



CUSTOMER RETENTION AND TELECOMMUNICATIONS SERVICES IN BANGLADESH



 **Md. Alamgir Hossain^{1*}**

¹Assistant Professor, Department of Management, Hajee Mohammad Danesh Science and Technology University, Bangladesh

Email: shamimru@gmail.com Tel: +821095312833

 **Md. Rakeullah Chowdhury²**

²Lecturer, Faculty of Business Administration, Metropolitan University, Sylhet, Bangladesh

Email: raki@metrouni.edu.bd Tel: +8801722135771

 **Nusrat Jahan³**

³Masters' Student, Department of Business Administration, College of Commerce, Chonbuk National University, South Korea

Email: njdisha.bd@gmail.com Tel: +821042062321



(+ Corresponding author)

ABSTRACT

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The telecommunication service in Bangladesh entered into a new transition period of its growth. The industry is moving its strategic focus on attracting new customer rather than retaining existing one through customer satisfaction strategy, referring as a fundamental marketing strategy during the past few decades. The study aims to explore the antecedents of customer satisfaction and retention behavior. Current study applies structural equation modeling via partial least squares with samples of 245 subscribers from 5 telecommunication service companies. The findings support the importance of customer satisfaction in building buyer-seller relationship, and reveal customer retention is the precursor of company's profit. The study's contribution to the literature is to scrutinize, empirically, the main antecedents of this endogenous variable in greater depth.

Contribution/ Originality: This study documents the growing importance of customer behavioral intentions toward mobile telecommunications service industry in emerging country, thereby it provides useful insights concerning the potential benefits associated with using customer retention strategies.

1. INTRODUCTION

Globally, telecommunication system has turned into the enormously competitive owing the liberalization of communication system to gear up the communication process. To maintain the success in the competitive telecommunication business, effort should be made by the telecommunication companies to learn the consumer needs, and serve that needs smarter than competition in order to attaining customer loyalty.

Mobile telephony market is recklessly increasing marketplace slice of telecommunications. Nowadays, mobile communication has become not only the strongest way of communication but also a juncture to connect the crowds to wide range of services. This mobile telephony became boost up by the inauguration of 3G (3rd generation) or 4G (4th generation) with a faster data services resulting in the outstanding development in network roll-outs amongst the telecommunication companies. Correspondingly, this finest technology development results in enormous increase in smart phone subscribers. Mobile communication services are awe-inspiring phenomena, as it becomes prevalent in daily life and capabilities look like more than desktop computers (Al-Debei and Al-Lozi, 2014).

However, a greater number of objections are accounted for poor service quality by the mobile subscribers. Operators are continuously upgrading their service quality and meet the customer needs and want to achieve their targets. Accordingly, mobile telephony companies are trying to retain existing profitable consumers as well as provide attractive pricing plan and apparent service quality to attract the potential consumers. To retain the market share, mobile communication becomes the dominant competitive tool for the mobile service providers. Customer satisfaction and loyalty metrics have been prejudiced by the degree of service quality (Bhatti *et al.*, 2016). According to Mittal and Argrawal (2016) consumer loyalty is measured by the relationship of quality, trust, price, image, etc. Almost consumers switch their existing subscriber due to dissatisfaction and opposite direction would become due to the satisfaction. Consequently, once consumer satisfaction has achieved, consumer would become loyal to their existing subscriber.

Mobile communications have spread promptly throughout the Bangladesh during the past decades, making it the main form of communication. This country remains one of the largest telecom market segments in Asia. Presently, five major players are operating their businesses in this country holding 130 million subscribers at the end of February, 2017 (BTRC, 2017). Surprisingly, the total number of subscribers was 87 million in 2012. 43 million of subscribers have increased during these 5 years which illustrate the fertility of this market segment.

Table-1. Market share of telecommunication companies

Operator	Subscriber (in 2012)	Subscriber (in 2017)	Market share (%)
Grameen Phone Ltd.	36.997	59.306	45.76
Banglalink Digital Communications Ltd.	23.881	31.309	24.16
Robi Axiata Ltd.	16.520	27.017	20.84
Airtel Bangladesh Ltd.	6.107	8.219	6.34
Teletalk Bangladesh Ltd.	1.250	3.733	2.88
Pacific Bangladesh Telecom Ltd.	1.804		
Total	86.559	129.58	100%

Source: BTRC (2017).

