Addressing the Factors Influencing Customer Satisfaction of 3G Mobile Phone Services: A Case of Dhaka City, Bangladesh

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Abstract

Now a day?s 3G mobile phone services are very essential to the telecommunication organizations to attract their customers. To provide better service, it is also necessary for these organizations to know customer satisfaction factors of 3G service. Therefore this study has been conducted to address the factors that will influence satisfaction of customer toward these services in Dhaka city. Seventeen potential customer satisfaction influencing factors are taken into consideration in this study. Data has been collected from both primary and secondary sources. Multiple regression and factor analysis have been conducted on the primarily collected data. The outcome of this paper is that network quality, price (overall charge), promotional offer, availability of customer service center, value added service and speed are most important factors influencing customer satisfaction.

Index terms— customer satisfaction, 3G, mobile phone, services.

1 Introduction

aintaining customers' satisfaction for their desired service is the primary consideration for every business. Specifically for new service or product achieving customer satisfaction is very important. 3G mobile technology, one of new telecommunication technologies, is not out of this fact. 3G (Third Generation) is the latest wireless technology. It is also known as UMTS (Universal Mobile Telecommunications System), an improvement over 2G (Second Generation) providing wireless access to the data and information to the users from anywhere and anytime. Customer satisfaction is an increasing challenge for telecommunication organizations. These organizations must maintain some standards or factors that their customers want. So which factors these organizations should maintain while providing services to their customer moreover in case of 3G mobile phone services? Therefore, the main focus of this study is to address the factors that telecommunication organizations in Bangladesh must ensure to make their customers satisfied. The practical importance of this study that it will help the telecommunication providers and practitioners in Bangladesh to understand customer satisfaction factor toward 3G mobile phone services and provide recommendations to them for making these services better. Different study has been conducted regard 3G mobile phone services in Bangladesh. Not enough study has been done to bring out these factors that must be followed by telecommunication organizations. As it is new service of telecommunication provider in Bangladesh, provide a good service to customer is necessary. The main contribution of researcher of this study is to help these providers reach the milestone.

The research question of this study is "which are the factors that will influence customer satisfaction of 3G mobile phone services in Dhaka city of Bangladesh. The research objectives of this study are: identify the factors that are affecting customer satisfaction of 3G mobile phone services, indentify the relationship among factors, identify the significant and non-significant factors. The study is divided into four parts. First section gives brief introduction to the study. Literature review is presented in second section. Third section identifies the methodology of the study. Data analysis of this study is described in fourth section. Fifth section concludes the study.

2 II.

3 Literature Review

A study found that there is an association between education and factors made to avail 3G connection (RANI & Dr. M. K., 2012). According to (Butt, 2008)Customer satisfaction of mobile phone users in Pakistan consisted of mainly four factors including price, transmission quality, usage ease and service support. A study by (Debarati & Ishita, 2010) revealed that the good network coverage and family or friends using the same network are of utmost important factor to the customers. (Chander, 2010) identified six broad parameters that contribute to overall satisfaction of mobile phone users with their mobile service provider, which are presales/sales, network, VAS, cost of service, customer care and billing. The analysis conducted by **??**Singh, 2011), identified some factors as critical factors which were accurate services followed by availability of modern equipment, timely delivery of bills, fulfilling the needs of the customer, ease of understanding of schemes and service offering. A study found that by extending its value added services, according to preference of the respondents customer satisfaction can be increased **??**Buvaneswari & Babu, 2013). The study confirms that customer value is a important drivers of customers' satisfaction. The study also reveals that factors acting behind customers' dissatisfaction are like quality of air time, service of helpline, service of information centers, high billing rate etc. (Hossain, Hossain, & Siddikee, 2012). This study focused on six factors-communication, price structure, value-added service, convenience, sales-promotions and customer service and the result indicated that except for salespromotion, all other five factors have positive correlations with customer loyalty with customer satisfaction (Hossain & Suchy, 2013). A study by (Kabir, Alam, & Alam, 2009)shows that there is a significant linear relationship exists between service quality and customer satisfaction. It also shows that service quality, switching cost, and trust are significant predictors of customer loyalty and satisfaction.

