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Factors Affecting University Students' Satisfaction toward Mobile Operator Services: An Empirical Study at Rajshahi in Bangladesh

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Abstract:

Mobile market is one of the most competitive service markets in Bangladesh. An extensive competition is visible among the existing mobile operators for capturing market share. This empirical study is conducted to understand the relationship between service factors and satisfaction of the university students. It applies descriptive study, EFA and regression analysis to meet the study objectives. This quantitative research considers convenience sampling to collect data using 7-points Likert-scale. A total 260 samples were collected from the students at 3 universities in Rajshahi. The collected data was analyzed using SPSS.15.00. The exploratory factor analysis explores six factors (i.e., value added service, network and communication, customer care service, price/billing, promotional activities and convenience) which are the main service offerings provided to customers by different mobile operators in Bangladesh. The six factors contain 21 service attributes and the satisfaction of students contains 7 attributes. The result of regression analysis confirmed that these six factors are positively related with the satisfaction of university students. This result is also supported with existing literatures. The result of descriptive study shows the distribution of data and it was applied to characterize the sample of this study. Furthermore, this study will contribute in existing literatures in the field of mobile telecommunication study and the stakeholders will also get some sought of valuable information. Beside these theoretical implications of the study were discussed with limitation and future research directions.

Keywords: Service factors, satisfaction, university students, factor analysis and regression analysis

1. Introduction

Telecommunication is now an inseparable part in our everyday life. Mobile phone plays an important role to communicate from one place to another among the people. The phone is used not only for calling but also for multi-dimensional purposes (i.e., text-message, multi-media message, using internet, mobile banking etc.). These create demand and opportunities for telecom market which seem endless globally. This industry is the most profitable market throughout the world. It is possible to connect one corner to another corner of the world through mobile phone. The mobile operators are giving these opportunities for its customer. It is the wonder of modern science (Sarker, Neogy, & Akhter, 2015) and people are closely connected with each other for it. Mobile telecommunication sector emerged as one of the most important service sectors and boosting up the economy of Bangladesh (Sarker, et. al., 2015). It enables to provide cost effective and quality services for its customer (Neogy, 2014). The author also suggests that telecommunication market is increasing rapidly. The total numbers of subscribers or users among different telecommunication sectors in Bangladesh have reached 128.939 million at the end of July, 2016 (BTRC). Grameen Phone Ltd (GP) is serving 56.300 million subscribers which are the top most market share holder among the six mobile telecommunication companies in Bangladesh. While Banglalink Digital Communication Ltd. owns 31.362 million subscribers; Robi Axiata Limited (Robi) is serving 26.362 million subscribers; Airtel Bangladesh Limited (Airtel); Pacific Bangladesh Limited (Citycell) is serving 0.668 million subscribers and Teletalk Bangladesh Ltd. (Teletalk) captures 4.437 million subscribers (BTRC, 2016). This is one of the most popular service sectors and it is serving business people, professional person and students (Ashaduzzaman, Ahmed, & Khan, 2011). It increases the social interaction among individuals (Rahaman, 2012) and makes communication easier by reducing distance. These telecommunication companies are trying to satisfy the customers which increase competition among them. Customers are getting different offerings by the operators and they are trying to meet up their necessity. Though the operators are trying to provide better services, the question of meeting customer satisfaction is too complex task. There is no exact definition of the term satisfaction. Whereas the levels of satisfaction vary from one customer to another and in the different market segments, it has no definite level.

2. Literature Review

To meet up the satisfaction of customer is the main task in service industries. If the companies want to know the purchase or use tendency of customers, measuring or understanding customer satisfaction is the most important predictor about its products or services. The companies can sell easily its product and service to the satisfied customers. But, this task is not so easy to for companies toward their product or service. The satisfaction may vary from situation to situation. The mental condition of a customer after experiencing a product or service is called satisfaction (Baker & Crompton, 2000; Valle, Silva, Mendes, & Guerreiro, 2006). It is the perceived performance which will exceed or equal to the level of expectation. While the satisfaction is the total benefits enjoyed during the use or consumption of a product or service (Hoffman & Bateson, 2001; Yu & Goulden, 2006). It can be measured using multi-dimensions of performance (Valle, et. al., 2006). If a customer is being satisfied toward a product or service, he/she will repurchase it and recommend it with others. This gaining of a company will play for investment opportunity and will increase market share (Bhat & Quadir, 2013; Ojo, 2010). It indicates that the consumer decisions of repurchasing and loyalty are derived from customer satisfaction (Bhat & Quadir, 2013; Hawkins, Lamoureux, & Clemmons, 2005; Lee, Graefe., & Burns, 2004; Moore & Taplin, 2014; Rodger, Taplin., & Moore, 2015; Weaver & Lawton, 2011). On the other hand, a visitor becomes a threat when he/she gets dissatisfaction. This study considers this interested research term and chooses the telecommunication sectors in Bangladesh. The following literatures are reviewed which are discussing in below.