Mobile phone operators are competing with each other to capture the market share by providing quality services through voice services, value added services, electronic transactions, web surfacing, etc. As rivalry has intensified among the operators, it is essential to learn the consumers' perception about the service quality. Mobile subscribers are come into contact with customer service and satisfaction questions (Escobar-Rodriguez and Carvajal-Trujillo, 2013; Rahman and Don, 2013). Into this competitive rivalry, mobile operators are repeatedly trying to find the conducts to distinguish their package and customer experience.

From the business point of view, it is certainly challenging to preserve the standardized service quality. The technology advancement is continuous and ongoing phenomena. Therefore, there are different factors which have influence on consumer repurchase decision. Meanwhile, mobile operators are trying hard to retain existing consumers and undertaking their finest effort for better customer satisfaction. In this consequence, the study aims to travel around the factors influencing the consumer loyalty in the mobile telecommunication industries. Telecommunication business managers and different business units, researchers and other practitioners would get benefit from the conclusion of this projected study.

2. REVIEW OF THE EMPIRICAL BACKGROUND AND RESEARCH HYPOTHESES

A significant number of researches have been directed the factors influencing the consumer behavior in various industries, such as financial services, tourism, telecommunications, airlines and so on. Expanded factors like service fairness, price fairness, communication, conflict handling, relational benefits, and customer care services are the determinants of consumer satisfaction and loyalty. The determinants depend on the nature of particular industry. Factors to be used to identify the consumer satisfaction and loyalty in the telecommunication industries are price fairness, network coverage, customer care service quality, promotional features, and corporate image.

2.1. Price Fairness

Price factor is a prime determinant to identify the consumer satisfaction and loyalty in telecommunication service sector. Price or worth for money denotes the monetary benefits consumer acquires by subscribing a mobile network. Price is a sum of money accused for product or service consumption (Kotler and Armstrong, 2010). Customer wellbeing has emerged due to the market liberalization and increased competition, since customers get benefited from intense competition in terms of price fairness and service offerings (Corrocher and Lasio, 2013). Most of the mobile operators enter the market segment targeting the low-cost price strategies. Pricing is one of the leading factors affecting consumer satisfaction in every organization which forms the competitive advantages (Chakraborty and Sengupta, 2014). Mobile operating services are unique service and customers are willing to pay for this service only when they become satisfied. Therefore, they would continue to stay with this existing operator, otherwise, in reverse. Hence, the following hypothesis is proposed:

H1: there is a positive relationship between customer satisfaction and price.

2.2. Network Quality

Network quality is considered as the trigger to competitive advantages of telecommunication industry, as it cares to attract and retain the customer. Researchers have identified the association between network service quality and its consequences on customer satisfaction. Chen *et al.* (2014) pointed that due to low quality of network, consumers become dissatisfied which lead them to switch other network operators. Additionally, poor network superiority tends to lower customer satisfaction toward the mobile service operator, thus it causes increased number of customer complaints (Chen *et al.*, 2011). Khan and Afsheen (2012) have quantified that network quality and price fairness have significant effect on choice the mobile phone operator. So, this relationship has been definite that low network quality has a strong negative influence on customer satisfaction, which eventually affects the customer loyalty. Thus, the following hypothesis is formulated:

H2: there is a positive relationship between customer satisfaction and network quality.

2.3. Customer Service

Due to the strong association among service quality, customer satisfaction and customer loyalty, many researches and practitioners have paid attention throughout the past decades (Deng *et al.*, 2010; Suhartanto, 2011; Kim *et al.*, 2015a). It is considered as the prime indicator of customer satisfaction and loyalty. Several studies on service quality and its values have been done, since it lead to develop the sustainable competitive advantages of a company (Suhartanto, 2011). Hossain and Suchy (2013) have revealed, customer care service has influence on customer satisfaction. Additionally, Kumar and Vandara (2011) recognized the positive association among the service quality, satisfaction and loyalty. When a consumer considers the service value that are getting from mobile operators is high, they asses positive evaluation to the service provider and willing to retain that service provider (Deng *et al.*, 2010). Therefore, we posit the following hypothesis:

H3: there is a positive relationship between customer satisfaction and customer service.

