of Bangladesh.

The study suggest that mobile service providers should develop appropriate marketing strategies by taking into consideration of price level (lower call rate for net tariff, off net tariff, FNF tariff), network quality(strong network coverage, infrequent call drops, minimum time required for dialing numbers, voice clarity), product diversity (increasing promotional offers and value added services), and facilities for the customers (easy recharge facility, easy utility bills payments, more number of FNFs, higher speed in internet service, efficient customer care service).

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