Adebiyi, Shitta and Olonade (2016) conduct an empirical study on the determinants of customer preference and satisfaction with Nigerian telecommunication services. It applies descriptive study, correlation and regression analysis to meet the study objectives. The findings of the study reveal that service quality, promotional activities, price/billing, customer care service influence the customer preference and satisfaction is also derived from different telecommunications companies. The result of regression analysis of the study proves that the telecommunication service affects the satisfaction of customer. Satisfaction leads the customer preference. There might be other factors which may lead to satisfy customer.

Sarker, Neogy and Akhter (2015) conduct a study on measuring customers' satisfaction regarding different services of mobile telecom operator companies in Bangladesh. This empirical study applies descriptive study and regression analysis to meet the study objectives. The results of the study indicate that customers are moderately satisfied of getting services from different operators. It is finally concluded that there are no significance difference regarding getting different services offered by different mobile telecom companies in Bangladesh.

Akpoyomare, Patrick and Salome (2014) conduct a study on determinants of customer satisfaction and loyalty in the Nigerian telecommunication industry. This empirical study considers descriptive study and regression analysis to meet the study objectives. The results of the analysis conclude that product, promotion and distribution have positive effect on customer satisfaction.

Tung (2013) conducts an empirical study on customer satisfaction, perceived value and customer loyalty in the mobile service in China. This study finds that perceived expectations, perceived quality, perceived value, perceived usefulness and perceived ease of use have positive effect on customer satisfaction. They also find that there is a direct negative impact between customer satisfaction and customer complaints.

Uddin and Akhter (2012) conduct a study on customer satisfaction on mobile phone services in Bangladesh. This empirical study applies SEM (Structured Equation Modeling) to meet the study objectives. The results of the study demonstrate that service quality and fair price have indirect effect on customer satisfaction. It also indicates that perceived quality plays as mediating role between quality, charges fairness and satisfaction. Finally, this study concludes that fair price has direct effect on customer satisfaction whereas service quality has no direct effect on customer satisfaction.

3. The Hypothesized and Research Framework

Most of the studies indicate that service factors are an important indicator to satisfy customer in telecommunication sectors. Though numerous studies are conducted to measure or understand customer satisfaction, the satisfaction of students using mobile telecommunication services is merely tested. The customer of this segment is very much important to telecommunication companies' profitability. Students use mobile phone for different purposes (*e.g., communication purpose, study purpose, using internet and getting better information and data etc.*) and the needs of student is not same as general customer (*e.g., professional, businessman and general people*). It has also been seen by reviewing different literatures some factors considering by some studies which are excluded by others. Due to that this study considers six factors (*i.e., Value added service, Network and communication service; Customer care service, Price/billing service; Sales promotional service and Convenience*) which is also empirically tested in different studies (Akpoymare, et.al., 2014; Hossain & Suchy, 2013; Khuhro, Azahar, Bhutto, Sarki, & Shaikh, 2011; Kuo, Wu, & Deng, 2009; Lai, 2004) to understand or measure or know relationship with customer satisfaction in telecommunication sectors. This study considers both of the issues and the conceptual framework has been developed (Fig-1).