2.4. Brand Image

Brand image is an additional significant factor in the overall service illustration. Brand image is a kind of perception of consumer mind toward organization, which works as a stimulator to consumer awareness of how company operates. Thus, this Brand image reflects the consumer's overall impression toward the company. According to Deng *et al.* (2010) customer will remain satisfied with their operator whenever they perceived that a mobile operator is reliable, trustworthy and has wider experience. Islam (2010) has argued that consumer satisfaction is predicted by the brand image of the service provider. Moreover, customer's willingness to maintain the contractual relationship with mobile operator is strongly prejudiced by the degree to which companies have

positive image (Gerpott *et al.*, 2001). Furthermore, reliability, integrity, experience, etc. are the important factors which consumer evaluate those attributes before taking the buying decision. As a result, we propose brand attitude has influence on consumer satisfaction, formulating the following hypothesis:

H4: there is a positive relationship between customer satisfaction and brand image.

2.5. Antecedents of Customer Satisfaction and Retention

Customer satisfaction is a psychological state of human being where there is similarity between emotion and perceived expectations. Customer satisfaction is being considered as an important factor influencing the customer retentions and recommendation phenomena (Kumar *et al.*, 2013; Kim *et al.*, 2015a; Kim *et al.*, 2016). Investigative studies by Segarra-Moliner and Moliner-Tena (2016) and Chuah *et al.* (2017) portrayed that satisfaction is the dominant factor affecting consumer loyalty.

Customer loyalty is a profound promise to repurchase despite environmental volatility (Keropyan and Gil-Lafuente, 2012). Hossain and Suchy (2013) have stated that satisfaction is the prime indicator of customer retention. Customer satisfaction is the consistence evaluation of prior expectation and perceived performance (Chen and Wang, 2009). Moreover, consumers acquire a significant number of evidences which make them a favorable attitude toward product or services. Thus, consumer would continue to maintain a relationship with existing service provider's result in strong background of consumer loyalty. Satisfied consumers are more likely to repurchase, have limited price sensitivity, positive recommendation, and become loyal to the service providers (Chen and Wang, 2009; Picon *et al.*, 2013; Chuah *et al.*, 2017). Additionally, it is also noted that customer satisfaction and loyalty relationship get affected by some other moderating factors (Chuah *et al.*, 2017). Thus, the following hypothesis is proposed:

H5: there is a positive relationship between customer satisfaction and retention.

3. RESEARCH DESIGN

This study considers a five-factor model of Price fairness, Network quality (Netwk), Customer care service (CareS), Brand image (Battitude) and Satisfaction (Sat) as major factors effecting customer loyalty toward telecommunication services in Bangladesh. A structured questionnaire was designed consisting 27 statements under different constructs. A 5-point Likert rating scale was used and after data cleaning and removal of invalid respondents, data pertaining to 245 active users were retained for the final study. All the measurement items were adapted and modified from the prior research to ensure the validity of these constructs and to fit the context. The items of price fairness, satisfaction and loyalty were adopted from Picon *et al.* (2013). The items of network quality and customer care service were modified from Saha *et al.* (2016). And items of brand image were taken from Chuah *et al.* (2017). On the basis of zero-order confirmatory factor analysis (CFA) and for attaining model fit indices some variables were removed and final variables were 18 under the all constructs. The outcomes from the usable sample were analyzed, and the research model was examined by using Amos 24 software. Structural equation modeling was used to test the research hypotheses, and path analysis was used to demonstrate the results. The demographic profile of respondents' portrait that most of the respondents fall in the age group 20-24 years as it was 40%. Out of 245 respondents, male and female respondents are 65% and 35% respectively.

4. DATA ANALYSIS AND FINDINGS

4.1. Data Reliability and Validity

Internal consistency reliability reflects the degree to which the items of a construct measure various aspects of the same characteristics (Hung *et al.*, 2011). This is verified by the Cronbach's alpha, with a value greater than 0.70 representing good reliability (Chin, 1998). The results for the constructs in this work ranged from 0.771 to 0.805, representing an acceptable level of reliability (see Table 2).