In one study a discrete choice methodology is used to test the three models for user satisfaction which are binomial logit model for overall satisfaction, and multinomial logit model for brand use and for handset preferred features **??**Khayyat & Heshmati, 2012). A customer satisfaction model was developed including variables which are customer service, personal and market factors, perceived quality, perceived value, technological advancement and company image to test the overall customer satisfaction (Uddin, Haque, & Bristy, 2014). By using structured equation modeling techniques the effect of service quality on customer satisfaction and behavioral intention in mobile telecommunication industry was examined. Based on the examination the study identified that Customer Relations, Real Network Quality and Image quality aspects of service quality positively affect customer satisfaction **??**Nimako, 2012). In a study of (Al-Zoubi, 2013) the effect of SERVQUAL model on customer loyalty among Jordanian telecommunication sector based on the application of regression model is assessed and found a strong and positive correlation between SERVQUAL model and customer loyalty in telecommunication industry. A study on service quality and customer satisfaction in the cellular telecommunication service provider in Malaysia is conducted using SERVQUAL model, GAP analysis, regression and t-test, in which it is found that all service quality dimensions of SERVQUAL model positively influenced customer satisfaction in terms of loyalty and attitudes (Arokiasamy & Abdullah, 2013). In a research study by (ALSAJJAN, 2014), a behavioral model was developed which proposed that trust and satisfaction mediate the effect of service quality on loyalty. In a study **??**Hom, 2000) emphasis on two levels of models, in Macro-models of customer satisfaction theorize the place of customer satisfaction among a set of related constructs in marketing research and in Micro-models of customer satisfaction theorize the elements of customer satisfaction. A value-precept theory is proposed as a competing framework for customer satisfaction, which argue that what is expected may not correspond to what is valued; values may be better comparative standards as opposed to expectations used in the EDP (Westbrook & Reilly, 1983). There is a model which received widest acceptance among researcher for consumer satisfaction model for study of consumer satisfaction **??**Helson, 1964). The Evaluation Congruity Model can capture the different states of satisfaction/ dissatisfaction resulting from different combinations of expectations and performance outcome **??**Chon, 1992). In a study by (Ahmed & Ali, 2014), the structural equation modeling (SEM) approach was employed to analyze and test the hypothesized model which results that behavioral intention to adopt 3G mobile technology has been positively influenced by social influence, performance expectancy, effort expectancy and perceived expense, whereas performance expectancy, social influence and behavioral intention were determinants of students' satisfaction with the 3G mobile technology. (Leelakulthanit & Hongcharu, 2011) used multiple regression analysis, which show that the customer values, network quality, emotional value, promotional value, quality of service at shops and quality of call center service has impact on customer satisfaction.

In a study ACSI model was used to the users of the three mobile operators to determine their satisfaction with service quality delivery in the Macedonian mobile telecommunication market (Angelova & Zekiri, 2011). A structure is developed by using structural equation modeling (SEM) in order to define the customer satisfaction level as a result of various components which are considered as relevant for explaining the overall satisfaction and in order to understand the actual gap in the responses and replicate the scenario in the structure, the data are collected in a continuous scale **??**Khattar, 2006).

4 a) Variable Identification

There are different kinds of study conducted on determining the customer satisfaction. By analyzing the literature review of various studies some variables/factors have been identified and some have been identified by considering

the 3G perspective of Bangladesh. To identify the customer satisfaction of 3G mobile phone service, some variables are taken into consideration which may influence overall customer satisfaction. Seventeen variables have been taken into consideration. These variables are-online security, bill payment system, network quality, charge price on service quality of provider, customer support, value added service, promotional offer, notification system, price (overall charge), internet service, advertisement, availability of customer service center, compliant management, brand image, network coverage, service variety, speed. Short form of some variable are used as like-vas (valued add service), availability of csc (availability of customer service center), Billps (bill payment system), charge price on sqp(charge price on service quality of provider) for suitable formatting.

5 III.

6 Methodology

This is a study to address the factors that mainly influence the customer satisfaction of 3G mobile phone services. For this purpose, both primary and secondary data are used in this study. This is mostly a descriptive research which has been conducted by using mainly the primary data and secondary data to a minimum extent. The primary data has been collected mainly by the survey. To conduct the survey, a questionnaire has been developed. In the questionnaires, there are some short questions used to capture the unique information of the responders, some multiple choice questions and some 5 point Likert scale questions used to capture the satisfaction and dissatisfaction level of the respondents. Some data are collected physically and some data are collected by using Google form, a free Google application for online survey, which was send to respondents through online. The population of the study is the inhabitants of the Dhaka city and the sample size of the study is 148. The sample has been collected through stratified sampling technique where entire responded are grouped into five categories (service, business person, student, unemployed and others).

The study has been conducted by using quantitative method. Different statistical analyses such as multiple regressions analysis and factor analysis have been applied in primary data. To validate factor analysis, a reliability test has been done. So these statistical tools are used to determine the main factors which have influence on overall customer satisfaction of 3Gservices and also to determine the significant variables or factors. The secondary data has been collected from different kind of websites, journal, articles, books etc. The analysis of the collected data is mainly done by using Statistical Package for Social Science (SPSS) and Microsoft Excel 2007.

7 a) Respondent Profile

To validate data collection, the participation of different types of respondents has been ensured. Data has been collected from both male and female ages between 18-60 years. Reponses from different educational backgrounds have been taken also likepost graduation, graduation, HSC, SSC and different professions like-service holders (public and private), businesspersons, students, unemployed and other professions. Respondents of all types of 3G telecommunication providers have been ensured as -Grameenphone, Banglalink, Robi, Airtel and Teletalk. As the data collection area is Dhaka city, we try to keep responses from different areas that represent this whole city. Specific areas are-badda, bangshal, cantonment, chackbazar, demra, dhanmondi, gandaria, gulshan, hazaribag, jatrabari, kalabagan, khilgaon, khilkhet, mirpur, mohammadpur, motijheel, new market, shahbag, tejgaon, uttara, azimpur, baridhara, bashundhara, banana, firmgate, gandaria, shantinagar, shabujbag, mogbazar, savar, tongi etc. The column of estimates provides the values for b0, b1, b2, b3, b4, b5, b6, b7, b8, b9, b10, b11, b12, b13, b14, b15, b16 and b17 for this equation.