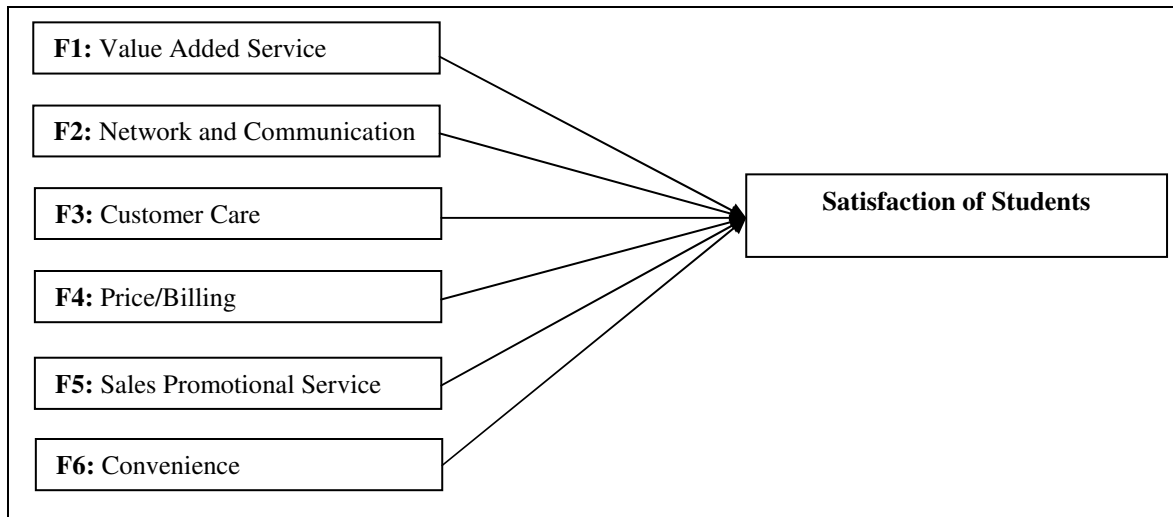


Figure 1: The proposed research framework

3.1. Value Added Service

It is the first factor which is considered in the studies (Hossain & Suchy, 2013; Kuo, Wu, & Deng, 2009; Lai, 2004). This service is one of the important indicators to attract customer for using operator services. If the company can provide positive value added services to customer, it will lead to satisfy the customer. So, the proposed hypothesis is-

- H1: Value added service factor positively affects the satisfaction of university students’.

3.2. Network and Communication

It is the second factor which are used in different studies also (Menachem, Joshi, Bhatia, Roy, & Saini, 2015; Hossain & Suchy, 2013). It is very much important to mobile users. They basically use mobile to communicate with each other from one corner to another corner over the world. If the operators ensure quality network and communication service, it leads better satisfaction of customer. Therefore, the following hypothesis is drowned for this factor, it is as follow

- H2: Network and communication service factor positively affects the satisfaction of university students’.

3.3. Customer Care Service

It is the third factor which is also considered in different studies (Adebiyi, et. al., 2016; Hossain & Suchy, 2013). It is the system which is viewed to solve customer complaints, to support customer, to report compliant easily and to take customer complaints in friendly manner (Kim, Park & Jeong, 2004). Customer care service is also the system to enable series of activities which enhance the satisfaction of customer (Turban, King, Lee, Warkentin, & Chung, 2002). These series of activities support the core product of the company (Zeithaml & Bitner, 2000). This factor is very much important to settle customer complaints and making warm relationship with customers. It leads to satisfy a customer or switch to another operator. It is considered for this study considering this important aspect and the proposed hypothesis is

- H3: Customer care service factor positively affects the satisfaction of university students’.

3.4. Price/Billing

The factor is already empirically tested in different studies (Adebiyi, et. al., 2016; Hossain & Suchy, 2013). It plays a crucial role in telecommunication market (Kollmann, 2000). Customer wants to use mobile operator services at lower cost. It is also found that customer will consume more by lowering the charges and will be committed more also towards the network (Kollmann, 2000; Varki & Colgate, 2001; Woodruff, 1997). They are very sensitive regarding this issue. It is seen that lower cost better service indicate higher satisfaction. This factor was considered by bearing in mind this importance. Therefore, the proposed hypothesis is drowned as follow-

- H4: Price/billing service factor positively affects the satisfaction of university students’.

3.5. Sales Promotion Service

The mobile operators communicate with customer to inform its product offerings through promotional activities (Rowley, 1998). It also informs customers about the information of company/firm and its product that makes the customer aware about the product available to them (Root, 1994). This factor is also empirically tested in different studies (Adebiyi, et. al., 2016; Hossain & Suchy, 2013; Khan & Afsheen, 2012; Leelakulthanit & Hongcharu, 2011). This factor is so much important for the companies to purchase or use more units. The success of promotional activities also ensures the success of the company by satisfying its valuable customers. This factor is thinking important for this reason and the proposed hypothesis is given in below.

- H5: Sales promotional service factor positively affect the satisfaction of university students’.

3.6. Convenience

It ensure how often customers fulfill their urgent needs of continuing services. It also makes the customer to use the operators' mobile services conveniently. This study considers convenience as the last factor which is also used in the study (Hossain & Suchy, 2013). This factor plays an important role to satisfy customer and the proposed hypothesis is given in below.

- H6: Convenience factor positively affects the satisfaction of university students'.

To fill up the gaps of the study, it firstly tries to explore the offered services available to students. Secondly, this study tries to find out the factors that lead to the satisfaction of students toward mobile operators. Finally, it tries to understand the relationship between the service factors and student satisfaction.