Table-2. Factor loadings and internal consistency reliability

Items	Path	Variables	Unstd. Estimates	Std. Estimates	C.R.	AVE	P	Cronbach's alpha
Price5	<---	Price	1.000	0.764	0.813	0.592		0.805
Price1	<---	Price	0.755	0.777			***	
Price2	<---	Price	0.870	0.769			***	
Netwk4	<---	Network	0.469	0.501	0.809	0.599	***	0.790
Netwk2	<---	Network	1.000	0.918				
Netwk1	<---	Network	0.851	0.839			***	
CareS3	<---	Customer care	0.576	0.582	0.778	0.545	***	0.771
CareS2	<---	Customer care	1.000	0.849				
CareS1	<---	Customer care	0.827	0.759			***	
Battitude8	<---	Band attitude	0.765	0.633	0.776	0.538	***	0.772
Battitude6	<---	Band attitude	1.000	0.753				
Battitude4	<---	Band attitude	0.932	0.805			***	
Sat3	<---	Satisfaction	0.890	0.740	0.796	0.565	***	0.795
Sat2	<---	Satisfaction	0.914	0.734			***	
Sat1	<---	Satisfaction	1.000	0.782				
Retn3	<---	Retention	0.942	0.716	0.798	0.570	***	0.794
Retn2	<---	Retention	1.000	0.771				
Retn1	<---	Retention	0.870	0.774			***	

(*** significant at $p < 0.001$ level)

Confirmatory factor analysis uses the method of maximum likelihood to estimate the measurement model parameters. In case of convergent validity, the factor loading can act as an indicator of measuring convergent validity. Result shows in the table 2, reveals that all the items except for 3 items had factor loadings greater than 0.70, complies with the recommendation of Hair *et al.* (2006). Additionally, composite reliability (CR) was used to measure the internal consistency of construct indicators. CR value should greater than 0.70 (Fornell and Larcker, 1981) and all the latent variables in the study have value greater than 0.70 which reveal that the observed variables are better able to assess the latent ones. The average variance extracted (AVE) shows the ability of each measured variable to explain the average variance of latent variables. All AVE values are greater than 0.50 which is in the acceptable range (Fornell and Larcker, 1981). The results of discriminant validity are shown in Table 3, in which the values on the diagonal are the square roots of the AVE for each variable, and the other values are the correlations between each pair of variables. The square roots of the AVE for each variable are uniformly higher than the correlation coefficient for the other variables indicates, the study's model has a good degree of discriminant validity. Additionally, the measurement model was found to be valid in terms of multicollinearity issues. The variance inflation factor (VIF) values ranges from 1.377 to 2.226, which are below the threshold of 10, indicating the acceptable range (Hair *et al.*, 2006).

Table-3. Discriminant validity for structural model variables

	Mean	Std. Deviation	1	2	3	4	5	6	VIF
1. Price fairness	3.3483	1.00828	0.805						1.600
2. Network	3.5279	0.94559	0.506	0.790					1.377
3. Customer care	3.6082	0.84323	0.597	0.437	0.771				1.514
4. Brand attitude	3.4340	0.80120	0.510	0.454	0.469	0.772			1.657
5. Satisfaction	3.4680	0.77911	0.694	0.574	0.653	0.780	0.795		2.226
6. Retention	3.6014	0.76721	0.747	0.406	0.567	0.803	0.888	0.794	

(Note: Bold diagonal numbers are the square roots of AVE).

4.2. Model Fitness

Based on the satisfaction of reliability and validity of individual construct as well as overall measurement model, the study proceeded to determine fitness of the overall measurement model (Figure 1) through model fit indices. Overall fit statistics of the measurement model which include Comparative Fit Index (CFI), Goodness-of-Fit index (GFI), Adjusted GFI, Root Mean Square Error of Approximation (RMSEA), Normalized Fit Index (NFI), Tucker-Lewis Index and the ratio of chi-square to degrees of freedom (CMIN/df) were found to be meeting their respective cut-off criteria. This study uses Amos 24 to estimate the values of the fit indices (see Table 4). All the results met the required standards, which proved the validity of the measurement model.

Table-4. Model fit indices: measurement model

Indices	Model fit indices	Recommended value	References
CFI	0.968	≥ 0.95	Hu and Bentler (1999)
CMIN/df	1.553	< 3	Hu and Bentler (1999)
GFI	0.924	>0.90	Hu and Bentler (1999)
AGFI	0.891	≥ 0.80	Hu and Bentler (1999)
RMSEA	0.064	≤ 0.08	Browne and Cudeck (1993)
NFI	0.915	≥ 0.90	Hair et al. (2006)
TLI	0.959	≥ 0.90	Hair et al. (2006)