8 IV.

9 Data Analysis and Discussion

The t-statistics and their associated 2-tailed pvalues used in testing whether a given coefficient is significantly different from zero. Using an alpha of 0.05, the significant value can be calculated, mainly the variable which p value is smaller than 0.05 is the significant one. So the significant variables are-Network quality, Price, Availability of csc, Billps, Promotional offer, Service variety. To have confidence in this article's measurement, it is needed to test its reliability (the degree to which it is error-free). It also refers to the property of a measurement instrument that causes it to give similar results for similar inputs. Cronbach's coefficient alpha, (?) is the common measure of scale reliability. It also measures internal consistency of the items, that is, how closely related a set of items are as a group. Value ranges from 0 to 1 with higher values indicate greater reliability. From the alpha coefficient for the18items is .926, suggesting that the items have relatively high internal consistency. In the last column of item-total statistics: 'alpha if item deleted' estimates what the Cronbach's alpha would be if we got rid of a particular item. From the item-total statistic stable, it clears that that none of the values is greater than the current alpha of the whole scale: .926. This means that it is not necessary to drop any items. Hence, the survey instrument (questionnaire) can be a reliable tool to measure all construct consistency. The variance explained by the initial solution, extracted components, and rotated components is displayed. It is recommended that component with eigenvalues greater than 1 be extracted, so the first four principal components form the extracted solution.

10   b) Reliability

Extracted four components together explain 64.680 % of the total variance. We can reduce the complexity of the data set by using these components, with only a 31.32% loss of information.

The rotated component matrix helps to determine what the components represent. The first component is highly correlated with speed and internet service. The second component is highly correlated with customer support, customer support and availability of customer service center. Third component is highly correlated with notification system. The fourth component is highly correlated with network quality and network coverage.

V.

11   Conclusion

To be successful in providing 3G mobile phone services, telecommunication providers in Bangladesh must try to keep their customer satisfied. For this reason, it is necessary for them to understand and identify factors that will affect their customers' satisfaction level. So the goal of this study is to address the factors that will influence customer satisfaction of 3G mobile services in Dhaka city and thereby help these companies throughout the findings. In this study, some important factors have been figured out after doing an extensive data collection and data examination on customers of this city. Network quality, price (overall charge) and promotional offer are derived as most important factors. Other significant factors are availability of customer service centre, valued added service, speed. [1]
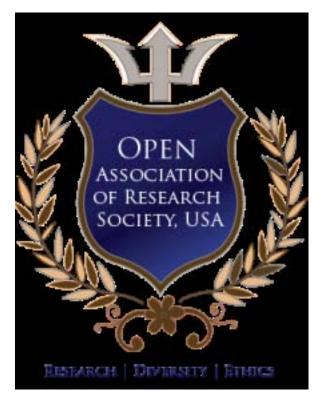

Figure 1: B

Bartlett's Test of Sphericity is used to test the null hypothesis that the variables are uncorrelated in the population. Here from the above table, our test statistics is 1215.43 with 136 degrees of freedom at the 5% level of significant. A large value of the test statistics will favor the rejection of null hypothesis. Therefore our factor analysis is appropriate. Another useful test statistics is Kaiser-Meyer-Olkin Measure of Sampling Adequacy. The value of KMO statistic (.889) is also large (>0.5).

Thus factor analysis may be considered an appropriate technique for analyzing the correlation matrix.

.1 Communalities

.2 Initial Extraction

[Ahmed and Ali ()] 'Behavioral Intention and Satisfaction with 3G Technology among Students in Somalia: A Structural Equation Modeling Study'. I S Ahmed , A Y Ali . *World Applied Sciences Journal* 2014. 32 (2) p. .

[Angelova and Zekiri ()] 'Measuring Customer Satisfaction with Service Quality Using American Customer Satisfaction Model (ACSI Model)'. B Angelova , J Zekiri . *International Journal of Academic Research in Business and Social Sciences* 2011. 1 (3) .

[Alsajjan ()] 'Satisfaction-Trust Model: Developing Customer Satisfaction and Trust Indices for Mobile Service Providers in the UK'. B A Alsajjan . *International Review of Management and Business Research* 2014.

[Arokiasamy and Abdullah ()] 'Service Quality and Customer Satisfaction in the Cellular Telecommunication Service Provider in Malaysia'. A Arokiasamy , A Abdullah . *International Refereed Research Journal* 2013. 4 (2) p. .

[Al-Zoubi ()] 'Service Quality Effects on Customer Loyalty among the Jordanian Telecom Sector "Empirical Study'. M R Al-Zoubi . *International Journal of Business and Management* 2013. 8 (7) p. .