4. Research Methodology

4.1. Sampling Design

This study considers quantitative methods and uses convenience sampling method to collect data. The target populations were the students in different universities at Rajshahi city in Bangladesh. This city is called the city of education in Bangladesh. This study considered three universities (i.e., *Rajshahi University, Rajshahi University of Engineering and Technology and Varendra University*) as sample and data were collected during 1st May, 2016 to 30th June, 2016. A total 300 structured questionnaires were distributed among the students who were used to different mobile operators' services in Bangladesh. The information is provided in the below (Table 1).

| Name of the Educational Institution | Location | Distributed Questionnaire | Received Questionnaire | Usable Questionnaire | % of Usable Questionnaire |
|--|----------------------|---------------------------|------------------------|----------------------|---------------------------|
| Rajshahi University (RU) | Rajshahi, Bangladesh | 165 | 158 | 148 | 89.70% |
| Rajshahi University of Engineering and Technology (RUET) | Rajshahi, Bangladesh | 80 | 75 | 68 | 85.00% |
| Varendra University (VU) | Rajshahi, Bangladesh | 55 | 47 | 44 | 80.00% |
| Total: | | 300 | 280 | 260 | 86.67% |

Table 1: Sample Size and Source

4.2. Questionnaire Design

The survey questionnaire contained three parts. The first part included the 26 service attributes which basically offered by different mobile operators in Bangladesh. These service attributes are also used in different studies (Appendix-Table A). The respondents were asked to provide their opinion using 7-points Likert-scale ranging 7 = very strongly agree and 1= very strongly disagree. This scale widely used in social and behavioral science research to understand or measure perception, evaluation, beliefs and attitude of customers/ users towards product and service (Malhotra, Hall, Shaw, & Crisp, 1996). The second part of the questionnaire contained the socio-demographic information of the respondents to identify their characteristics. The final section of the questionnaire contained 7 attributes which are representing the satisfaction of students. The respondents were asked to provide their opinion using 7-points Likert-scale also ranging 7 = very strongly satisfied and 1 = very strongly dissatisfied.

4.3. Pretesting of the Questionnaire

This study also conducted the pretesting to check the clarity, reliability and comprehensiveness of the questionnaire. A total 30 questionnaires were distributed among 30 students at Rajshahi University who were being used to different mobile operators in Bangladesh for getting feedback from them. The recommendations of the participants were considered warmly and some modifications of wording were made for the final questionnaire.

4.4. Scale Reliability

This study conducted reliability test to judge the internal consistency or average correlation of items in a study. The value of Cronbach's was considered and the rules of thumbs for the alpha coefficient value is 0.50 (Hair, Anderson, Tatham, & Black, 1998). The Cronbach's alpha coefficient value for the overall questionnaire was 0.894, indicating that data are suitable for factor analysis.

4.5. Data Analysis

The collected data were analyzed using SPSS 15.00. This study applied descriptive study, Exploratory Factor Analysis (EFA) and finally regression analysis. Descriptive study was conducted to know the distribution of data. EFA was conducted to reduce the items with few correlated items. It was also used to explore the factor structure from a set of observed variable without imposing predetermined factor structure outcome (Child, 1990).

5. Results and Discussion

5.1. Demographic Profile of the Respondents

The results of descriptive study have been shown in the table 2. It is seen from the result that 47% of the respondents are the users of Grameen phone; 21.2% are the users of Banglalink; 11.20% are the users of Robi; 9.2% are the users of Airtel; 8.80% are the users of Teletalk and only 2.30% are the users of Citycell. While 56.90% of the respondents are the students at Rajshahi University, 26.20% and 16.90% are the students from Rajshahi University of Engineering and Technology and Varendra University respectively. Near half (48.10%) of the respondents live in Rajshahi division which is the highest segment whereas 16.50% and 13.10% are the residents from Khulna and Dhaka division respectively. The percentages of respondents are 7.70% from Rangpur division; 3.50% from Chittagong division; 3.10% from Sylhet division; 3.80% from Barisal division and 4.20% from Mymensingh division. It is also seen from the descriptive study that 91.90% of the students are studying in graduation level (13-15 years' education) and 8.10% are in post-graduation level (16 years' education). Beside these 95.00% of the respondents are in the age level 21-30 years and only 5.00% are less than 20 years. 76.90% of the respondents are male and 23.10% of the respondents are female. In addition to that 92.30% of the respondents are single and 7.70% of the respondents are married. It is also seen with regards to personal monthly income measures in taka (\$1= 79BDT), the survey reveals that 25.80% of the respondents report monthly income less than 10,000BDT; 16.50% and 15.80% report monthly income ranges 10,001-20,000BDT and 20,001-25,000BDT respectively. It denotes that most of respondents fall in the area of lower income level. While, 12.30%, 13.50% and 10.00% of the respondents report monthly income ranges from 25,001-30,000BDT, 30,001-35,000BDT and 35,001-40,000BDT respectively. Only 6.20% of the respondents fall in monthly income level more than 40,000BDT.