Source: AMOS output

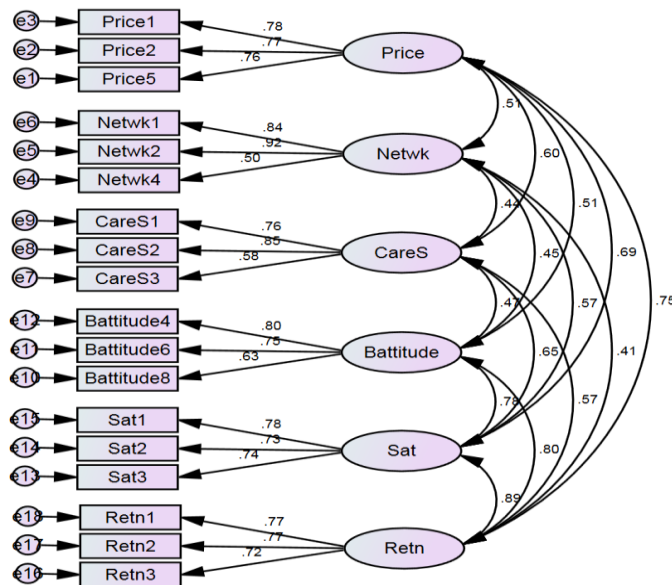


Figure-1. Measurement model

Source: AMOS output

4.3. Hypothesis Testing

SEM was used to estimate parameters of the structural model (Figure 2) and the completely standardized solutions computed by the AMOS maximum-likelihood method are indicated in Table 5. Of the five hypotheses in this study, all except for H2 were supported. As for factors influencing customer retention toward telecommunication service, price fairness ($\beta=0.222$, $p<0.001$), customer care services ($\beta=0.223$, $p<0.001$), brand image ($\beta=0.391$, $p<0.001$), and customer satisfaction ($\beta=0.706$, $p<0.001$) had significant positive effects, and thus hypotheses H1, H3, H4 and H5 were supported.

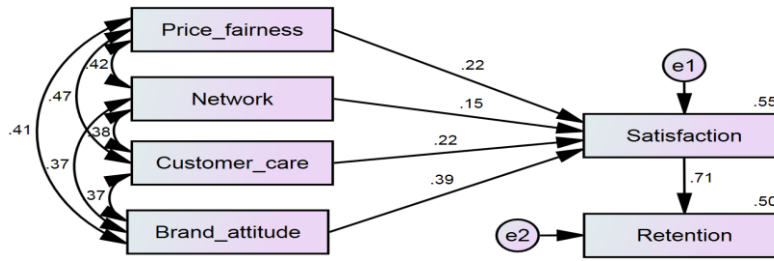


Figure-2. Structural model

Source: AMOS output

Table-5. Summary of hypotheses testing

			Estimate	C.R.	P	Hypothesis
Satisfaction	<---	Price fairness	0.222	4.241	***	H1 accepted
Satisfaction	<---	Network	0.146	2.955	0.003	H2 not-accepted
Satisfaction	<---	Customer care	0.223	4.382	***	H3 accepted
Satisfaction	<---	Brand attitude	0.391	7.953	***	H4 accepted
Retention	<---	Satisfaction	0.706	15.561	***	H5 accepted

(***significance level at $p < 0.001$)

Table-6. Direct, indirect and total effects of variables to Customer Retention

Path proposed			Total effect	Direct effect	Indirect effect
Satisfaction	<---	Customer care	0.223	0.223	0.000
Satisfaction	<---	Network	0.146	0.146	0.000
Satisfaction	<---	Price fairness	0.222	0.222	0.000
Satisfaction	<---	Brand attitude	0.391	0.391	0.000
Retention	<---	Customer care	0.157	0.000	0.157
Retention	<---	Network	0.103	0.000	0.103
Retention	<---	Price fairness	0.157	0.000	0.157
Retention	<---	Brand attitude	0.276	0.000	0.276
Retention	<---	Satisfaction	0.706	0.706	0.000

Source: AMOS output

Nevertheless, the relationship customer retention and telecommunication network quality did not reach the level of significance ($\beta=0.146$, $p=0.003$), and hypothesis H2 was not supported. The squared multiple correlations (R^2) value indicates the amount of variance explained by independent variables. R^2 reflects the predictive power of the model. This study shows that the proposed model correctly explains the customer retention behavior of telecommunication, as R^2 is not far from 100 percent. The structural model explains 55% of the variance in satisfaction and 50% of the variance in customer retention. Table 6 summarizes direct, indirect and total effects among the variables in the proposed model where satisfaction represents strong direct influence on customer retention.