| Demographic Characteristics | Freq. | Percent (%) | Demographic Characteristics | Freq. | Percent (%) |
|-----------------------------|-------|-------------|-------------------------------------|-------|-------------|
| Uses Operator: | | | Education: | | |
| Grameen-Phone | 123 | 47.3 | Graduation | 239 | 91.9 |
| Banglalink | 55 | 21.2 | Post-Graduation | 21 | 8.1 |
| Robi | 29 | 11.2 | Age: | | |
| Teletalk | 23 | 8.8 | Less than 20 yrs | 13 | 5.0 |
| Airtel | 24 | 9.2 | 21-30 yrs | 247 | 95.0 |
| Citycell | 6 | 2.3 | Gender: | | |
| Student in: | | | Male | 200 | 76.9 |
| RU | 148 | 56.9 | Female | 60 | 23.1 |
| RUET | 68 | 26.2 | Marital Status: | | |
| VU | 44 | 16.9 | Single | 240 | 92.3 |
| You are from: | | | Married | 20 | 7.7 |
| Dhaka | 34 | 13.1 | Your/Parents monthly Income: | | |
| Khulna | 43 | 16.5 | >10,000 BDT | 67 | 25.8 |
| Rajshahi | 125 | 48.1 | 10,001-20,000 BDT | 43 | 16.5 |
| Rangpur | 20 | 7.7 | 20,001-25,000 BDT | 41 | 15.8 |
| Chittagong | 9 | 3.5 | 25,001-30,000 BDT | 32 | 12.3 |
| Sylhet | 8 | 3.1 | 30,001-35,000 BDT | 35 | 13.5 |
| Barisal | 10 | 3.8 | 35,001-40,000 BDT | 26 | 10.0 |
| Mymensingh | 11 | 4.2 | More than 40,000 BDT | 16 | 6.2 |

Table 2: Demographic Profile of the Respondents

5.2. Exploratory Factor Analysis

This study conducted EFA to reduce the item with few correlated item and also to draw the factor structure without predetermined structure. The result of the study illustrates that the value of Bartlett test of Sphericity is significant ($\chi^2 = 1723.810$, $p = 0.000$). This study also considers the overall value of the Kaiser-Meyer-Olkin (KMO) to measure of sampling adequacy (MSA). The rule of thumbs for minimum of KMO value is 0.50 (Hair, et. al., 1998). The value of KMO is 0.845 for this study. These tests indicate that data are suitable for exploratory factor analysis. Finally, six factors are chosen on the basis of Eigen value greater than one, scree-plot criteria and the percentage of variance criterion. These factors capture 61.06% of total variance. Among the 26 service attributes, 5 has factor loading less than .50. These are the variables (i.e., price of SIM/RIM card; group conference facility; call quality; horoscope, fun, greetings, ring tone and customize service) which deleted by following the criterion of Hair, et.al. (1998). The results of the principle component analysis with orthogonal (VARIMAX) rotations are shown in **Table 3**. The scale reliability for each factor also tested which was considered to assess the internal consistency. The rules of thumb suggest that item-to-total correlations exceed .50 and lower limit for Cronbach's alpha value is 0.633. The result shows that the alpha coefficient ranges from 0.751 to 0.633 for the six factors. Factors are labeled based on highly loaded items and the common characteristics of the items they include.

5.3. Satisfaction of Students

This study considers seven items to understand the satisfaction of students toward mobile operators' services in Bangladesh. These items are also used in different studies (Appendix-table A). The average opinion of students regarding these items is ranging from 3.73 to 4.77 (Appendix- Table B). The item (satisfaction with employees' responsiveness) shows the highest opinion (4.77) of students and the item (i.e., satisfaction with billing, transparency & fast service) shows the lowest opinion (3.73) of students. The values of these seven items comprise the overall value of students' satisfaction toward mobile operators and the grand mean value of the satisfaction of students toward mobile operators in Bangladesh is 4.38. It indicates the students are moderately satisfied toward the mobile operator companies in Bangladesh.

| Services and Factors | Component | | | | | | Mean | S. D |
|--|-----------|-------|-------|-------|-------|-------|------|------|
| | F1 | F2 | F3 | F4 | F5 | F6 | | |
| F1: Value Added Services | | | | | | | | |
| Caller tunes & call alerts | .763 | | | | | | 4.86 | 1.57 |
| Security, call block, call tracking, call forwarding | .751 | | | | | | 4.42 | 1.68 |
| SMS, MMS, GPRS | .695 | | | | | | 4.98 | 1.57 |
| Enough FnF facility | .617 | | | | | | 4.45 | 1.70 |
| F2: Network and Communication | | | | | | | | |
| Bundle packages | | .674 | | | | | 4.29 | 1.52 |
| Few drop calls | | .643 | | | | | 4.20 | 1.59 |
| Good signal quality | | .596 | | | | | 4.07 | 1.63 |
| Easy and convenient recharge facility | | .582 | | | | | 4.20 | 1.46 |
| F3: Customer Care Service | | | | | | | | |
| Waiting time to connect personnel | | | .735 | | | | 4.16 | 1.58 |
| Help line service (doctor, ticket, others) | | | .645 | | | | 4.64 | 1.40 |
| Bill pay facility (electricity, gas, telephone) | | | .603 | | | | 4.93 | 1.57 |
| Ease of reporting complaint | | | .561 | | | | 4.12 | 1.57 |
| Faster Internet service | | | .518 | | | | 3.99 | 1.59 |
| F4: Price/Billing | | | | | | | | |
| Call/ SMS/ MMS Charge for another operator | | | | .791 | | | 3.97 | 1.58 |
| Call/ SMS/ MMS Charge for same operator | | | | .723 | | | 3.88 | 1.65 |
| Affordable charges of using internet | | | | .681 | | | 3.96 | 1.71 |
| F5: Promotional Activities | | | | | | | | |
| Available prizes, premium & price-off | | | | | .757 | | 4.27 | 1.43 |
| Available Cash refund offers | | | | | .703 | | 4.13 | 1.40 |
| Available price pack | | | | | .617 | | 4.25 | 1.45 |
| F6: Convenience | | | | | | | | |
| Instant recharging or credit balance | | | | | | .749 | 4.40 | 1.46 |
| Electronic payment system | | | | | | .730 | 4.46 | 1.45 |
| Eigen Values | 6.12 | 1.82 | 1.46 | 1.23 | 1.13 | 1.07 | | |
| Variance (%) | 29.15 | 8.65 | 6.94 | 5.86 | 5.39 | 5.07 | | |
| Cumulative Variance (%) | 29.15 | 37.80 | 44.74 | 50.60 | 55.99 | 61.06 | | |
| Cronbach's Alpha | 0.751 | 0.685 | 0.736 | 0.711 | 0.697 | 0.633 | | |

Table 3: Exploratory Factor Analysis

5.4. Regression Analysis

The regression analysis is conducted to test the relationship of service factors with satisfaction of students. The result of regression analysis indicates adjusted $R^2 = 0.349$ and the F-ratio of the equation is 24.136. The result of beta coefficients is significant at the value ($p < 0.000$). So, there are a positive relationship between dependent and independent variable. The results are shown in the table 4 which are discussing in below.

5.4.1. Value Added Service

It consists of four variables and the average values are ranging from 4.42 to 4.98. It indicates that students are agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta = 0.161$, $t = 3.218$ and $p = 0.001$) which conclude the existence of positive relationship between satisfaction and value added service. Therefore, the first hypothesis is accepted at 95% confidence level. This result is similar to the result of the study (Khuhro, Azahar, Bhutto, Sarki, & Shaikh, 2011).

| Multiple R | = | 0.603 | | | | |
|------------------------------------|---------------------------|-----------------------------|------------|---------------------------|--------|------|
| Multiple R Square | = | 0.364 | | | | |
| Adjusted R Square | = | 0.349 | | | | |
| Standard error of estimates | = | 0.854 | | | | |
| F-value | = | 24.136 | | | | |
| Significance F | = | 0.000 | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.379 | .053 | | 82.677 | .000 |
| | Value Added Service | .171 | .053 | .161 | 3.218 | .001 |
| | Network and Communication | .124 | .053 | .117 | 2.343 | .020 |
| | Customer Care Service | .343 | .053 | .324 | 6.463 | .000 |
| | Price/ Billing | .377 | .053 | .357 | 7.113 | .000 |
| | Promotional Activities | .204 | .053 | .193 | 3.851 | .000 |
| | Convenience | .248 | .053 | .234 | 4.667 | .000 |
| a Dependent Variable: Satisfaction | | | | | | |

Table 4: Regression Analysis

5.4.2. Network and Communication

This factor consists of also four variables and the average values are ranging from 4.07 to 4.29. It indicates that students are agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta=0.117$, $t = 2.343$ and $p = 0.020$) which conclude the existence of positive relationship between satisfaction and network and communication. Therefore, the second hypothesis is accepted at 95% confidence level.