5. DISCUSSIONS AND MANAGERIAL IMPLICATIONS

The intense competitive action in the service sector encourages firms to seek a longer relationship with customers. Due to the presence of alternatives and strong inclination of switching propensity, the customer retention become merely challenging. The current study aims to examine customer retention behavior by analyzing the factors that influence this concept. The results of the empirical analysis provide a number of interesting insights, as follows. Price fairness, customer care service and brand image were found to be an important antecedent of customer satisfaction, while satisfaction was found to be an important antecedent of customer retention for longer time. In other words, the study found customer satisfaction to be a key determinant or antecedent for customers' propensity or willingness to retain their existing telecommunication service. In addition,

network quality was found to be as non-significant predictor of customer satisfaction. It is important to see that model is found fit with good indication of R^2 values. 50% of variance of customer loyalty is explained by customer satisfaction. And 55% of variance of satisfaction is explained jointly by all independent variables.

These findings are consistent with the earlier studies in the area of customer satisfaction and retention. Previous study reported that satisfaction is the highest predictor of customer retention (Picon *et al.*, 2013; Chuah *et al.*, 2017) and price factor, brand image and customer care service are the main determinants of customer satisfaction (Gerpott *et al.*, 2001; Deng *et al.*, 2010; Chakraborty and Sengupta, 2014). The highest significant impact of brand image on customer satisfaction indicates that users of telecommunication in Bangladesh have high expectations in brand image. However, the result differs from the previous studies in the case of network quality. Study by Chen *et al.* (2014) and Khan and Afsheen (2012) found that network quality has significant positive influence on customer satisfaction which is not true for this study. In the context of Bangladesh, this study confirms the conclusion of Hossain and Suchy (2013) satisfaction is the prime determinant of customer retention. Similarly, brand image (Islam, 2010) and customer care service Hossain and Suchy (2013) are the important determinants of customer satisfaction. However, the study result found contradiction with Rahman (2014) stated that price factor and brand value do not find significant influence.

This might happen because of price sensitivity of customer. Price seems one of the very significant factors to derive satisfaction and make users loyal. In this concern, telecommunication operators should be more cautious in determining and retaining price structure of call and variety of services offered to the customers, otherwise switching propensity of customers toward operators will be augmented and resulting declining the loyalty of customers. Additionally, subscriber may expose too much on brand image and customer care service of mobile service providers. The promptness of customer care services is ground for making loyal customer. Furthermore, the higher levels of competition among telecommunication service providers for adopting new customer service techniques to retain their existing customer and attracting new one as well. For that reason, marketing manager should try to provide more efficient and customer friendly service which can help to build customer retention toward a particular service. Currently, unfair practices, unethical behavior etc. are very common and serious misconducts exist in this market like third world economy which lead the users to become skeptic toward the service providers. Users perceive for recommendation from others and observe the trustworthy brands for making a rational decision to purchase. Thus, brand image plays an important role among the consumers and managers should carefully consider this phenomenon. However, this study results suggest insignificant influence of network quality which may because of an identical network infrastructure has already been established in this market.

6. CONCLUSIONS AND FUTURE STUDY

The results of this study extensively contribute to the managerial understandings and theoretical contribution of consumer retention attitude toward telecommunication service. The study has produced a greater understanding of the variables that appeared to be the most influential factors to structure the customer satisfaction toward telecommunication service which have ultimate impact on retention behavior of customer. Many argue that retention of customers is always important for companies to generate profit. In other words, an increase in customer retention can have a positive impact on company's operating cash flow and profit. In such a scenario, it is momentous to know about the services delivered by telecom operators' influence on user's loyalty. In addition, the study results could provide managers with greater insights concerning the potential benefits associated with using perceived quality strategies to achieve customer satisfaction. Higher the customer satisfaction leads to higher the sales generating higher profits. In conclusion, service providers may use the findings to make their marketing strategies and operating plans that create promising atmosphere to building customer retention.

The findings of the study have to be interpreted considering few limitations. One of the main drawbacks is associated with the overall research model. In order to achieve parsimony, the model was constrained only four

constructs (price, network, customer care, and brand image) to explain customer satisfaction. Apart from factors suggested in this study, other factors such as service reliability, switching cost, life style of customers etc. were not included. Another limitation was sample size used in the study was limited and only consider one country (Bangladesh). A caution is, therefore, needed to generalize the study findings. In order to remedy these limitations, future studies could examine those factors with longitudinal approach. Additionally, to achieve more methodical reliability of customer retention, mobile telecommunication services should be compared with other communications services and with other service industries.

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