5.4.3. Customer Care Service

There are five variables and the average values are ranging from 3.99 to 4.93. This process takes place between a buyer, a seller and third party which increase the demand in market (Innis & La Londe, 1994). It indicates that students are agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta=0.324$, $t = 6.463$ and $p = 0.000$). These results indicate that there is a positive relationship between satisfaction and customer care service. As a result, the third hypothesis is accepted at 95% confidence level. The result of this study is similar to the result of the study (Akpyomare, et. al., 2014).

5.4.4. Price/ Billing

This factor consists of three variables and the average values are ranging from 3.88 to 3.99. It indicates that students are near about agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta=0.357$, $t = 7.113$ and $p = 0.000$). These results indicate that there is a positive relationship between satisfaction and price/billing. As a result, the fourth hypothesis is accepted at 95% confidence level. This result is similar to the result of the studies (Akpyomare, et. al., 2014; Uddin & Akter, 2012).

5.4.5. Promotional Activities

There are five variables and the average values are ranging from 4.13 to 4.27. It indicates that students are agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta=0.193$, $t = 3.851$ and $p = 0.000$). These results indicate that there is a positive relationship between satisfaction and promotional activities. As a result, the fifth hypothesis is accepted at 95% confidence level. The result of this factor is similar with other study (Akpyomare, et.al., 2014).

5.4.6. Convenience

It consists of two variables and the average values are 4.40 and 4.46 for instant research and electronic payment system respectively. It indicates that students are agreed with the availability of these services within this factor. The result of regression analysis indicates (Standardized, $\beta=0.324$, $t = 6.463$ and $p = 0.000$). These results indicate that there is a positive relationship between satisfaction and convenience. As a result, the sixth hypothesis is accepted at 95% confidence level.

6. Conclusion

This study aims to understand the relationship of different factors with satisfaction of students. To fulfill the study objectives, it applies descriptive study, EFA and regression analysis. The study explores 26 variables which are the service attributes. The operators are trying to provide these services to satisfy their customers. It also explores 7 variables which comprise the satisfaction of customer. Satisfaction is an important element for achieving profit of the service operators. It is also known that higher service leads to higher satisfaction and higher satisfaction leads to higher profitability. The sale volume is also increase if the customers are satisfied with the product performance. The result of exploratory factor analysis discovers 6 factors which contains 21 variables finally among the 26 variables. These six factors (*i.e., value added service, network and communication, customer care service, price/billing, promotional*

activities and convenience) are positively related with the satisfaction of customer. The result of regression analysis confirmed it. The mobile operator companies should provide keen attention to continue the services within these factors. It is seen from the descriptive study that the average opinion of students is 3.88 about the service call/sms/mms charges to same operator. This value is not so satisfactory. The operators should provide keen attention to make it more reasonable to customers. The average opinion is 3.97 also for the service call/sms/mms charges to another operator. The same suggestion is being given to the mobile operators to make reasonable it for customer. In addition to that charges of using internet shows also lower opinion of respondents, the operators should be provided very keen attention to make it affordable for them. Beside these, the respondents are not enough happy with the speed of internet.

The average value is 3.99 for this service. The operators should be very much responsible to provide faster internet to the customer. It will lead to reduce waiting time to use internet for customer and they will be more satisfied with the operator. The descriptive study also reveals that signal of network is not at the satisfactory level. The operator should improve its capability in this area also. Though the result of regression analysis of this study confirmed the positive relationship between network and communication with satisfaction, it differs with the result of other study (Rahman, 2014). That might be the cause of change network capability and renovation. Furthermore, this study will be very much helpful for the mobile operators to serve services to its customer. The information will be also helpful for the business man to target this segment and also to develop the services which have shown lower average opinion of students. Though the market condition is very much competitive in telecommunication sectors, there have some opportunities (i.e., ensuring good network capability, introduce faster internet, reducing call/sms/mms cost for same and another operator etc.) for new businessman. If the new entrants can bring and ensure these services with the alignment of existing services, it will be a great threat for the existing mobile operators in Bangladesh. This study will help a lot for the mobile operators to understand the market segment of students who are one of the major contributors for their profitability. The need and uses pattern are not same as another customer (i.e., professional, businessman and housewife). The operators should think this segment differently. The students will also get a lot of information about the current status regarding these services offered by operators from this study. It will enrich the existing literatures as new dimension of students' segment in mobile operator market. The academicians, researchers and practitioners will get valuable information for their future research tasks.

This study also faces some drawbacks. The sample size is 260 who are the students in 3 major universities among the 7 existing public and private university in Rajshahi. If it could cover all universities, the generalization of result might be more accepted. It is also seen from this study that majority of students are from the Rajshahi. It might be the reason to choose the private university in the sample where majority of students are from local area. So, our future research plan is to increase the sample up to 350 from all universities and draw a structured equation model to make the factor context more specific. This study will act as a reference for the future research.

7. References

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(Appendix)

| | Literature Support |
|---|--|
| Security, call block, call tracking and call forwarding | Hasan & Abdullah, 2013 |
| SMS, MMS, GPRS | Hossain & Suchi, 2013; Islam, 2011 |
| Caller tunes & call alerts | Hossain & Suchi, 2013 |
| Enough FnF facility | Islam, 2011 |
| Call/ SMS/ MMS Charge for same operator | Hasan & Abdullah, 2013; Islam, 2011 |
| Call/ SMS/ MMS to others operator | Hasan & Abdullah, 2013; Islam, 2011 |
| Affordable charges of using internet | Sarker, Neogy, & Akhter, 2015 |
| Price of SIM/RIM card | Hasan & Abdullah, 2013 |
| Group conference facility | Hasan & Abdullah, 2013 |
| Electronic payment system | Islam, 2011 |
| Instant recharging or credit | Islam, 2011 |
| Bundle packages (discount, call & SMS) | Khan & Afsheen, 2012 |
| Easy and convenient recharge facility | Hasan & Abdullah, 2013 |
| Signal Quality | Almossawi, 2012; Hossain & Suchi, 2013; Leelakulthanit & Hongcharu, 2011 |
| Drop calls rate | Hossain & Suchi, 2013; Poulrajan & Rajkumar, 2011 |
| Call quality | Poulrajan & Rajkumar, 2011 |
| Available price pack | Hossain & Suchi, 2013 |
| Available cash refund offers | Hossain & Suchi, 2013 |
| Available prizes, premium & price-off | Hossain & Suchi, 2013 |
| Horoscope, fun, greetings, ring tone | Hasan & Abdullah, 2013 |
| Ease of reporting complaint | Hossain & Suchi, 2013 |
| Waiting time to connect personnel | Hossain & Suchi, 2013 |
| Bill pay facility (electricity, gas, telephone) | Hasan & Abdullah, 2013 |
| Help line service (doctor, ticket, others) | Hasan & Abdullah, 2013 |
| Faster Internet service | Hasan & Abdullah, 2013 |
| Customize (personalize) care | Hossain & Suchi, 2013 |
| Responsiveness of employees | Hutchinson, Lai, & Wang, (2009) |
| The well-mannered of employees | Hutchinson, Lai, & Wang, (2009) |
| Employees cooperativeness | Hutchinson, Lai, & Wang, (2009) |
| Correctness billing services | Hutchinson, Lai, & Wang, (2009) |
| Billing relevance services | Hutchinson, Lai, & Wang, (2009) |
| Service feature | Hutchinson, Lai, & Wang, (2009) |
| Billing transparency & fast service | Hutchinson, Lai, & Wang, (2009) |
| Satisfied with my current operator & willing to use it | |

Table A: Service Attributes of Different Operators

| Attributes of Satisfaction | Mean | Median | Mode | S.D |
|---|------|--------|------|-------|
| I am satisfied with the responsiveness of employees | 4.77 | 5.00 | 5 | 1.597 |
| I feel good about the well-mannered behavior of employees | 4.75 | 5.00 | 5 | 1.412 |
| I am satisfied with employees cooperativeness | 4.63 | 5.00 | 5 | 1.434 |
| I am truly happy with their correctness of billing services | 4.26 | 4.00 | 4 | 1.358 |
| I feel good with their billing relevance services | 4.23 | 4.00 | 5 | 1.537 |
| I am satisfied with their service feature | 4.29 | 4.50 | 5 | 1.598 |
| I am truly satisfied with their billing transparency & fast service | 3.73 | 4.00 | 4 | 1.603 |

Table B: Students Satisfaction toward Mobile Operators